



# GRANTEE DIRECTORY

2005-2006





## Acknowledgements

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### Editorial Staff

Larry Bryant

Senior Program Manager

Monica Cowan

Program Analyst

Juanita Koziol MS, NP, CS, RN

Senior Program Analyst

Kathleen Manning MPH, RD

Program Analyst

Judith Sparrow

Program Analyst

Dena S. Puskin, ScD

Director

Office for the Advancement of Telehealth (OAT)

Health Resources and Services Administration

U.S. Department of Health and Human Services

The editors would like to acknowledge the contributions of all OAT grantees, whose project descriptions serve as a valuable resource for others working in the field of telehealth.

***Note:*** For the user of this directory, definitions of some of the more commonly used acronyms and terms found throughout this material are provided.



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## Overview

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### Background

The Office for the Advancement of Telehealth (OAT) promotes the use of telehealth technologies for health care delivery, education, and health information services. Telehealth is defined as the use of telecommunications and information technologies to share information, and to provide clinical care, education, public health, and administrative services at a distance. The office is part of the Health Resources and Services Administration (HRSA) at the U.S. Department of Health and Human Services. HRSA's mission is to assure quality health care for underserved, vulnerable, and special needs populations.

### Grants Overview

In 2005, OAT administered 159 telehealth/telemedicine projects. Of those, 92 were awarded funds totaling more than \$34.9 million. Projects administered by OAT receive funds in one of four ways:

1. The Telehealth Network Grant Program (TNGP): OAT now awards competitive grants through the TNGP. This program replaced the Rural Telemedicine Grant Program (RTGP). The TNGP funds projects that demonstrate the use of telehealth networks to improve healthcare services for medically underserved populations in urban, rural, and frontier communities. More specifically, the networks can be used to: (a) expand access to, coordinate, and improve the quality of health care services; (b) improve and expand the training of health care providers; and/or (c) expand and improve the quality of health information available to health care providers, patients, and their families. The primary objective of the Telehealth Network Grant Program (TNGP) is to help communities build the human, technical, and financial capacity to develop sustainable telehealth programs and networks. In 2003, 15 projects were funded through the TNGP as part of a three-year award.
2. Rural Telemedicine Grant Program (RTGP): This program was replaced by the Telehealth Network Grant Program (TNGP). OAT awarded competitive grants through 2002. The goal of the RTGP was to improve quality health services for rural residents and reduce the isolation of rural practitioners through the use of telemedicine technologies. In 2005, OAT administered 5 projects that were funded from 2000-2002.
3. Congressionally Mandated Projects (CMP): OAT also administers funds specially earmarked by Congress. The goals of these projects vary widely, but all include the use of telehealth technologies to improve access to health care. In 2005, OAT administered 139 CMP projects. Of those, 77 CMP projects were funded and 62 projects were in an extension period.
4. Special Projects: These projects were funded through OAT grantees to: 1) promote activities in program evaluation; 2) to document the diffusion of telehealth technologies among the Health Resources and Services Administration's (HRSA's) grantees <http://www.telemed.med.ecu.edu/hrsa/>; 3) to evaluate specific policy issues; and 4) to develop concepts for telehealth resource centers.

The projects focus on collaboration and using telehealth as a method of overcoming health care or educational access issues.





# OAT Grantee Organizations

**The Office for the Advancement of Telehealth's (OAT) "Grantee Directory 2005-2006" provides information about Grantee Organizations whose grants are administered by the Office for the Advancement of Telehealth (OAT). Projects included are those in an active status and/or projects receiving funding during fiscal years (FY) 2005 and 2006. \***

**\*FY 2005 is the period October 1, 2004 through September 30, 2005.**

**\*FY 2006 is the period October 1, 2005 through September 30, 2006.**

**This section contains a list of 2005–2006 OAT Grantee Organizations and their project names (descriptions).**

## Grantee Organization

(Where a grantee organization has multiple projects, they are listed.)

State	Grantee	State	Grantee
AK	<b>Alaska Native Tribal Health Consortium</b>	CO	<b>Avista Adventist Hospital</b>
	<ul style="list-style-type: none"> <li>Continued Advancement of Telehealth Capacity in Alaska</li> <li>The Summative Telemedicine Evaluation Project</li> </ul>		<ul style="list-style-type: none"> <li>Clinical Integration Through Health Informatics</li> </ul>
AK	<b>Alaska Psychiatric Institute (API)</b>	CO	<b>University of Colorado Health Sciences Center</b>
	<ul style="list-style-type: none"> <li>API TeleBehavioral Health Project</li> </ul>		<ul style="list-style-type: none"> <li>Native Telehealth Outreach and Technical Assistance Program</li> </ul>
AL	<b>University of South Alabama</b>	DC	<b>American Red Cross</b>
	<ul style="list-style-type: none"> <li>Center for Strategic Health Innovation (CSHI) RMEDE/BioTrac Project</li> <li>Center for Strategic Health Innovation (CSHI) Traditional Telemedicine</li> </ul>		<ul style="list-style-type: none"> <li>Congressionally Mandated Telehealth Grants</li> </ul>
AR	<b>University of Arkansas for Medical Sciences</b>	DC	<b>Foundation For eHealth Initiative</b>
	<ul style="list-style-type: none"> <li>South Arkansas Integrated Telehealth Oncology Program</li> </ul>		<ul style="list-style-type: none"> <li>Connecting Communities for Better Health Program</li> </ul>
AZ	<b>Arizona Board of Regents, University of Arizona</b>	FL	<b>BayCare Health System</b>
	<ul style="list-style-type: none"> <li>Arizona Diabetes Virtual Center for Excellence (ADVCE)</li> <li>Institute for Advanced Telemedicine and Telehealth (THealth)</li> </ul>		<ul style="list-style-type: none"> <li>Electronic Medication and Clinical Services Ordering Subsystem</li> </ul>
AZ	<b>Banner Good Samaritan Telemedicine Program</b>	FL	<b>Florida Cancer Research Cooperative, University of South Florida</b>
	<ul style="list-style-type: none"> <li>Banner Telehealth Program-Banner Health System</li> </ul>		<ul style="list-style-type: none"> <li>Clinical Trial Patient/Physician Information &amp; Education Program</li> </ul>
AZ	<b>Maricopa County, Arizona</b>	FL	<b>University of Florida College of Dentistry (UFCD)</b>
	<ul style="list-style-type: none"> <li>Correctional Health Services Telemedicine Initiative</li> </ul>		<ul style="list-style-type: none"> <li>University of Florida College of Dentistry (UFCD)</li> </ul>
CA	<b>Familia Unida Living with Multiple Sclerosis</b>	GA	<b>Morehouse School of Medicine</b>
	<ul style="list-style-type: none"> <li>Telehealth Grant</li> </ul>		<ul style="list-style-type: none"> <li>Diabetes Screening Telehealth Project</li> </ul>
CA	<b>Multi-Dimensional Imaging, Inc. of Newport Beach</b>	GA	<b>Ware County Health Department</b>
	<ul style="list-style-type: none"> <li>Telemedicine for Improved Health Care and Education</li> </ul>		<ul style="list-style-type: none"> <li>Rural Health Telemedicine Grant Program</li> </ul>
CA	<b>San Joaquin County Health Care Services</b>	HI	<b>Hawai'i Primary Care Association (HPCA)</b>
	<ul style="list-style-type: none"> <li>Automated Drug Dispensing Medication Administration System</li> </ul>		<ul style="list-style-type: none"> <li>The Hawai'i CHC Telehealth Network Project</li> </ul>
CA	<b>Santa Rosa Memorial Hospital</b>	HI	<b>Moloka'i General Hospital</b>
	<ul style="list-style-type: none"> <li>Northern California Telemedicine Network (NCTN)</li> </ul>		<ul style="list-style-type: none"> <li>Moloka'i Telehealth Network</li> </ul>
		IA	<b>Iowa Chronic Care Consortium</b>
			<ul style="list-style-type: none"> <li>Congestive Heart Failure and Diabetes Telemanagement Protocols</li> <li>Iowa Medicaid Population Disease Management Demonstration</li> </ul>
		IA	<b>Mercy Foundation</b>
			<ul style="list-style-type: none"> <li>Midwest Rural Telemedicine Consortium</li> </ul>
		ID	<b>Clearwater Valley Hospital and Clinics, Inc.</b>
			<ul style="list-style-type: none"> <li>Clearwater Valley Hospital: Electronic Medical Records</li> </ul>

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(Where a grantee organization has multiple projects, they are listed.)

State	Grantee	State	Grantee
ID	<b>Idaho State University, Institute of Rural Health</b>	KY	<b>New Horizons Health Systems, Inc.</b>
	<ul style="list-style-type: none"> <li>• <i>Telehealth Idaho</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>Information Technology Development and Improvement</i></li> </ul>
ID	<b>North Idaho Rural Health Consortium (NIRHC)</b>	KY	<b>University of Kentucky Research Foundation—Kentucky TeleCare</b>
	<ul style="list-style-type: none"> <li>• <i>Expanding Telehealth to North Idaho Districts (EXTEND)</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>Improving Health Outcomes for Children in Rural Kentucky Schools</i></li> </ul>
IL	<b>Northern Illinois University/Fermi National Laboratory</b>	LA	<b>Southwest Louisiana Health Care Systems</b>
	<ul style="list-style-type: none"> <li>• <i>Neutron Radiation for Cancer Treatment</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>Community Hospital Telehealth Consortium</i></li> </ul>
IL	<b>OSF Saint James – John W. Albrecht Medical Center</b>	LA	<b>Woman’s Hospital</b>
	<ul style="list-style-type: none"> <li>• <i>OSF Saint James Telehealth Network</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>Expansion of Physician Internet Portal, Woman’s POL</i></li> </ul>
IL	<b>Saint John’s Hospital</b>	MA	<b>Massachusetts College of Pharmacy and Health Sciences</b>
	<ul style="list-style-type: none"> <li>• <i>Neonatal Telehealth Project in Rural Illinois Located at the Perinatal Center</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>Worcester Campus Distance Learning Initiative</i></li> </ul>
IL	<b>Southern Illinois University School of Medicine</b>	MA	<b>UMass Memorial Medical Center</b>
	<ul style="list-style-type: none"> <li>• <i>Downstate Illinois Regional Telehealth Project</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>PACS Teleradiology Project</i></li> </ul>
IN	<b>James Whitcomb Riley Hospital for Children</b>	ME	<b>Regional Medical Center at Lubec</b>
	<ul style="list-style-type: none"> <li>• <i>Telemedicine Applications for Riley Hospital for Children</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>Maine Nursing Home Telehealth Network</i></li> </ul>
IN	<b>Health &amp; Hospital Corporation of Marion County</b>	MI	<b>Altarum Institute</b>
	<ul style="list-style-type: none"> <li>• <i>Congressionally-Mandated Telehealth Grants</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>Concepts for a Michigan Health Information Network (MHIN)</i></li> </ul>
KS	<b>University of Kansas Medical Center</b>	MI	<b>Hillsdale Community Health Center</b>
	<ul style="list-style-type: none"> <li>• <i>Expansion of the Kansas Telehealth Network</i></li> <li>• <i>Sustainability and Cost Benefit Evaluation of the Kansas Telehealth Network</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>PACS System</i></li> </ul>
KY	<b>The James B. Haggin Memorial Hospital</b>	MI	<b>Hurley Medical Center</b>
	<ul style="list-style-type: none"> <li>• <i>PACS (Picture Archiving and Communication System)</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>Clinical Information System Replacement Project</i></li> </ul>
KY	<b>Marcum &amp; Wallace Memorial Hospital</b>	MI	<b>Michigan State University</b>
	<ul style="list-style-type: none"> <li>• <i>Teleradiology Enhancement Project</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>Telehospice in Mid-Michigan</i></li> </ul>
		MI	<b>Western Michigan University</b>
			<ul style="list-style-type: none"> <li>• <i>The Application of Tele-Allied Health in Rural Counties in Southwest Lower Michigan</i></li> </ul>
		MN	<b>Fairview Health Services</b>
			<ul style="list-style-type: none"> <li>• <i>Ambulatory Electronic Medical Record System—Twin Cities Metropolitan Care Systems</i></li> </ul>

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(Where a grantee organization has multiple projects, they are listed.)

State	Grantee	State	Grantee
MN	<b>University of Minnesota</b> • <i>Fairview—University of Minnesota Telemedicine Network</i>	NE	<b>Good Samaritan Hospital Foundation</b> • <i>Mid-Nebraska Telemedicine Network (MNTN)</i>
MO	<b>The Curators of the University of Missouri</b> • <i>Missouri Telehealth Network</i>	NE	<b>University of Nebraska Medical Center</b> • <i>Distance Education of Undergraduate Nursing Students</i>
MT	<b>Benefis Healthcare Foundation</b> • <i>NMHA/REACH Telehealth Network Development Project</i>	NJ	<b>Hackensack University Medical Center</b> • <i>Implementation of Oncology Patient Management System</i>
MT	<b>Billings Clinic Foundation</b> • <i>Effect of an Integrated CIS on Inpatient and Post-Discharge Medication Administration Errors and Chronic Disease Management</i>	NJ	<b>Saint Peter's University Hospital</b> • <i>Medical Technology Center for Infants and Children</i>
MT	<b>Deaconess Billings Clinic Foundation</b> • <i>Eastern Montana Telemedicine Network</i> • <i>Revolutionizing Diabetes Care at Billings Clinic: A Model for Chronic Disease Care</i>	NM	<b>New Mexico Human Services Department</b> • <i>New Mexico Tele-Behavioral Health Improvement Project</i>
MT	<b>Saint Patrick Hospital &amp; Health Foundation</b> • <i>Montana Cardiology Telemedicine Network</i>	NM	<b>The University of New Mexico Health Sciences Center</b> • <i>Project TOUCH (Telehealth Outreach for Unified Community Health)</i> • <i>Rural Health Telemedicine Program</i>
MT	<b>Saint Vincent Healthcare Foundation</b> • <i>Mansfield Health Education Center (MHEC)</i>	NV	<b>Nevada Rural Hospital Partners Foundation</b> • <i>Digital Imaging System for Rural Nevada (DISRN)</i>
MT	<b>The University of Montana—Missoula</b> • <i>Improving Health Among Rural Montanans (IPHARM)</i>	NV	<b>University of Nevada, Reno</b> • <i>Biomedical Imaging Laboratory</i>
NC	<b>Duke University Medical Center</b> • <i>Patient Inclusion in a Community-Based Telehealth Network</i>	NY	<b>Community Health Care Services Foundation, Inc.</b> • <i>Introducing Home Telehealth in New York's 20<sup>th</sup> Congressional District</i>
NC	<b>Educational and Research Consortium of Western Carolinas</b> • <i>Western North Carolina Regional Data Link Project</i>	NY	<b>Genesee Gateway Local Development Corporation, Inc.</b> • <i>Upstate New York Telemedicine Study</i>
ND	<b>North Dakota State University College of Pharmacy</b> • <i>North Dakota Telepharmacy Project</i>	NY	<b>Integrated Community Alternatives Network, Inc.</b> • <i>Foster Care Tracker and Assessment Tool</i>
ND	<b>Northland Healthcare Alliance</b> • <i>St. Alexius/Northland Telecare Network</i>	NY	<b>Long Island Association for Millennium Center for Convergent Technologies</b> • <i>An Electronic Clinical Trial System to Reduce Drug Development Costs</i>

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State	Grantee	State	Grantee
NY	<b>Montefiore Medical Center</b> • <i>Electronic Medical Records Expansion</i>	OK	<b>OSU Center for Rural Health</b> • <i>Rural Oklahoma Telemedicine Service Expansion</i>
NY	<b>New York Presbyterian Hospital</b> • <i>Systems Technology Interfacing Teaching and Community Hospitals (STITCH)</i>	OR	<b>Asante Health System</b> • <i>Asante Clinical Systems Initiative</i>
NY	<b>Research Foundation, State University of New York (SUNY) at Buffalo</b> • <i>Telehealth New York</i>	OR	<b>Tillamook Lightwave IGA</b> • <i>Tillamook Lightwave Telehealth Technologies for Tillamook County Rural Communities</i>
NY	<b>The Rosalind and Joseph Gurwin Jewish Geriatric Center of Long Island</b> • <i>Demonstration of Implementation of Electronic Medical Record in Skilled Nursing Facility</i>	PA	<b>Clarion University</b> • <i>Primary Care Education for the Citizens of Rural Pennsylvania</i>
OH	<b>Case Western Reserve University</b> • <i>NetWellness</i>	PA	<b>Community Nurses Home Health and Hospice, Inc.</b> • <i>Home Telehealth</i>
OH	<b>Cincinnati Children’s Hospital Medical Center</b> • <i>Pursuing Perfection—Transforming Health Care Delivery</i>	PA	<b>Geisinger Clinic</b> • <i>Developing a Stoke Care Educational Program for Rural Pennsylvania</i>
OH	<b>Northeastern Ohio Universities College of Medicine (NEOUCOM)</b> • <i>Medical Education Network Teaching Ohio Region III (MENTOR)</i>	PA	<b>Good Samaritan Hospital Regional Medical Center</b> • <i>Schuylkill Alliance for Health Care Access</i>
OH	<b>Ohio Board of Regents</b> • <i>Medical Collaboration Network</i>	PA	<b>Hospice of Metropolitan Erie</b> • <i>Hospice Telehealth Project</i>
OH	<b>Ohio State University Research Foundation (for the Ohio Supercomputer Center)</b> • <i>Computational Approaches to Research on Cancer in Children and Others</i>	PA	<b>Jewish Healthcare Foundation</b> • <i>Reinventing Healthcare: the Application of the Pittsburgh Regional Healthcare Initiative’s Perfecting Patient Care (PPC) System to Chronic Medical Conditions</i>
OH	<b>Southern Consortium for Children</b> • <i>Southern Ohio Telepsychiatric Network</i>	PA	<b>Magee Rehabilitation Hospital</b> • <i>Virtual Reality Technology</i>
OK	<b>INTEGRIS Health, Inc.</b> • <i>INTEGRIS Rural Telemedicine Project</i>	PA	<b>Mercy Health Partners</b> • <i>Using Information Technology to Enhance Patient Safety</i>
OK	<b>Oklahoma Office of Rural Health</b> • <i>Rural Health Telemedicine Program</i>	PA	<b>Mercy Hospital of Pittsburgh</b> • <i>Mobile Clinician Project</i>
		PA	<b>Millcreek Community Hospital</b> • <i>Millcreek Health System Informatics Project</i>
		PA	<b>Oil Region Alliance of Business, Industry &amp; Tourism</b> • <i>The Venango Center for Healthcare Careers (VCHC)</i>
		PA	<b>Pennsylvania College of Optometry</b> • <i>Ophthalmic Telehealth</i>

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(Where a grantee organization has multiple projects, they are listed.)

State	Grantee	State	Grantee
PA	<b>Pennsylvania Homecare Association</b> <ul style="list-style-type: none"> <li>• <i>Researching on the Financial Viability of Telehealth and Telehealth's Impact on Home Health Nurses</i></li> </ul>	RI	<b>Kent County Visiting Nurse Association d/b/a VNA of Care New England</b> <ul style="list-style-type: none"> <li>• <i>Advancing Point-of-Care Technology at VNA of Care New England</i></li> <li>• <i>Increasing Access to Telehealth—Phase II</i></li> </ul>
PA	<b>Penn State University</b> <ul style="list-style-type: none"> <li>• <i>Digital Informatics and Communications System</i></li> </ul>	RI	<b>Thundermist Health Center</b> <ul style="list-style-type: none"> <li>• <i>Thundermist Health Center Electronic Health Record</i></li> </ul>
PA	<b>Pennsylvania State University College of Medicine</b> <ul style="list-style-type: none"> <li>• <i>Physician-Scientist Initiative</i></li> </ul>	SC	<b>Advanced Technology Institute (ATI)</b> <ul style="list-style-type: none"> <li>• <i>Healthcare and Emergency Awareness Response for Telehealth (HEART) Phase II</i></li> </ul>
PA	<b>Pinnacle Health System</b> <ul style="list-style-type: none"> <li>• <i>Reducing Variability to Deliver Safe Care</i></li> </ul>	SC	<b>Beaufort-Jaspert-Hampton Comprehensive Health Services</b> <ul style="list-style-type: none"> <li>• <i>South Carolina Prostate Cancer/Telehealth Project</i></li> </ul>
PA	<b>Safe Harbor Behavioral Health</b> <ul style="list-style-type: none"> <li>• <i>Safe Harbor Behavioral Health Telemedicine Program</i></li> </ul>	SC	<b>Greenville Hospital System</b> <ul style="list-style-type: none"> <li>• <i>ICU Telemedicine Project</i></li> </ul>
PA	<b>SUN Home Health Services</b> <ul style="list-style-type: none"> <li>• <i>SUN Home Health Services Network</i></li> </ul>	SC	<b>Voorhees College</b> <ul style="list-style-type: none"> <li>• <i>Developing a Telehealth Infrastructure to Address Health Disparities Through Education and Training</i></li> </ul>
PA	<b>Susquehanna Health System</b> <ul style="list-style-type: none"> <li>• <i>Regional Electronic Medical Record</i></li> </ul>	SD	<b>Avera Health</b> <ul style="list-style-type: none"> <li>• <i>Avera Rural and Frontier Disease Management Telehealth Network</i></li> </ul>
PA	<b>Thomas Jefferson University</b> <ul style="list-style-type: none"> <li>• <i>Integrative Medicine Informatics Feasibility Project</i></li> </ul>	SD	<b>The University of South Dakota (USD)</b> <ul style="list-style-type: none"> <li>• <i>Growing Our Own: A Nursing Education/Provider Partnership</i></li> </ul>
PA	<b>Tyrone Hospital</b> <ul style="list-style-type: none"> <li>• <i>The Tyrone Hospital Health Information Network</i></li> </ul>	TN	<b>University Health System, Inc.</b> <ul style="list-style-type: none"> <li>• <i>High-Risk Newborn Services Project</i></li> </ul>
PA	<b>University of Pittsburgh School of Nursing Nurse Anesthesia Program</b> <ul style="list-style-type: none"> <li>• <i>Nurse Anesthesia Rural and Elderly Expansion Project (NAREEP)</i></li> </ul>	TN	<b>University of Tennessee Health Science Center</b> <ul style="list-style-type: none"> <li>• <i>Delta Health Partnership</i></li> <li>• <i>Mid-Appalachia Telehealth Project</i></li> <li>• <i>Mid-South Telehealth Consortium</i></li> <li>• <i>Telehealth for Diabetic Patients in Hispanic and Underserved Rural Communities</i></li> </ul>
PA	<b>Wayne Memorial Hospital</b> <ul style="list-style-type: none"> <li>• <i>Improving Medication and Patient Safety</i></li> </ul>	TX	<b>CHRISTUS Visiting Nurse Association of Houston</b> <ul style="list-style-type: none"> <li>• <i>Home Monitoring: Demonstration Pilot of Cost Control</i></li> </ul>
RI	<b>Family Resources Community Action</b> <ul style="list-style-type: none"> <li>• <i>HIV/AIDS Comprehensive Psychosocial Support Project</i></li> </ul>	TX	<b>Cook Children's Medical Center</b> <ul style="list-style-type: none"> <li>• <i>Rural Specialty Health Telemedicine Initiative</i></li> </ul>

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(Where a grantee organization has multiple projects, they are listed.)

State	Grantee	State	Grantee
TX	<b>Harris County Hospital District</b>	WA	<b>Inland Northwest Health Services</b>
	<ul style="list-style-type: none"> <li>• <i>Specialty Access Through Telemedicine (SA++)</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>Northwest Telehealth—TeleER</i></li> <li>• <i>Northwest Telehealth—Telepharmacy</i></li> </ul>
TX	<b>University of Texas Health Science Center at San Antonio</b>	WA	<b>Yakima Valley Memorial Hospital</b>
	<ul style="list-style-type: none"> <li>• <i>Diabetes Risk Reduction via Community-Based Telemedicine (DiRReCT)</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>Bedside Medication Management (MAR) System</i></li> </ul>
TX	<b>University of Texas Medical Branch Center to Eliminate Health Disparities</b>	WI	<b>La Crosse Medical Health Science Consortium</b>
	<ul style="list-style-type: none"> <li>• <i>The Texas Telehealth Disparities Network</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>Virtual Population Health Centers in the Rural Midwest</i></li> </ul>
TX	<b>University of Texas Medical Branch - Galveston</b>	WI	<b>Marshfield Clinic Telehealth Network</b>
	<ul style="list-style-type: none"> <li>• <i>Electronic Health Network</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>Marshfield Clinic Telehealth Network</i></li> </ul>
UT	<b>Association for Utah Community Health (AUCH)</b>	WI	<b>Rural Wisconsin Health Cooperative</b>
	<ul style="list-style-type: none"> <li>• <i>Association for Utah Community Health Telehealth Program</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>RWHC/WPHCA Telehealth Initiative (WPHCA – Wisconsin Primary Health Care Association)</i></li> </ul>
UT	<b>Dr. Ezekiel R. Dumke College of Health Professions</b>	WI	<b>St. Elizabeth Hospital Community Foundation</b>
	<ul style="list-style-type: none"> <li>• <i>Health Opportunity Professional Exploration (HOPE)</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>Affinity/UW Telemedicine Project</i></li> </ul>
UT	<b>Intermountain Healthcare</b>	WV	<b>Appalachian Pain Foundation</b>
	<ul style="list-style-type: none"> <li>• <i>HRSA Telemedicine Pilot Program for Interpreting Services for the Deaf</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>Physician Education, Community Outreach Program to Prevent Diversion of Prescription Drugs</i></li> </ul>
UT	<b>University of Utah</b>	WV	<b>Robert C. Byrd Center for Rural Health</b>
	<ul style="list-style-type: none"> <li>• <i>Utah Telehealth Network Comprehensive Telehealth Services</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>Marshall University Southern West Virginia Rural Outreach Project</i></li> </ul>
VA	<b>University of Virginia</b>	WV	<b>West Virginia University, Mountaineer Doctor TeleVision (MDTV)</b>
	<ul style="list-style-type: none"> <li>• <i>Southwest Virginia Alliance for Telemedicine</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>West Virginia Community Mental Telehealth Project</i></li> </ul>
VT	<b>The Community Health Center of Burlington</b>	WY	<b>United Medical Center</b>
	<ul style="list-style-type: none"> <li>• <i>Community Health Center Technology Upgrade</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>Regional Expansion of Telehealth and Distance Learning</i></li> </ul>
VT	<b>The University of Vermont (UVM)</b>	WY	<b>Wyoming Department of Health</b>
	<ul style="list-style-type: none"> <li>• <i>Pediatric Teletrauma Project</i></li> </ul>		<ul style="list-style-type: none"> <li>• <i>Wyoming Network for Telehealth (WyNETTE)</i></li> </ul>
WA	<b>Children's Hospital and Regional Medical Center – Seattle</b>		
	<ul style="list-style-type: none"> <li>• <i>Children's Health Access Regional Telemedicine (CHART) Program</i></li> </ul>		





# Types Of Grants

This section contains a background of the types of grants administered through OAT. Grantee organizations and their projects are delineated by the Telehealth Network Grant Program (TNGP), the Rural Telemedicine Grant Program (RTGP), Congressionally Mandated Projects, and Special Projects. Funding years for current grantees are also provided.

## Types of Grants

### Telehealth Network Grant Program (TNGP)

#### FY 2003-05 Grantees

State	Name	Previously Funded
AR	University of Arkansas for Medical Sciences	RTGP 97-99, RTGP 00-02
AZ	Arizona Board of Regents, University of Arizona	RTGP 97-99, TNGP 03-05
GA	Ware County Health Department	RTGP 00-02, TNGP 03-05
KS	University of Kansas Medical Center	RTGP 00-02, TNGP 03-05
KY	University of Kentucky Research Foundation	RTGP 94-96, RTGP 97-99
ME	Regional Medical Center at Lubec	RTGP 97-99, RTGP 00-02, TNGP 03-05
MN	University of Minnesota	RTGP 94-96, RTGP 00-02, TNGP 03-05
MT	Benefis Healthcare Foundation	TNGP 03-05
NC	Duke University Medical Center	TNGP 03-05
NM	University of New Mexico Health Sciences Center	RTGP 97-99, TNGP 03-05
OH	Southern Consortium for Children	TNGP 03-05
SD	Avera Health	RTGP 94-96, RTGP 97-99, TNGP 03-05
TN	University of Tennessee Health Science Center	RTGP 97-99, RTGP 00-02, TNGP 03-05
TX	University of Texas Health Science Center at San Antonio	TNGP 03-05
WI	Marshfield Clinic Telehealth Network	RTGP 97-99, RTGP 00-02, TNGP 03-05

### Rural Telemedicine Grant Program (RTGP)

#### FY 2000-02 Grantees

State	Name	Previously Funded
AR	University of Arkansas for Medical Sciences	RTGP 97-99
GA	Ware County Health Department	-
KS	University of Kansas Medical Center	-
ME	Regional Medical Center at Lubec	RTGP 97-99
MN	University of Minnesota	RTGP 94-96
MO	The Curators of the University of Missouri	RTGP 97-99
MT	Deaconess Billing Clinic Foundation	RTGP 94-96, 97
MT	St. Vincent Healthcare Foundation	-
ND	Northland Healthcare Alliance	RTGP 97-99
NE	Good Samaritan Hospital Foundation	RTGP 94-96, 97-99
OK	INTEGRIS Health, Inc.	RTGP 97-99
TN	University of Tennessee Health Science Center	RTGP 97-99
WI	Marshfield Clinic Telehealth Network	RTGP 97-99

### Rural Telemedicine Grant Program (RTGP)

#### FY 1997-99 Grantees

Seventeen projects were originally funded in this cycle. Ten projects were re-funded in the FY 00-02 cycle. Seven projects were re-funded in the FY03 cycle.

### Rural Telemedicine Grant Program (RTGP)

#### FY 1994-96 Grantees

Eleven projects were originally funded in this cycle. Five projects have completed their activities and are not included in this directory. Six other projects were re-funded in later cycles.

## Types of Grants

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### Congressionally Mandated Grantee Organizations

The following projects either received awards in FY 05, or have carryover dollars or a no-cost extension from a previous award.

State	Name	Year Funded
AL	<b>University of South Alabama (USA)</b>	
	<ul style="list-style-type: none"> <li>Center for Strategic Health Innovation (CSHI) RMEDE/BioTrac Project</li> <li>Center for Strategic Health Innovation (CSHI) Traditional Telemedicine</li> </ul>	FY 02, 03, 04, 05 FY 00, 04
AK	<b>Alaska Native Tribal Health Consortium</b>	
	<ul style="list-style-type: none"> <li>Continued Advancement of Telehealth Capacity in Alaska</li> <li>The Summative Telemedicine Evaluation Project</li> </ul>	FY 05 FY 02, 03
AK	<b>Alaska Psychiatric Institute (API)</b>	
	<ul style="list-style-type: none"> <li>API TeleBehavioral Health Project</li> </ul>	FY 05
AZ	<b>Arizona Board of Regents, University of Arizona</b>	
	<ul style="list-style-type: none"> <li>Institute for Advanced Telemedicine and Telehealth (THealth)</li> </ul>	FY 05
AZ	<b>Banner Good Samaritan Telemedicine Program</b>	
	<ul style="list-style-type: none"> <li>Banner Telehealth Program—Banner Health System</li> </ul>	FY 03
AZ	<b>Maricopa County, Arizona</b>	
	<ul style="list-style-type: none"> <li>Correctional Health Services Telemedicine Initiative</li> </ul>	FY 02
CA	<b>Familia Unida Living with Multiple Sclerosis</b>	
	<ul style="list-style-type: none"> <li>Telehealth Grant</li> </ul>	FY 05
CA	<b>Multi-Dimensional Imaging, Inc. Of Newport Beach</b>	
	<ul style="list-style-type: none"> <li>Telemedicine for Improved Health Care and Education</li> </ul>	FY 05
CA	<b>San Joaquin County Health Care Services</b>	
	<ul style="list-style-type: none"> <li>Automated Drug Dispensing Medication Administration System</li> </ul>	FY 05
CA	<b>Santa Rosa Memorial Hospital</b>	
	<ul style="list-style-type: none"> <li>Northern California Telemedicine Network(NCTN)</li> </ul>	FY 00, 01
CO	<b>Avista Adventist Hospital</b>	
	<ul style="list-style-type: none"> <li>Clinical Integration Through Health Informatics</li> </ul>	FY 05
CO	<b>University of Colorado Health Sciences Center</b>	
	<ul style="list-style-type: none"> <li>Native Telehealth Outreach and Technical Assistance Program</li> </ul>	FY 03
DC	<b>American Red Cross</b>	
	<ul style="list-style-type: none"> <li>Congressionally Mandated Telehealth Grants</li> </ul>	FY 05
DC	<b>Foundation for eHealth Initiative</b>	
	<ul style="list-style-type: none"> <li>Connecting Communities for Better Health</li> </ul>	FY 03, 04
FL	<b>BayCare Health System</b>	
	<ul style="list-style-type: none"> <li>Electronic Medication and Clinical Services Ordering Subsystem</li> </ul>	FY 02, 03, 04, 05
FL	<b>Florida Cancer Research Cooperative, University of South Florida</b>	
	<ul style="list-style-type: none"> <li>Clinical Trial Patient/Physician Information &amp; Education Program</li> </ul>	FY 04, 05
FL	<b>University of Florida College of Dentistry (UFCD)</b>	
	<ul style="list-style-type: none"> <li>University of Florida College of Dentistry (UFCD)</li> </ul>	FY 04
GA	<b>Morehouse College School of Medicine</b>	
	<ul style="list-style-type: none"> <li>Diabetes Screening Telehealth Project</li> </ul>	FY 02
HI	<b>Hawai'i Primary Care Association (HPCA)</b>	
	<ul style="list-style-type: none"> <li>The Hawai'i CHC Telehealth Network Project</li> </ul>	FY 02, 03, 04, 05

## Types of Grants

State	Name	Year Funded
HI	<b>Moloka'i General Hospital</b>	
	• <i>Moloka'i Telehealth Network</i>	FY 01, 02
IA	<b>Iowa Chronic Care Consortium</b>	
	• <i>Congestive Heart Failure and Diabetes Telemanagement Protocols</i>	FY 03, 04
IA	<b>Iowa Chronic Care Consortium</b>	
	• <i>Iowa Medicaid Population Disease Management Demonstration</i>	FY 05
IA	<b>Mercy Foundation</b>	
	• <i>Midwest Rural Telemedicine Consortium</i>	FY 03, 04, 05
ID	<b>Clearwater Valley Hospital and Clinics, Inc.</b>	
	• <i>Clearwater Valley Hospital: Electronic Medical Records</i>	FY 05
ID	<b>Idaho State University, Institute of Rural Health</b>	
	• <i>Telehealth Idaho</i>	FY 01, 02, 03, 04, 05
ID	<b>North Idaho Rural Health Consortium (NIRHC)</b>	
	• <i>Expanding Telehealth to North Idaho Districts (EXTEND)</i>	FY 02, 03, 04, 05
IL	<b>Northern Illinois University/Fermi National Laboratory</b>	
	• <i>Neutron Radiation for Cancer Treatment</i>	FY 04
IL	<b>OSF Saint James – John W. Albrecht Medical Center</b>	
	• <i>OSF Saint James Telehealth Network</i>	FY 04
IL	<b>Saint John's Hospital</b>	
	• <i>Neonatal Telehealth Project in Rural Illinois Located at the Perinatal Center</i>	FY 05
IL	<b>Southern Illinois University School of Medicine</b>	
	• <i>Downstate Illinois Regional Telehealth Project</i>	FY 01
IN	<b>James Whitcomb Riley Hospital for Children</b>	
	• <i>Telemedicine Applications for Riley Hospital for Children</i>	FY 03
IN	<b>Health &amp; Hospital Corporation of Marion County</b>	
	• <i>Congressionally-Mandated Telehealth Grants</i>	FY 05
KY	<b>The James B. Haggin Memorial Hospital</b>	
	• <i>PACS (Picture Archiving and Communication System)</i>	FY 05
KY	<b>Marcum &amp; Wallace Memorial Hospital</b>	
	• <i>Teleradiology Enhancement Project</i>	FY 05
KY	<b>New Horizons Health Systems, Inc.</b>	
	• <i>Information Technology Development and Improvement</i>	FY 05
LA	<b>Southwest Louisiana Health Care Systems</b>	
	• <i>Community Hospital Telehealth Consortium</i>	FY 01, 03
LA	<b>Woman's Hospital</b>	
	• <i>Expansion of Physician Internet Portal, Woman's POL</i>	FY 04
MA	<b>Massachusetts College of Pharmacy and Health Sciences</b>	
	• <i>Worcester Campus Distance Learning Initiative</i>	FY 01, 03, 05
MA	<b>UMass Memorial Medical Center</b>	
	• <i>PACS Teleradiology Project</i>	FY 04, 05
MI	<b>Altarum Institute</b>	
	• <i>Concepts for a Michigan Health Information Network (MHIN)</i>	FY 05
MI	<b>Hillsdale Community Health Center</b>	
	• <i>PACS System</i>	FY 04
MI	<b>Hurley Medical Center</b>	
	• <i>Clinical Information System Replacement Project</i>	FY 05
MI	<b>Michigan State University</b>	
	• <i>Telehospice in Mid-Michigan</i>	FY 05

## Types of Grants

State	Name	Year Funded
MI	<b>Western Michigan University</b>	
	• <i>The Application of Tele-Allied Health in Rural Counties in Southwest Lower Michigan</i>	FY 04
MN	<b>Fairview Health Services</b>	
	• <i>Ambulatory Electronic Medical Record System—Twin Cities Metropolitan Care Systems</i>	FY 02, 04, 05
MT	<b>Billings Clinic Foundation</b>	
	• <i>Effect of an Integrated CIS on Inpatient and Post-Discharge Medication Administration Errors and Chronic Disease Management</i>	FY 02, 03, 04
MT	<b>Deaconess Billings Clinic Foundation</b>	
	• <i>Revolutionizing Diabetes Care at Billings Clinic: A Model for Chronic Disease Care</i>	FY 05
MT	<b>Saint Patrick Hospital &amp; Health Foundation</b>	
	<i>Montana Cardiology Telemedicine Network</i>	FY 05
MT	<b>Saint Vincent Healthcare Foundation</b>	
	• <i>Mansfield Health Education Center (MHEC)</i>	FY 01, 02, 03
MT	<b>The University of Montana - Missoula</b>	
	• <i>Improving Health Among Rural Montanans (IPHARM)</i>	FY 02
NC	<b>Education and Research Consortium of Western Carolinas</b>	
	• <i>Western North Carolina Regional Data Link Project</i>	FY 02
ND	<b>North Dakota State University College of Pharmacy</b>	
	• <i>North Dakota Telepharmacy Project</i>	FY 02, 03, 04, 05
NE	<b>Good Samaritan Hospital Foundation</b>	
	• <i>Mid-Nebraska Telemedicine Network (MNTN)</i>	FY 04, 05
NE	<b>University of Nebraska Medical Center</b>	
	• <i>Distance Education of Undergraduate Nursing Students</i>	FY 03
NJ	<b>Hackensack University Medical Center</b>	
	• <i>Implementation of Oncology Patient Management System</i>	FY 05
NJ	<b>Saint Peter's University Hospital</b>	
	• <i>Medical Technology Center for Infants and Children</i>	FY 05
NM	<b>New Mexico Human Services Department</b>	
	• <i>New Mexico Tele-Behavioral Health Improvement Project</i>	FY 05
NM	<b>Universities of New Mexico, Health Sciences Center</b>	
	• <i>Project TOUCH (Telehealth Outreach for Unified Community Health)</i>	FY 00, 01, 02, 03
NV	<b>Nevada Rural Hospital Partners Foundation</b>	
	• <i>Digital Imaging System for Rural Nevada (DISRN)</i>	FY 04
NV	<b>University of Nevada, Reno</b>	
	• <i>Biomedical Imaging Laboratory</i>	FY 04
NY	<b>Community Health Care Services Foundation, Inc.</b>	
	<i>Introducing Home Telehealth in New York's 20<sup>th</sup> Congressional District</i>	FY 05
NY	<b>Genesee Gateway Local Development Corporation, Inc.</b>	
	• <i>Upstate New York Telemedicine Study</i>	FY 05
NY	<b>Integrated Community Alternatives Network, Inc.</b>	
	• <i>Foster Care Tracker and Assessment Tool</i>	FY 05
NY	<b>Long Island Association for Millenium Center for Convergent Technologies</b>	
	• <i>An Electronic Clinical Trial System to Reduce Drug Development Costs</i>	FY 05

## Types of Grants

State	Name	Year Funded
NY	<b>Montifiore Medical Center</b>	
	• <i>Electronic Medical Records Expansion</i>	FY 03, 04, 05
NY	<b>New York Presbyterian Hospital</b>	
	• <i>Systems Technology Interfacing Teaching and Community Hospitals (STITCH)</i>	FY 03, 05
NY	<b>Research Foundation, State University of New York (SUNY) at Buffalo</b>	
	• <i>Telehealth New York</i>	FY 03
NY	<b>The Rosalind and Joseph Gurwin Jewish Geriatric Center of Long Island</b>	
	• <i>Demonstration of Implementation of Electronic Medical Record in Skilled Nursing Facility</i>	FY 05
OH	<b>Case Western Reserve University</b>	
	• <i>NetWellness</i>	FY 02, 03, 04
OH	<b>Cincinnati Children's Hospital Medical Center</b>	
	• <i>Pursuing Perfection—Transforming Health Care Delivery</i>	FY 05
OH	<b>Northeastern Ohio Universities College of Medicine (NEOUCOM)</b>	
	• <i>Medical Education Network Teaching Ohio Region III (MENTOR)</i>	FY 02
OH	<b>Ohio Board of Regents</b>	
	• <i>Medical Collaboration Network</i>	FY 04
OH	<b>Ohio State University Research Foundation (for the Ohio Supercomputer Center)</b>	
	• <i>Computational Approaches to Research on Cancer in Children and Others</i>	FY 04
OK	<b>INTEGRIS Health, Inc.</b>	
	• <i>INTEGRIS Rural Telemedicine Project</i>	FY 04
OK	<b>Oklahoma Office of Rural Health</b>	
	• <i>Rural Health Telemedicine Program</i>	FY 02, 03, 05
OK	<b>OSU Center for Rural Health</b>	
	• <i>Rural Oklahoma Telemedicine Service Expansion</i>	FY 05
OR	<b>Asante Health System</b>	
	• <i>Asante Clinical Systems Initiative</i>	FY 04
OR	<b>Tillamook Lightwave IGA</b>	
	• <i>Tillamook Lightwave Telehealth Technologies for Tillamook County Rural Communities</i>	FY 04
PA	<b>Clarion University of Pennsylvania</b>	
	• <i>Primary Care Education for the Citizens of Rural Pennsylvania</i>	FY 02
PA	<b>Community Nurses Home Health and Hospice, Inc.</b>	
	• <i>Home Telehealth</i>	FY 04
PA	<b>Geisinger Clinic</b>	
	• <i>Developing a Stroke Care Educational Program for Rural Pennsylvania</i>	FY 03
PA	<b>Good Samaritan Hospital Regional Medical Center</b>	
	• <i>Schuylkill Alliance for Health Care Access</i>	FY 05
PA	<b>Hospice of Metropolitan Erie</b>	
	• <i>Hospice Telehealth Project</i>	FY 05

## Types of Grants

State	Name	Year Funded
PA	<b>Jewish Healthcare Foundation</b>	
	• <i>Reinventing Healthcare: the Application of the Pittsburgh Regional Healthcare Initiative's Perfecting Patient Care (PPC) System to Chronic Medical Conditions</i>	FY 05
PA	<b>Magee Rehabilitation Hospital</b>	
	• <i>Virtual Reality Technology</i>	FY 05
PA	<b>Mercy Health Partners</b>	
	• <i>Using Information Technology to Enhance Patient Safety</i>	FY 04, 05
PA	<b>Mercy Hospital of Pittsburgh</b>	
	• <i>Mobile Clinician Project</i>	FY 05
PA	<b>Millcreek Community Hospital</b>	
	• <i>Millcreek Health System Informatics Project</i>	FY 05
PA	<b>Oil Region Alliance of Business, Industry, &amp; Tourism</b>	
	• <i>The Venango Center for Healthcare Careers (VCHC)</i>	FY 04
PA	<b>Pennsylvania College of Optometry</b>	
	• <i>Ophthalmic Telehealth</i>	FY 02, 04
PA	<b>Pennsylvania Homecare Association</b>	
	• <i>Researching on the Financial Viability of Telehealth and Telehealth's Impact on Home Health Nurses</i>	FY 02, 03, 04
PA	<b>Penn State University</b>	
	• <i>Digital Informatics and Communications System</i>	FY 03
PA	<b>Pennsylvania State University College of Medicine</b>	
	• <i>Physician-Scientist Initiative</i>	FY 02, 05
PA	<b>Pinnacle Health System</b>	
	• <i>Reducing Variability to Deliver Safe Care</i>	FY 05
PA	<b>Safe Harbor Behavioral Health</b>	
	• <i>Safe Harbor Behavioral Health Telemedicine Program</i>	FY 05
PA	<b>SUN Home Health Services</b>	
	• <i>SUN Home Health Services Network</i>	FY 05
PA	<b>Susquehanna Health System</b>	
	• <i>Regional Electronic Medical Record</i>	FY 01, 02, 03, 04, 05
PA	<b>Thomas Jefferson University</b>	
	• <i>Integrative Medicine Informatics Feasibility Project</i>	FY 04, 05
PA	<b>Tyrone Hospital</b>	
	• <i>The Tyrone Hospital Health Information Network</i>	FY 05
PA	<b>University of Pittsburgh School of Nursing Nurse Anesthesia Program</b>	
	• <i>Nurse Anesthesia Rural and Elderly Expansion Project (NAREEP)</i>	FY 02
PA	<b>Wayne Memorial Hospital</b>	
	• <i>Improving Medication and Patient Safety</i>	FY 05
RI	<b>Family Resources Community Action</b>	
	• <i>HIV/AIDS Comprehensive Psychosocial Support Project</i>	FY 04
RI	<b>Kent County Visiting Nurse Association d/b/a VNA of Care New England</b>	
	• <i>Advanced Point of Care Technology at VNA of Care New England</i>	FY 04
	• <i>Increasing Access to Telehealth—Phase II</i>	FY 05
RI	<b>Thundermist Health Center</b>	
	• <i>Thundermist Health Center Electronic Health Record</i>	FY 05

## Types of Grants

State	Name	Year Funded
SC	<b>Advanced Technology Institute (ATI)</b> • <i>Healthcare and Emergency Awareness Response for Telehealth (HEART) Phase II</i>	FY 03, 04, 05
SC	<b>Beaufort-Jaspert-Hampton Comprehensive Health Services</b> • <i>South Carolina Prostate Cancer/Telehealth Project</i>	FY 00, 02, 03
SC	<b>Greenville Hospital System</b> • <i>ICU Telemedicine Project</i>	FY 04
SC	<b>Voorhees College</b> • <i>Developing a Telehealth Infrastructure to Address Health Disparities Through Education and Training</i>	FY 05
SD	<b>The University of South Dakota (USD)</b> • <i>Growing Our Own: A Nursing Education/Provider Partnership</i>	FY 02
TN	<b>University Health System, Inc.</b> • <i>High-Risk Newborn Services Project</i>	FY 05
TN	<b>University of Tennessee Health Science Center</b> • <i>Delta Health Partnership</i> • <i>Telehealth for Diabetic Patients in Hispanic and Underserved Rural Communities</i>	FY 05 FY 04
TN	<b>University of Tennessee (Knoxville)</b> • <i>Telehealth for Aging Population and for Diabetic Patients in Hispanic and Underserved Rural Communities</i>	FY 04
TX	<b>CHRISTUS Visiting Nurse Association of Houston</b> • <i>Home Monitoring: Demonstration Pilot of Cost Control</i>	FY 03
TX	<b>Cook Children's Medical Center</b> • <i>Rural Specialty Health Telemedicine Initiative</i>	FY 03
TX	<b>Harris County Hospital District</b> • <i>Specialty Access Through Telemedicine (SA++)</i>	FY 05
TX	<b>University of Texas Medical Branch Center to Eliminate Health Disparities</b> • <i>The Texas Telehealth Disparities Network</i>	FY 05
TX	<b>University of Texas Medical Branch—Galveston</b> • <i>Electronic Health Network</i>	FY 01, 02, 03
UT	<b>Association for Utah Community Health (AUCH)</b> • <i>Association for Utah Community Health Telehealth Program</i>	FY 04, 05
UT	<b>Dr. Ezekiel R. Dumke College of Health Professions</b> • <i>Health Opportunity Professional Exploration (HOPE)</i>	FY 05
UT	<b>Intermountain Healthcare</b> • <i>HRSa Telemedicine Pilot Program for Interpreting Services for the Deaf</i>	FY 05
UT	<b>University of Utah</b> • <i>Utah Telehealth Network Comprehensive Telehealth Services</i>	FY 04
VA	<b>University of Virginia</b> • <i>Southwest Virginia Alliance for Telemedicine</i>	FY 02, 04
VT	<b>The Community Health Center of Burlington</b> • <i>Community Health Center Technology Upgrade</i>	FY 03
VT	<b>The University of Vermont (UVM)</b> • <i>Pediatric Teletrauma Project</i>	FY 02, 04



## Types of Grants

State	Name	Year Funded
<b>WA</b>	<b>Children’s Hospital &amp; Regional Medical Center - Seattle</b>	
	• <i>Children’s Health Access Regional Telemedicine (CHART) Program</i>	FY 00, 01, 02, 03
<b>WA</b>	<b>Inland Northwest Health Services</b>	
	• <i>Northwest Telehealth—TeleER</i>	FY 05
	• <i>Northwest Telehealth—Telepharmacy</i>	FY 04
<b>WA</b>	<b>Yakima Valley Memorial Hospital</b>	
	• <i>Bedside Medication Management (MAR) System</i>	FY 05
<b>WI</b>	<b>La Crosse Medical Health Science Consortium</b>	
	• <i>Virtual Population Health Centers in the Rural Midwest</i>	FY 01, 03, 04
<b>WI</b>	<b>Rural Wisconsin Health Cooperative</b>	
	• <i>RWHC/WPHCA Telehealth Initiative</i> (WPHCA – Wisconsin Primary Health Care Association)	FY 04
<b>WI</b>	<b>St. Elizabeth Hospital Community Foundation</b>	
	• <i>Affinity/UW Telemedicine Project</i>	FY 03
<b>WV</b>	<b>Appalachian Pain Foundation</b>	
	• <i>Physician Education, Community Outreach Program to Prevent Diversion of Prescription Drugs</i>	FY 04
<b>WV</b>	<b>Robert C. Byrd Center for Rural Health</b>	
	• <i>Marshall University Southern West Virginia Rural Outreach Project</i>	FY 05
<b>WV</b>	<b>West Virginia University, Mountaineer Doctor TeleVision (MDTV)</b>	
	• <i>West Virginia Community Mental Telehealth Project</i>	FY 02
<b>WY</b>	<b>United Medical Center</b>	
	• <i>Regional Expansion of Telehealth and Distance Learning</i>	FY 04
<b>WY</b>	<b>Wyoming Department of Health,</b>	
	• <i>Wyoming Network for Telehealth (WyNETTE)</i>	FY 04

## **Types of Grants**

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### **Special Projects**

#### **Resource Center Development**

University of California – Davis

- *The Northern California Telemedicine Network (NCTN)*

The Curators of the University of Missouri

- *Missouri Telehealth Network*

#### **HRSA Telehealth Inventory**

East Carolina University

- *HRSA Telehealth Inventory Project*

#### **Evaluation**

Good Samaritan Hospital Foundation/Abt Associates

- *Mid-Nebraska Telemedicine Network*

#### **Licensure**

Center for Telemedicine Law

Federation of State Medical Boards of the United States, Inc.

# Components of the Project

All OAT grantees were asked whether their project(s) were involved in clinical telemedicine, distance learning, or electronic health records (or a combination of the three). Grantees' specific responses are indicated in this section.

N/A = Not Applicable/Not Available

Components of the Project

ST	Grantee	Clinical Telemedicine Services	Distance Learning			Information Systems/Electronic Health Records (***See Category Definitions Below)						Health Information Exchange Network / Other (please specify)	
			Professional Development – Non-Credit	Professional Development – Credit (e.g. CME)	Academic – Degree Granting	Record Contains Key Data	Results Reporting & Notification	Computerized Provider Order Entry	Electronic Integrated Medical Record	Reporting and Population Health Management	Scheduling Management		Electronic Billing
AK	<b>Alaska Native Tribal Health Consortium</b>												
	<i>Continued Advancement of Telehealth Capacity in Alaska</i>	•	•			•	•		•	•			Yes. This project will support the development of an Alaska RHIO; the exact information has not been defined.
	<i>The Summative Telemedicine Evaluation Project</i>												N/A
	<b>Alaska Psychiatric Institute (API)</b>												
	<i>API TeleBehavioral Health Project</i>	•	•								•	•	No.
AL	<b>University of South Alabama</b>												
	<i>Center for Strategic Health Innovation (CSHI) RMEDE/ BioTrac Project</i>		•	•		•	•	•	•		•		YES/EMR
	<i>Center for Strategic Health Innovation (CSHI) Traditional Telemedicine</i>	•	•	•	•	•							No.
AR	<b>University of Arkansas for Medical Sciences</b>												
	<i>South Arkansas Integrated Telehealth Oncology Program</i>	•	•	•	•	•	•	•	•	•	•	•	No.
AZ	<b>Arizona Board of Regents, University of Arizona</b>												
	<i>Arizona Diabetes Virtual Center for Excellence (ADVANCE)</i>	•	•	•									No.
	<i>Institute for Advanced Telemedicine and Telehealth (THealth)</i>	•	•	•									No.
	<b>Banner Good Samaritan Telemedicine Program</b>												
	<i>Banner Telehealth Program—Banner Health System</i>	•	•	•									No.
	<b>Maricopa County, Arizona</b>												
	<i>Correctional Health Services Telemedicine Initiative</i>	•	•	•									No.
CA	<b>Familia Unida Living with Multiple Sclerosis</b>												
	<i>Telehealth Grant</i>												N/A
	<b>Multi-Dimensional Imaging, Inc. of Newport Beach</b>												
	<i>Telemedicine for Improved Health Care and Education</i>	•				•	•	•			•	•	No.
	<b>San Joaquin County Health Care Services</b>												
	<i>Automated Drug Dispensing Medication Administration System</i>					•		•					No.
<b>Santa Rosa Memorial Hospital</b>													
	<i>Northern California Telemedicine Network (NCTN)</i>	•	•	•									No.

# Components of the Project

ST	Grantee	Clinical Telemedicine Services			Distance Learning			Information Systems/Electronic Health Records (***See Category Definitions Below)					Health Information Exchange Network / Other (please specify)
		Professional Development – Non-Credit	Professional Development – Credit (e.g. CME)	Academic – Degree Granting	Record Contains Key Data	Results Reporting & Notification	Computerized Provider Order Entry	Electronic Integrated Medical Record	Reporting and Population Health Management	Scheduling Management	Electronic Billing		
CO	<b>Avista Adventist Hospital</b>												
	<i>Clinical Integration Through Health Informatics</i>				•	•	•	•	•	•	•		Yes: health disparities and planned care consortium.
	<b>University of Colorado Health Sciences Center</b>												
	<i>Native Telehealth Outreach and Technical Assistance Program</i>		•										No.
DC	<b>American Red Cross</b>												
	<i>Congressionally Mandated Telehealth Grants</i>												N/A
	<b>Foundation For eHealth Initiative</b>												
	<i>Connecting Communities for Better Health Program</i>				•	•	•	•	•	•	•		Yes. The overall purpose of the Connecting Communities for Better Health Program is to accelerate the development; and sustainability of health information exchange networks.
	CareSpark, TN				•	•	•	•	•				The HRSA/OAT funds supported the process of strategic business planning for a regional health improvement initiative to be enabled through a health information exchange infrastructure.
	Colorado Health Exchange Network							•					Yes.
	Indiana Health Information Exchange				•	•							
	Maryland/DC Collaborative for Healthcare Information Technology, MD												No. The project does not participate in a working RHIO, however the goal of the project was to develop a
	Massachusetts Health Data Consortium (MA-SHARE), MA				•		•						Yes.
	Santa Barbara County Care Data Exchange, CA.				•	•							Yes.

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DC	St. Joseph's Hospital Foundation (WHATCOM HIE), WA					•	•	•	•	•	•	•	Yes. Self-sustaining network for access to health information, resources, communication and anti-virus, anti-spam protection across the community.
	WHATCOM HIE		•			•		•	•				
	Taconic Educational Research Fund, NY					•	•						Yes.
FL	<b>BayCare Health System</b>												
	<i>Electronic Medication and Clinical Services Ordering System</i>	•					•	•	•				No.
	<b>Florida Cancer Research Cooperative, University of South Florida</b>												
	<i>Clinical Trial Patient/Physician Information &amp; Education Program</i>												N/A
	<b>University of Florida College of Dentistry (UFCD)</b>												
	<i>University of Florida College of Dentistry (UFCD)</i>		•	•				•					No.
GA	<b>Morehouse School of Medicine</b>												
	<i>Diabetes Screening Telehealth Project</i>	•		•		•						•	Yes. Diabetes Screening research study part of southeastern clinicians network.
	<b>Ware County Health Department</b>												
	<i>Rural Health Telemedicine Grant Program</i>	•	•	•									No.
HI	<b>Hawaii Primary Care Association (HPCA)</b>												
	<i>The Hawai'i CHC Telehealth Network Project</i>	•	•										Yes.
	<b>Moloka'i General Hospital</b>												
	<i>Moloka'i Telehealth Network</i>	•		•									Yes. Telederm Solutions, Inc. is a collaborative demonstration.
IA	<b>Iowa Chronic Care Consortium</b>												
	<i>Congestive Heart Failure and Diabetes Telemanagement Protocols</i>	•					•						No.
	<i>Iowa Medicaid Population Disease Management Demonstration</i>	•				•	•		•				No.
	<b>Mercy Foundation</b>												
	<i>Midwest Rural Telemedicine Consortium</i>	•	•	•	•								No.
ID	<b>Clearwater Valley Hospital and Clinics, Inc.</b>												
	<i>Clearwater Valley Hospital: Electronic Medical Records</i>					•	•	•	•	•		•	Yes/shared info between primary care clinics and hospitals

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ID	<b>Idaho State University, Institute of Rural Health</b>													
	<i>Telehealth Idaho</i>	•	•	•	•	•	•	•	•	•	•	•	•	Yes.
	<b>North Idaho Rural Health Consortium (NIRHC)</b>													
	<i>Expanding Telehealth to North Idaho Districts (EXTEND)</i>	•	•	•	•	•	•	•	•			•	•	Yes. Working with regional and local RHIOs.
IL	<b>Northern Illinois University/Fermi National Laboratory</b>													
	<i>Neutron Radiation for Cancer Treatment</i>	•											•	No.
	<b>OSF Saint James-John W. Albrecht Medical Center</b>													
	<i>OSF Saint James Telehealth Network</i>	•	•	•		•	•		•					No.
	<b>Saint John's Hospital</b>													
	<i>Neonatal Telehealth Project in Rural Illinois Located at the Perinatal Center</i>	•	•	•										
	<b>Southern Illinois University School of Medicine</b>													
	<i>Downstate Illinois Regional Telehealth Project</i>	•	•	•	•	•	•	•	•	•	•	•	•	No.
IN	<b>James Whitcomb Riley Hospital for Children</b>													
	<i>Riley Connections</i>	•	•	•		•								No.
	<b>Health &amp; Hospital Corporation of Marion County</b>													
	<i>Congressionally-Mandated Telehealth Grants</i>	•				•	•							Yes. Local Health Information Exchange Organization.
KS	<b>University of Kansas Medical Center</b>													
	<i>Expansion of the Kansas Telehealth Network Sustainability and Cost Benefit Evaluation of the Kansas Telehealth Network</i>	•	•	•										No.
KY	<b>The James B. Haggin Memorial Hospital</b>													
	<i>PACS (Picture Archiving and Communication System)</i>					•	•							No.
	<b>Marcum &amp; Wallace Memorial Hospital</b>													
	<i>Teleradiology Enhancement Project</i>	•					•							Yes. Radiology procedures and reports access to physicians and radiologists.
	<b>New Horizons Health Systems, Inc.</b>													
	<i>Information Technology Development and Improvement</i>					•	•	•	•	•	•	•	•	No, but planned for the future.

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KY	<b>University of Kentucky Research Foundation—Kentucky TeleCare</b>												
	<i>Improving Health Outcomes for Children in Rural Kentucky Schools</i>	•	•	•		•	•	•	•	•	•	•	No.
LA	<b>Southwest Louisiana Health Care Systems</b>												
	<i>Community Hospital Telehealth Consortium</i>	•	•	•							•		No.
	<b>Woman’s Hospital</b> <i>Expansion of Physician Internet Portal, Woman’s POL</i>					•	•	•		•			No.
MA	<b>Massachusetts College of Pharmacy and Health Sciences</b>												
	<i>Worcester Campus Distance Learning Initiative</i>		•	•	•								No.
	<b>UMass Memorial Medical Center</b> <i>PACS Teleradiology Project</i>	•				•	•						Yes. Radiological images and reports planned.
ME	<b>Regional Medical Center at Lubec</b>												
	<i>Maine Nursing Home Telehealth Network</i>	•	•	•			•						No.
MI	<b>Altarum Institute</b>												
	<i>Concepts for a Michigan Health Information Network (MHIN)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No, but planned for the future.
	<b>Hillsdale Community Health Center</b>												
	<i>PACS System</i>					•							No.
	<b>Hurley Medical Center</b>												
	<i>Clinical Information System Replacement Project</i>					•	•	•	•				No.
	<b>Michigan State University</b> <i>Tele hospice in Mid-Michigan</i>	•	•										
MN	<b>Western Michigan University</b>												
	<i>The Application of Tele-Allied Health in Rural Counties in Southwest Lower Michigan</i>	•	•	•	•								No.
	<b>Fairview Health Services</b> <i>Ambulatory Electronic Medical Record System – Twin Cities Metropolitan Care Systems</i>					•	•	•	•	•	•	•	Yes.
MO	<b>University of Minnesota</b> <i>Fairview – University of Minnesota Telemedicine Network</i>	•		•					•		•		No.
	<b>The Curators of the University of Missouri</b> <i>Missouri Telehealth Network</i>	•		•					•		•		No.
MT	<b>Benefis Healthcare Foundation</b>												
	<i>NMHA/REACH Telehealth Network Development Project</i>	•	•	•									No.



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MT	<b>Billings Clinic Foundation</b> <i>Effect of an Integrated CIS on Inpatient and post-Discharge Medication Administration Errors and Chronic Disease Management</i>							•	•				No.
	<b>Deaconess Billings Clinic Foundation</b> <i>Eastern Montana Telemedicine Network</i>	•	•	•									Unknown at this time.
	<i>Revolutionizing Diabetes Care at Billings Clinic: A Model for Chronic Disease Care</i>				•	•		•	•				Yes.
	<b>Saint Patrick Hospital &amp; Health Foundation</b> <i>Montana Cardiology Telemedicine Network</i>	•			•	•							No.
	<b>Saint Vincent Healthcare Foundation</b> <i>Mansfield Health Education Center (MHEC)</i>	•	•	•									No.
	<b>University of Montana - Missoula</b> <i>Improving Health Among Rural Montanans (IPHARM)</i>	•											No.
	<b>Duke University Medical Center</b> <i>Patient Inclusion in a Community-Based Telehealth Network</i>				•			•	•	•			Yes. Collaborative research study with exchange between primary care providers, care managers and government agencies.
	<b>Educational and Research Consortium of Western Carolinas</b> <i>Western North Carolina Regional Data Link Project</i>				•	•		•					Yes. Electronic exchange of patient data between 16 western NC hospitals.
ND	<b>North Dakota State University College of Pharmacy</b> <i>North Dakota Telepharmacy Project</i>	•										No.	
	<b>Northland Healthcare Alliance</b> <i>St. Alexius/Northland Telecare Network</i>	•	•	•	•						•	Yes. Northland has received a grant to create such a network.	
	<b>Good Samaritan Hospital Foundation</b> <i>Mid-Nebraska Telemedicine Network (MNTN)</i>	•	•	•	•	•	•	•				No.	
NE	<b>University of Nebraska Medical Center</b> <i>Distance Education of Undergraduate Nursing Students</i>			•								No.	
	<b>Hackensack University Medical Center</b> <i>Implementation of Oncology Patient Management System</i>				•	•	•	•	•	•	•	No.	

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NJ	<b>Saint Peter's University Hospital</b>												
	<i>Medical Technology Center for Infants and Children</i>												N/A
NM	<b>New Mexico Human Services Department</b>												
	<i>New Mexico Tele-Behavioral Health Improvement Project</i>	•		•									No.
	<b>The University of New Mexico Health Sciences Center</b>												
	<i>Project TOUCH (Telehealth Outreach for Unified Community Health)</i>												N/A
NV	<b>Rural Health Telemedicine Program</b>	•	•	•									No.
	<b>Nevada Rural Hospital Partners Foundation</b>												
	<i>Digital Imaging System for Rural Nevada (DISRN)</i>						•						No.
	<b>University of Nevada, Reno</b>												
NY	<i>Biomedical Imaging Laboratory</i>												N/A
	<b>Community Health Care Services Foundation, Inc.</b>												
	<i>Introducing Home Telehealth in New York's 20<sup>th</sup> Congressional District</i>	•											No.
	<b>Genesee Gateway Local Development Corporation, Inc.</b>												
	<i>Upstate New York Telemedicine Study</i>	•	•	•									No.
	<b>Integrated Community Alternatives Network, Inc.</b>												
	<i>Foster Care Tracker and Assessment Tool</i>	•				•							No.
	<b>Long Island Association for Millennium Center for Convergent Technologies</b>												
	<i>An Electronic Clinical Trial System to Reduce Drug Development Costs</i>					•				•			Yes. Project partners use available existing communications.
	<b>Montefiore Medical Center</b>												
<i>Electronic Medical Records Expansion</i>	•				•	•	•	•	•	•		Yes. Montefiore is a member in the newly formed Bronx RHIO.	
<b>New York Presbyterian Hospital</b>													
<i>Systems Technology Interfacing Teaching and Community Hospitals (STITCH)</i>												Yes. RHIO among 4 hospital sites and 14 ambulatory care clinics.	
<b>Research Foundation, State University of New York (SUNY) at Buffalo</b>													
<i>Telehealth New York</i>	•	•	•		•				•	•		Yes. Electronic Health Information Exchange.	

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NY	<b>The Rosalind and Joseph Gurwin Jewish Geriatric Center of Long Island</b>												
	<i>Demonstration of Implementation of Electronic Medical Record in Skilled Nursing Facility</i>					•	•	•	•				No.
OH	<b>Case Western Reserve University</b>												
	<i>NetWellness</i>												N/A
	<b>Cincinnati Children’s Hospital Medical Center</b>												
	<i>Pursuing Perfection—Transforming Health Care Delivery</i>	•			•	•				•			No.
	<b>Northeastern Ohio Universities College of Medicine (NEOUCOM)</b>												
	<i>Medical Education Network Teaching Ohio Region III (MENTOR)</i>	•	•	•							•		No.
	<b>Ohio Board of Regents</b>												
	<i>Medical Collaboration Network</i>	•	•	•	•								No.
	<b>Ohio State University Research Foundation (for the Ohio SupercomputerCenter)</b>												
	<i>Computational Approaches to Research on Cancer in Children and Others</i>					•		•					No.
OK	<b>Southern Consortium for Children</b>												
	<i>Southern Ohio Telepsychiatric Network</i>	•	•	•									No.
OK	<b>INTEGRIS Health, Inc.</b>												
	<i>INTEGRIS Rural Telemedicine Project</i>	•	•	•		•	•		•	•	•		Yes. Diabetes & wound care collaborative research study.
	<b>Oklahoma Office of Rural Health</b>												
	<i>Rural Health Telemedicine Program</i>	•		•									No. In planning stages.
OR	<b>OSU Center for Rural Health</b>												
	<i>Rural Oklahoma Telemedicine Service Expansion</i>	•		•									No, though we do have plans to develop.
OR	<b>Asante Health System</b>												
	<i>Asante Clinical Systems Initiative</i>	•		•		•	•	•					No.
	<b>Tillamook Lightwave IGA</b>												
PA	<i>Tillamook Lightwave Telehealth Technologies for Tillamook County Rural Communities</i>												N/A
	<b>Clarion University</b>												
PA	<i>Primary Care Education for the Citizens of Rural Pennsylvania</i>			•	•								No.
	<b>Community Nurses Home Health and Hospice, Inc.</b>												
	<i>Home Telehealth</i>	•											No.

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PA	<b>Geisinger Clinic</b>												
	<i>Developing a Stoke Care Educational Program for Rural Pennsylvania</i>	•		•					•				Yes. Working with an AHRQ grant to develop.
	<b>Good Samaritan Hospital Regional Medical Center</b>												
	<i>Schuylkill Alliance for Health Care Access</i>												N/A
	<b>Hospice of Metropolitan Erie</b>												
	<i>Hospice Telehealth Project</i>	•				•	•	•	•	•		•	No.
	<b>Jewish Healthcare Foundation</b>												
	<i>Reinventing Healthcare: The Application of the Pittsburgh Regional Healthcare Initiative's Perfecting Patient Care (PPC) System to Chronic Medical Conditions</i>		•	•					•	•			No.
	<b>Magee Rehabilitation Hospital</b>												
	<i>Virtual Reality Technology</i>	•											No.
	<b>Mercy Health Partners</b>												
	<i>Using Information Technology to Enhance Patient Safety</i>					•		•	•				Yes. Available to physicians and clinicians in office or home.
	<b>Mercy Hospital of Pittsburgh</b>												
	<i>Mobile Clinician Project</i>					•							No.
	<b>Millcreek Community Hospital</b>												
	<i>Millcreek Health System Informatics Project</i>					•	•	•	•	•	•	•	Yes.
	<b>Oil Region Alliance of Business, Industry, &amp; Tourism</b>												
	<i>The Venango Center for Healthcare Careers (VCHC)</i>		•										No.
	<b>Pennsylvania College of Optometry</b>												
	<i>Ophthalmic Telehealth</i>	•	•			•							No.
<b>Pennsylvania Homecare Association</b>													
<i>Researching on the Financial Viability of Telehealth and Telehealth's Impact on Home Health Nurses</i>	•				•							Unavailable at this time.	
<b>Penn State University</b>													
<i>Digital Informatics and Communications System</i>	•		•									Yes. Pennsylvania Cancer Care Coalition (PAC3)	
<b>Pennsylvania State University College of Medicine</b>													
<i>Physician-Scientist Initiative</i>		•	•	•								Clinical Trials Network	
<b>Pinnacle Health System</b>													
<i>Reducing Variability to Deliver Safe Care</i>	•				•	•	•	•	•	•	•	Yes. Dauphin County Health Collaborative.	

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PA	<b>Safe Harbor Behavioral Health</b>													
	<i>Safe Harbor Behavioral Health Telemedicine Program</i>	•												No.
	<b>SUN Home Health Services</b>													
	<i>SUN Home Health Services Network</i>	•												No.
	<b>Susquehanna Health System</b>													
	<i>Regional Electronic Medical Record</i>					•	•	•	•	•	•	•		No.
	<b>Thomas Jefferson University</b>													
	<i>Integrative Medicine Informatics Feasibility Project</i>		•											No.
	<b>Tyrone Hospital</b>													
	<i>The Tyrone Hospital Health Information Network</i>						•	•	•	•				No.
<b>University of Pittsburgh School of Nursing Nurse Anesthesia Program</b>														
<i>Nurse Anesthesia Rural and Elderly Expansion Project (NAREEP)</i>		•		•									No.	
<b>Wayne Memorial Hospital</b>														
<i>Improving Medication and Patient Safety</i>						•			•	•	•	•	No.	
RI	<b>Family Resources Community Action</b>													
	<i>HIV/AIDS Comprehensive Psychosocial Support Project</i>													N/A
	<b>Kent County Visiting Nurse Association d/b/a VNA of Care New England</b>													
	<i>Advancing Point-of-Care Technology at VNA of Care New England</i>						•	•		•		•		No.
	<i>Increasing Access to Telehealth—Phase II</i>	•					•	•		•				No.
<b>Thundermist Health Center</b>														
<i>Thundermist Health Center Electronic Health Record</i>						•	•	•	•	•	•		Yes. RI RHIO, RIHCA Data Warehouse, HRSA HD Collaboratives, RI DOH Diabetes Control Program.	
SC	<b>Advanced Technology Institute (ATI)</b>													
	<i>Healthcare and Emergency Awareness Response for Telehealth (HEART) Phase II</i>						•				•			No.
	<b>Beaufort-Jaspert-Hampton Comprehensive Health Services</b>													
	<i>South Carolina Prostate Cancer/Telehealth Project</i>						•				•	•	•	Unavailable at this time.
	<b>Greenville Hospital System</b>													
	<i>ICU Telemedicine Project</i>	•												No.
<b>Voorhees College</b>														
<i>Developing a Telehealth Infrastructure to Address Health Disparities Through Education and Training</i>				•									No.	

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SD	<b>Avera Health</b>													
	<i>Avera Rural and Frontier Disease Management Telehealth Network</i>	•	•	•										Yes—with partners within the Avera Health System.
	<b>The University of South Dakota (USD)</b>													
TN	<b>University Health System, Inc.</b>													
	<i>High-Risk Newborn Services Project</i>	•		•										No.
	<b>University of Tennessee Health Science Center</b>													
	<i>Delta Health Partnership</i>	•	•	•	•									Yes.
	<i>Mid-Appalachia Telehealth Project</i>	•	•	•										No.
	<i>Mid-South Telehealth Consortium</i>	•	•	•										No.
TX	<b>CHRISTUS Visiting Nurse Association of Houston</b>													
	<i>Home Monitoring: Demonstration Pilot Of Cost Control</i>	•												No.
	<b>Cook Children's Medical Center</b>													
	<i>Rural Specialty Health Telemedicine Initiative</i>	•	•	•										No.
	<b>Harris County Hospital District</b>													
	<i>Specialty Access Through Telemedicine (SA++)</i>	•												Unavailable at this time.
	<b>University of Texas Health Science Center at San Antonio</b>													
	<i>Diabetes Risk Reduction via Community Based Telemedicine (DiRReCT)</i>	•		•		•				•				No.
	<b>University of Texas Medical Branch Center To Eliminate Health Disparities</b>													
	<i>The Texas Telehealth Disparities Network</i>	•		•		•				•	•			Yes. In planning stages.
<b>University of Texas Medical Branch – Galveston</b>														
<i>Electronic Health Network</i>	•	•	•		•	•	•	•	•	•	•		Yes.	

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UT	<b>Association for Utah Community Health (AUCH)</b>													
	<i>Association for Utah Community Health Telehealth Program</i>	•	•										No.	
	<b>Dr. Ezekiel R. Dumke College of Health Professions</b>													
	<i>Health Opportunity Professional Exploration (HOPE)</i>		•	•										
	<b>Intermountain Healthcare</b>													
	<i>HRSA Telemedicine Pilot Program for Interpreting Services for the Deaf</i>	•											Yes. Intermountain Healthcare is a fully integrated delivery system, which includes doctors, hospitals, clinics, and a health plan.	
UT	<b>University of Utah</b>													
	<i>Utah Telehealth Network Comprehensive Telehealth Services</i>	•	•	•	•	•	•					No.		
VA	<b>University of Virginia</b>													
	<i>Southwest Virginia Alliance for Telemedicine</i>	•	•	•								Yes. For patient education, diabetes, smoking cessation, obesity, cancer, nutrition.		
VT	<b>The Community Health Center of Burlington</b>													
	<i>Community Health Center Technology Upgrade</i>	•		•		•	•	•	•	•	•	No.		
	<b>The University of Vermont (UVM)</b>													
	<i>Pediatric Teletrauma Project</i>	•										Yes. Currently partnering with Vermont Information Technology Leaders.		
WA	<b>Children's Hospital and Regional Medical Center – Seattle</b>													
	<i>Children's Health Access Regional Telemedicine (CHART) Program</i>	•										No.		
	<b>Inland Northwest Health Services</b>													
	<i>Northwest Telehealth--TeleER</i>	•	•			•	•	•	•	•	•	Yes (RHIO).		
	<i>Northwest Telehealth--Telepharmacy</i>	•	•			•	•	•	•	•	•	Yes (RHIO).		
	<b>Yakima Valley Memorial Hospital</b>													
	<i>Bedside Medication Management (MAR) System</i>							•				No.		

## Components of the Project

ST	Grantee	Clinical Telemedicine Services	Distance Learning			Information Systems/Electronic Health Records (***See Category Definitions Below)							Health Information Exchange Network / Other (please specify)
			Professional Development – Non-Credit	Professional Development – Credit (e.g. CME)	Academic – Degree Granting	Record Contains Key Data	Results Reporting & Notification	Computerized Provider Order Entry	Electronic Integrated Medical Record	Reporting and Population Health Management	Scheduling Management	Electronic Billing	
WI	<b>La Crosse Medical Health Science Consortium</b>												
	<i>Virtual Population Health Centers in the Rural Midwest</i>	•		•									Yes. Diabetes collaborative research study.
	<b>Marshfield Clinic Telehealth Network</b>												
	<i>Marshfield Clinic Telehealth Network</i>	•				•	•	•	•	•	•	•	Yes. Provides EMR to other organizations that support outreach, telepathology, and other clinical applications.
	<b>Rural Wisconsin Health Cooperative</b>												
	<i>RWHC/WPHCA Telehealth Initiative</i>	•	•	•	•								No.
WV	<b>St. Elizabeth Hospital Community Foundation</b>												
	<i>Affinity/UW Telemedicine Project</i>	•				•	•	•	•		•		No.
WV	<b>Appalachian Pain Foundation</b>												
	<i>Physician Education, Community Outreach Program to Prevent Diversion of Prescription Drugs</i>			•									No.
WV	<b>Robert C. Byrd Center for Rural Health</b>												
	<i>Marshall University Southern West Virginia Rural Outreach Project</i>		•	•		•			•				Yes. In planning stages.
WV	<b>West Virginia University, Mountaineer Doctor TeleVision (MDTV)</b>												
	<i>West Virginia Community Mental Telehealth Project</i>	•	•	•									No.
WY	<b>United Medical Center</b>												
	<i>Regional Expansion of Telehealth and Distance Learning</i>	•		•									No.
WY	<b>Wyoming Department of Health</b>												
	<i>Wyoming Network for Telehealth (WyNETTE)</i>	•	•	•									Yes. Planned for tumor board.



## Components of the Project

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### Electronic Health Records Definitions

<b><u>Key Data</u></b>	Includes any of the following: Problem List, Procedures, Diagnoses, Medication List, Allergies, Demographics, Diagnostic Test Results, Radiology Results, Health Maintenance, Advance Directives, Disposition, and/or Level of Service.
<b><u>Results Reporting &amp; Notification</u></b>	Includes Laboratory, Microbiology, Pathology, Radiology Reports, and Consults.
<b><u>Computerized Provider Order Entry</u></b>	Includes availability of Electronic Prescribing, Laboratory, Microbiology, Pathology, Radiology, Nursing, Supplies, Consults, and Ancillary.
<b><u>Electronic Integrated Medical Record</u></b>	Defined as the extent to which a single record integrates data from different settings, providers, and organizations (e.g., <i>primary care physician, specialist, hospital</i> ). Can include Within-Setting, Cross-Setting, Inpatient – Outpatient, Other Cross-Setting.
<b><u>Reporting and Population Health Management</u></b>	Includes Patient Safety and Quality Reporting ( <i>Routine reporting of key quality indicators to clinicians, External accountability reporting, and Ad hoc reporting</i> ), Public Health Reporting ( <i>Reportable diseases and Immunization</i> ), De-Identifying Data, and Disease Registries.
<b><u>Scheduling Management</u></b>	Includes Appointments, Admissions, Surgery/procedure scheduling.
<b><u>Electronic Billing</u></b>	Using computerized systems for submission of paperless medical and related claims to insurers and other payers.

# Major Services

**OAT Grantees were asked to identify the major clinical services delivered by their project(s), if applicable. For the category “Rehabilitation,” grantees were instructed to use a key of abbreviations (provided at the end of this section) to indicate their specific service. This section covers only those projects providing clinical telemedicine services. For a complete listing of all services, see the individual project descriptions.**

**I = Number of sites where service is implemented      P = Number of sites where service is planned**

Major Services

ST	Grantee	Allergy	Asthma Control	Cardiology	Diabetes Care and Management	Dermatology	Endocrinology (not diabetes)	ENT	Infectious Disease	Intensivist/Remote ICU Monitoring	Mental Health	Neonatology	Nutrition	Ob/Gyn	Oncology	Orthopedics	Pain Management	Pediatrics	Pharmacy	Pulmonology	Radiology	Rehabilitation (see key at bottom of chart)	Remote Patient Monitoring	Rheumatology	Surgery (all types)	Trauma/Emergency Medicine	Other Services (please specify)
AK	Alaska Native Tribal Health Consortium			P/3																							
	Continued Advancement of Telehealth Capacity in Alaska				P/3			I/1 P/3																			Audiology: I/1, P/3
	The Summative Telemedicine Evaluation Project																										N/A
	Alaska Psychiatric Institute (API)										P/9, I/8								P/9, I/8								Substance abuse assessment & consultations; Pediatrics limited to developmental & Fetal Alcohol Spectrum & traumatic brain injury screenings. Licensing supervision, case consultation, professional trainings, & consumer group psycho-education.
	API TeleBehavioral Health Project																										



Major Services

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AZ	Banner Good Samaritan Telemedicine Program																										
	Banner Telehealth Program—Banner Health System			P/1										P/1												P/3	Neuro: 1/1
CA	Maricopa County																										
	Correctional Health Services Telemedicine Initiative		1/2																								CME: 1/1 Physical Therapy: 1/2
	Familia Unida Living with Multiple Sclerosis																										N/A
	Telehealth Grant																										N/A
CA	Multi-Dimensional Imaging, Inc. of Newport Beach																										
	Telemedicine for Improved Health Care and Education																										
	San Joaquin County Health Care Services																										
	Automated Drug Dispensing Medication Administration System																										N/A

Major Services

ST	Grantee	Allergy	Asthma Control	Cardiology	Diabetes Care and Management	Dermatology	Endocrinology (not diabetes)	ENT	Infectious Disease	Intensivist/Remote ICU Monitoring	Mental Health	Neonatology	Nutrition	Ob/Gyn	Oncology	Orthopedics	Pain Management	Pediatrics	Pharmacy	Pulmonology	Radiology	Rehabilitation (see key at bottom of chart)	Remote Patient Monitoring	Rheumatology	Surgery (all types)	Trauma/Emergency Medicine	Other Services (please specify)	
		CA	Santa Rosa Memorial Hospital				1/1	1/2	1/6		1/1		1/8		1/2											1/3		
CA	Northern California Telemedicine Network (NCTN)																											
CO	Avista Adventist Hospital																											
	Clinical Integration Through Health Informatics																										N/A	
	University of Colorado Health Sciences Center																											
	Native Telehealth Outreach and Technical Assistance Program																										N/A	
DC	American Red Cross																											
	Congressionally Mandated Telehealth Grants																											N/A
	Foundation For eHealth Initiative																											N/A
	Connecting Communities for Better Health Program																											N/A
	CareSpark, TN																											N/A

**Major Services**

ST	Grantee	Allergy	Asthma Control	Cardiology	Diabetes Care and Management	Dermatology	Endocrinology (not diabetes)	ENT	Infectious Disease	Intensivist/Remote ICU Monitoring	Mental Health	Neonatology	Nutrition	Ob/Gyn	Oncology	Orthopedics	Pain Management	Pediatrics	Pharmacy	Pulmonology	Radiology	Rehabilitation (see key at bottom of chart)	Remote Patient Monitoring	Rheumatology	Surgery (all types)	Trauma/Emergency Medicine	Other Services (please specify)	
DC	Colorado Health Exchange Network, CO																										N/A	
	Indiana Health Information Exchange, IN																											N/A
	Maryland/DC Collaborative for Healthcare Information Technology, MD																											N/A
	Massachusetts Health Data Consortium (MA-SHARE), MA																											N/A
	National Institute for Medical Informatics, WI																										N/A	
	Santa Barbara County Care Data Exchange, CA																										N/A	
	St. Joseph's Hospital Foundation (WHATCOM HIE), WA																										N/A	

Major Services

		Allergy	Asthma Control	Cardiology	Diabetes Care and Management	Dermatology	Endocrinology (not diabetes)	ENT	Infectious Disease	Intensivist/Remote ICU Monitoring	Mental Health	Neonatology	Nutrition	Ob/Gyn	Oncology	Orthopedics	Pain Management	Pediatrics	Pharmacy	Pulmonology	Radiology	Rehabilitation (see key at bottom of chart)	Remote Patient Monitoring	Rheumatology	Surgery (all types)	Trauma/Emergency Medicine	Other Services (please specify)
ST	Grantee																										
DC	Taconic Educational Research Fund, NY																										
FL	BayCare Health Systems																										
	Electronic Medication and Clinical Services Ordering Subsystem			P/9	p/9																						
	Florida Cancer Research Cooperative, University of South Florida																										
	Clinical Trial Patient/Physician Information and Education Program																										N/A
GA	University of Florida College of Dentistry (UFCD)																										N/A
	Morehouse School of Medicine																										
	Diabetes Screening Telehealth Project																										Ophthalmology: 1/2



Major Services

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	Ware County Health Department																										
	Rural Health Telemedicine Grant Program	I/2	I/1																								
	Hawai'i Primary Care Association (HPCA)																										
	The Hawai'i CHC Telehealth Network Project					I/5					P/5																
	Moloka'i General Hospital																										
	Moloka'i Telehealth Network				I/1					I/1																	Josline Vision Network Telehealth Eye Care: P/1
	Iowa Chronic Care Consortium																										
	Congestive Heart Failure and Diabetes Telemanagement Protocols				I/8																						CHF I/11
	Iowa Medicaid Population Disease Management Demonstration			P/1																							

Major Services

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		IA	Mercy Foundation																								
	Midwest Rural Telemedicine Consortium			I/5, P/5	P/45	P/5					P/5			I/2													Dialysis: I/3, P/3 Wound Care: I/3
	Clearwater Valley Hospital and Clinics, Inc.																										
	Clearwater Valley Hospital: Electronic Medical Records																										N/A
ID	Idaho State University, Institute of Rural Health																										
	Telehealth Idaho																										Home Health Services: I/12 Dentistry: I/1 Hispanic Health Promotoras: I/3
	North Idaho Rural Health Consortium (NIRHC)																										
	Expanding Telehealth to North Idaho Districts (EXTEND)										I/6																Pathology: I/6

Major Services

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IL	Northern Illinois University/Fermi National Laboratory																											
	Neutron Radiation for Cancer Treatment														I/1													
	OSF Saint James-John W. Albrecht Medical Center																											
	OSF Saint James Telehealth Network			P/1																							Family Practice: P/23	
	Saint John's Hospital																											
	Neonatal Telehealth Project in Rural Illinois Located at the Perinatal Center											P/13		P/13														
	Southern Illinois University School of Medicine																											
	Downstate Illinois Regional Telehealth Project			I/11																								Neurology: I/3 Home Care: I/10









Major Services

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MI	Michigan State University																										Palliative Care: P/18 Bereavement Care: P/18 Caregivers support: P/18
	Teleospice in Mid-Michigan																P/18										
MI	Western Michigan University																										Home Health (Up to 100 patients' homes)
	The Application of Tele-Allied Health in Rural Counties in Southwest Lower Michigan																										
MN	Fairview Health Services																										
	Ambulatory Electronic Medical Record System – Twin Cities Metropolitan Care Systems																										N/A
MN	University of Minnesota																										Wound Care: I/1 Transplant consults: I/1 Gastroenterology: I/1 Neurology: I/1 Home Care: I/1 NICU Visits: I/1 Geriatrics: P/4 Fetal & Maternal Health: P/1
	Fairview – University of Minnesota Telemedicine Network	I/1, P/2			P/14	I/10, P/14	P/3																				



Major Services

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MO	The Curators of the University of Missouri																										
	Missouri Telehealth Network			p/10	p/14																						
MT	Benefis Healthcare Foundation																										
	MMHA/REACH Telehealth Network Development Project										i/4																
	Billings Clinic Foundation																										
	Effect of an Integrated C/S on Inpatient and Post-Discharge Medication Administration Errors and Chronic Disease Management																									N/A	
MT	Deaconess Billings Clinic Foundation																										
	Eastern Montana Telemedicine Network																										CV surgery follow-up
	Revolutionizing Diabetes Care at Billings Clinic: A Model for Chronic Disease Care																										N/A

Major Services

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		MT	Saint Patrick Hospital & Health Foundation																								
Montana Cardiology Telemedicine Network				1/15																							
Saint Vincent Healthcare Foundation																											
Mansfield Health Education Center (MHEC)				1/3, P/2	1/20						1/7	1/2	P/2			1/6, P/1		1/2, P/2	1/2		1/4					1/2, P/1	Genetics: 1/1 Perinatology: 1/1
The University of Montana - Missoula																											
NC	Improving Health Among Rural Montanans (IPHARM)			1/43	1/43																						Bone Density: 1/43
	Duke University Medical Center																										N/A
	Patient Inclusion in a Community Based Telehealth Network																										

Major Services

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NC	Educational and Research Consortium of Western Carolinas																										
		Western North Carolina Regional Data Link Project																		I/57							
ND	Northland Healthcare Alliance																										
		North Dakota Telepharmacy Project																									
NE	Good Samaritan Hospital Foundation																										
		St. Alexius/Northland Telecare Network			I/17	I/15	P/17		I/17	I/17		I/17	I/17					I/17			I/17	I/4	SLP: I/17		I/17	I/17	I/5
NE	Mid-Nebraska Telemedicine Network (MNTN)			I/18	I/18	I/18		I/18			I/18	I/18	I/18	I/18	I/18	I/18					I/18	SLP: I/18, OT: I/18				I/8, P/7	Genetics: I/18 Geriatrics: I/18

Major Services

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NE	University of Nebraska Medical Center																											
	Distance Education of Undergraduate Nursing Students																										N/A	
NJ	Hackensack University Medical Center																											
	Implementation of Oncology Patient Management System																										N/A	
	Saint Peter's University Hospital																											
NM	Medical Technology Center for Infants and Children																											N/A
	New Mexico Human Services Department																											
	New Mexico Tele-Behavioral Health Improvement Project										P/5																	

Major Services

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NM	The University of New Mexico Health Science Center																											
	Project TOUCH (Telehealth Outreach for Unified Community Health)										1/3, P/4		1/2															N/A
	Rural Health Telemedicine Program																											
NV	Nevada Rural Hospital Partners Foundation																											
	Digital Imaging System for Rural Nevada (DISRN)																											N/A
	University of Nevada, Reno																											N/A
	Biomedical Imaging Laboratory																											N/A
	Community Health Care Services Foundation, Inc.																											
NY	Introducing Home Telehealth in New York's 20 <sup>th</sup> Congressional District																											
	Genesee Gateway Local Development Corporation, Inc.																											
	Upstate New York Telemedicine Study																											Clinical Sites: P/5 Education: P/2

Major Services

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NY	Integrated Community Alternatives Network, Inc.																											
	Foster Care Tracker and Assessment Tool										I/2, P/1																	
	Long Island Association for Millennium Center for Convergent Technologies																											
	An Electronic Clinical Trial System to Reduce Drug Development Costs																										N/A	
	Monteriore Medical Center																											
	Electronic Medical Records Expansion	I/1	I/1	I/1	I/1	I/1				I/1				I/1														
	New York Presbyterian Hospital																											
	Systems Technology Interfacing Teaching and Community Hospitals (STITCH)																											N/A
	Research Foundation, State University of New York (SUNY) at Buffalo																											
	Telehealth New York					P/2				I/10		I/1, P/5					I/10, P/5											I/52, P/2
																											Gastroenterology: I/10	

Major Services

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NY	The Rosalind and Joseph Gurwin Jewish Geriatric Center of Long Island																											
NY	Demonstration of Implementation of Electronic Medical Record in Skilled Nursing Facility																											
OH	Case Western Reserve University Net/Wellness																										N/A	
	Cincinnati Children's Hospital Medical Center																											N/A
	Pursuing Perfection—Transforming Health Care Delivery		1/4																								Liver Transplant: 1/177	
	Northwestern Ohio Universities College of Medicine (NEOUCOM)																										N/A	
OH	Medical Education Network Teaching Ohio Region III (MENTOR)																											
	Ohio Board of Regents																											
	Medical Collaboration Network										P/2																	

Major Services

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OH	Ohio State University Research Foundation (for the Ohio Supercomputer Center																											
	Computational Approaches to Research on Cancer in Children and Others																										N/A	
	Southern Consortium for Children																										Distance Learning: Child and Adolescent Behavioral Health: I/13	
	Southern Ohio Telepsychiatric Network										I/11																	
OK	INTEGRIS Health, Inc.																											
	INTEGRIS Rural Telemedicine Project				I/6						I/1						P/1	I/2									Brain Injury: I/1 Wound Care: I/5	
	Oklahoma Office of Rural Health																											
	Rural Health Telemedicine Program			I/8							I/6																General Health (consults): I/4 Burn Wound Care: I/1	
	OSU Center for Rural Health																											
	Rural Oklahoma Telemedicine Service Expansion			I/8							I/6																	General Health (consults): I/4 Burn Wound Care: I/1



Major Services

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		Asante Health System																									
OR	Asante Clinical Systems Initiative			1/6																							
	Tillamook Lightwave IGA																										N/A
PA	Tillamook Lightwave Telehealth Technologies for Tillamook County Rural Communities																										N/A
	Clarion University																										
	Primary Care Education for the Citizens of Rural Pennsylvania																										N/A
	Community Nurses Home Health and Hospice, Inc.																										
	Home Telehealth			1/5	1/5																						
	Geisinger Clinic																										24 hour service line to Geisinger neurologist on call
PA	Developing a Stoke Care Education Program for Rural Pennsylvania																										
	Good Samaritan Hospital Regional Medical Center																										
	Schuykill Alliance for Health Care Access																										N/A
	Hospice of Metropolitan Erie																										Hospice Care: P/60+
	Hospice Telehealth Project																										

Major Services

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	<b>Jewish Healthcare Foundation</b>																											
	<i>Reinventing Healthcare: the Application of the Pittsburgh Regional Healthcare Initiative's Perfecting Patient Care (PPC) System to Chronic Medical Conditions</i>																											N/A
	<b>Magee Rehabilitation Hospital</b>																											
	<i>Virtual Reality Technology</i>																											
	<b>Mercy Health Partners</b>																											
	<i>Using Information Technology to Enhance Patient Safety</i>																											N/A
<b>PA</b>	<b>Mercy Hospital of Pittsburgh</b>																											
	<i>Mobile Clinician Project</i>																											N/A
	<b>Millcreek Community Hospital</b>																											
	<i>Millcreek Health System Informatics Project</i>																											N/A
	<b>Oil Region Alliance of Business, Industry, &amp; Tourism</b>																											
	<i>The Venango Center for Healthcare Careers (VCHC)</i>																											N/A



Major Services

ST	Grantee	Allergy	Asthma Control	Cardiology	Diabetes Care and Management	Dermatology	Endocrinology (not diabetes)	ENT	Infectious Disease	Intensivist/Remote ICU Monitoring	Mental Health	Neonatology	Nutrition	Ob/Gyn	Oncology	Orthopedics	Pain Management	Pediatrics	Pharmacy	Pulmonology	Radiology	Rehabilitation (see key at bottom of chart)	Remote Patient Monitoring	Rheumatology	Surgery (all types)	Trauma/Emergency Medicine	Other Services (please specify)			
PA	Safe Harbor Behavioral Health																													
	Safe Harbor Behavioral Health Telemedicine Program										P/1																			
	SUN Home Health Services																													
	SUN Home Health Services Network			1/9	1/9																									
	Susquehanna Health System																													
	Regional Electronic Medical Record																													
	Thomas Jefferson University																													
	Integrative Medicine Informatics Feasibility Project																													
	Tyrone Hospital																													
	The Tyrone Hospital Health Information Network																													
University of Pittsburgh School of Nursing Nurse Anesthesia Program																														
Nurse Anesthesia Rural and Elderly Expansion Project (NAREEP)																														
Wayne Memorial Hospital																														
Improving Medication and Patient Safety																														

Major Services

ST	Grantee	Allergy	Asthma Control	Cardiology	Diabetes Care and Management	Dermatology	Endocrinology (not diabetes)	ENT	Infectious Disease	Intensivist/Remote ICU Monitoring	Mental Health	Neonatology	Nutrition	Ob/Gyn	Oncology	Orthopedics	Pain Management	Pediatrics	Pharmacy	Pulmonology	Radiology	Rehabilitation (see key at bottom of chart)	Remote Patient Monitoring	Rheumatology	Surgery (all types)	Trauma/Emergency Medicine	Other Services (please specify)
RI	Family Resources Community Action																										
	HIV/AIDS Comprehensive Psychosocial Support Project																										N/A
	Kent County Visiting Nurse Association d/b/a VNA of Care New England																										
	Advancing Point-of-Care Technology at VNA of Care New England																										N/A
	Increasing Access to Telehealth—Phase II																						I/1				
	Thundermist Health Center																										
	Thundermist Health Center Electronic Health Record																										N/A





Major Services

TX	CHRISTUS Visiting Nurse Association of Houston	TN				ST
		Telehealth for Diabetic Patients in Hispanic and Underserved Rural Communities	Mid-South Telehealth Consortium	Mid-Appalachia Telehealth Project	Delta Health Partnership	
Home Monitoring: Demonstration Pilot of Cost Control						Allergy
						Asthma Control
						Cardiology
I/1						Diabetes Care and Management
I/1						Dermatology
						Endocrinology (not diabetes)
						ENT
						Infectious Disease
						Intensivist/Remote ICU Monitoring
						Mental Health
						Neonatology
						Nutrition
						Ob/Gyn
						Oncology
						Orthopedics
P/1						Pain Management
						Pediatrics
						Pharmacy
I/1						Pulmonology
						Radiology
PT: I/1						Rehabilitation (see key at bottom of chart)
I/1						Remote Patient Monitoring
						Rheumatology
						Surgery (all types)
						Trauma/Emergency Medicine
HIV/AIDS: I/1 Wound Care: I/1			Neurology: I/5			Other Services (please specify)



Major Services

ST	Grantee	Allergy	Asthma Control	Cardiology	Diabetes Care and Management	Dermatology	Endocrinology (not diabetes)	ENT	Infectious Disease	Intensivist/Remote ICU Monitoring	Mental Health	Neonatology	Nutrition	Ob/Gyn	Oncology	Orthopedics	Pain Management	Pediatrics	Pharmacy	Pulmonology	Radiology	Rehabilitation (see key at bottom of chart)	Remote Patient Monitoring	Rheumatology	Surgery (all types)	Trauma/Emergency Medicine	Other Services (please specify)
TX	Cook Children's Medical Center																										
	Rural Specialty Health Telemedicine Initiative														P/1												Genetics: 1/3
	Harris County Hospital District																										
	Specialty Access Through Telemedicine (SA++)					P/2					P/2																
	University of Texas Health Science Center at San Antonio (UTHSCSA)																										
	Diabetes Risk Reduction via Community Based Telemedicine (DirReCT)										1/2		1/2														Diabetes Malentia and Coronary Artery Disease Prevention: 1/9
	University of Texas Medical Branch Center to Eliminate Health Disparities																										
	The Texas Telehealth Disparities Network																										Disease and/or access issues to be addressed in pilot projects have not yet been defined

Major Services

ST	TX
Grantee University of Texas Medical Branch – Galveston	Electronic Health Network
Allergy	1/83
Asthma Control	1/83
Cardiology	1/83
Diabetes Care and Management	1/83
Dermatology	1/83
Endocrinology (not diabetes)	1/83
ENT	1/83
Infectious Disease	1/83
Intensivist/Remote ICU Monitoring	
Mental Health	1/83
Neonatology	
Nutrition	1/83
Ob/Gyn	1/20
Oncology	1/83
Orthopedics	1/85
Pain Management	
Pediatrics	1/20
Pharmacy	1/83
Pulmonology	1/83
Radiology	1/83
Rehabilitation (see key at bottom of chart)	SLP: 1/83
Remote Patient Monitoring	
Rheumatology	1/83
Surgery (all types)	1/83
Trauma/Emergency Medicine	1/83
Other Services (please specify)	Anesthesiology: 1/83 Dental: 1/83 Education: 1/67 Internal Medicine: 1/83 Gastroenterology: 1/83 Hematology: 1/83 Hepatology: 1/83 Nephrology: 1/83 Neurology (General: 1/83, Epilepsy: 1/4) Ophthalmology: 1/83 Otolaryngology: 1/83 Primary Care: 1/61

Major Services

ST	Grantee	Allergy	Asthma Control	Cardiology	Diabetes Care and Management	Dermatology	Endocrinology (not diabetes)	ENT	Infectious Disease	Intensivist/Remote ICU Monitoring	Mental Health	Neonatology	Nutrition	Ob/Gyn	Oncology	Orthopedics	Pain Management	Pediatrics	Pharmacy	Pulmonology	Radiology	Rehabilitation (see key at bottom of chart)	Remote Patient Monitoring	Rheumatology	Surgery (all types)	Trauma/Emergency Medicine	Other Services (please specify)	
UT	Association for Utah Community Health (AUCH)				I/19																							
	Association for Utah Community Health Telehealth Program										P/4																Ophthalmology: I/19	
	Dr. Ezekiel R. Dumke College of Health Professions																											
	Health Opportunity Professional Exploration (HOPE)																										N/A	
	Intermountain Healthcare																											
	HRSA Telemedicine Pilot Program for Interpreting Services for the Deaf																											Video interpretation for the deaf: P/12
	University of Utah																											
	Utah Telehealth Network Comprehensive Telehealth Services			I/3	P/4	I/1				I/1		I/2																Neurology: I/4, P/3 Burn: I/3+

Major Services

ST	VA	VT
Grantee	Southwest Virginia Alliance for Telemedicine	The Community Health Center of Burlington
University of Virginia		Community Health Center Technology Upgrade
		The University of Vermont (UVM)
		Pediatric Teletrauma Project
Allergy		
Asthma Control		P/3
Cardiology	P/3	
Diabetes Care and Management	P/3	I/3
Dermatology	P/3	
Endocrinology (not diabetes)	P/3	
ENT	P/3	
Infectious Disease	P/3	
Intensivist/Remote ICU Monitoring		P/2
Mental Health	P/3	
Neonatology	P/3	
Nutrition	P/3	
Ob/Gyn	P/3	
Oncology	P/3	
Orthopedics	P/3	
Pain Management	P/3	
Pediatrics	P/3	
Pharmacy		
Pulmonology	P/3	
Radiology	I/3	
Rehabilitation (see key at bottom of chart)		
Remote Patient Monitoring		
Rheumatology	I/3	
Surgery (all types)	P/3	
Trauma/Emergency Medicine	P/3	P/2 & I/3
Other Services (please specify)	HIV/AIDS: P/3 Wound Care: I/3 Fitness: P/3 Genetics: P/3 Geriatrics: P/3 Hematology: P/3 Nephrology: P/3 Neurology: P/3 Neurosurgery: P/3 Ophthalmology: P/3 Retinopathy: I/3 TCV: P/3 Transplant: P/3 Toxicology: P/3 Urology: P/3	





Major Services

ST	Grantee	Allergy	Asthma Control	Cardiology	Diabetes Care and Management	Dermatology	Endocrinology (not diabetes)	ENT	Infectious Disease	Intensivist/Remote ICU Monitoring	Mental Health	Neonatology	Nutrition	Ob/Gyn	Oncology	Orthopedics	Pain Management	Pediatrics	Pharmacy	Pulmonology	Radiology	Rehabilitation (see key at bottom of chart)	Remote Patient Monitoring	Rheumatology	Surgery (all types)	Trauma/Emergency Medicine	Other Services (please specify)
			<b>Appalachian Pain Foundation</b>																								
	<i>Physician Education, Community Outreach Program to Prevent Diversion of Prescription Drugs</i>																										N/A
WV	<b>Robert C. Byrd Center for Rural Health</b>																										
	<i>Marshall University Southern West Virginia Rural Outreach Project</i>																										N/A
	<b>West Virginia University, Mountaineer Doctor Television (MDTV)</b>																										
	<i>West Virginia Community Mental Telehealth Project</i>																										Psychiatry: 1/13, P/5
	<b>United Medical Center</b>																										
WY	<i>Regional Expansion of Telehealth and Distance Learning</i>			P/5																							Wound Care: P/2 Surgery Follow-Up: P/1
	<b>Wyoming Department of Health</b>																										
	<i>Wyoming Network for Telehealth (WYNETTE)</i>			I/23							I/10																Primary Care: 1/1, P/1

## Major Services

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### Rehabilitation

Key to Abbreviations	
A	audiology
OT	occupational therapy/medicine
PT	physical therapy
SLP	speech language therapy/pathology
PM	physical medicine/physiatry
OTH	Other (Please Specify)





# Sources of Reimbursement

**OAT grantee organizations were asked to identify major sources of reimbursement for their projects available in their respective states. Their responses are indicated in this section.**

## Sources of Reimbursement

ST	Organization	Medicare	Medicaid	Private Payor (Please Specify)	Other Contract (Please Specify)	Other Source
AK	Alaska Native Tribal Health Consortium	•	•	Blue Cross, Aetna	IHS Contract Health	
	Alaska Psychiatric Institute (API)	•	•			
AL	University of South Alabama		•			
AR	University of Arkansas for Medical Sciences	•	•	Cigna, First Health, First Source, Health Advantage, Humana, QualChoice, Premier Care, United Health Care, USABLE, Aetna, AARP Healthcare, Arkansas 1 <sup>st</sup> Source, TRICARE, AR Kids First		
AZ	Arizona Board of Regents, University of Arizona	•	•	Although almost all private payors in Arizona reimburse telemedicine services, the patients seen for clinical services in the ADVICE program have been uninsured to date.	Tobacco Tax Funding Indian Health Services	
	Banner Good Samaritan Telemedicine Program					N/A
	Maricopa County, Arizona					N/A
CA	Familia Unida Living with Multiple Sclerosis					N/A
	Multi-Dimensional Imaging, Inc. of Newport Beach					N/A
	San Joaquin County Health Care Services					N/A
	Santa Rosa Memorial Hospital					N/A
CO	Avista Adventist Hospital					N/A
	University of Colorado Health Sciences Center					N/A
DC	American Red Cross					N/A
DC	Foundation For eHealth Initiative					
	CareSpark, TN			Anticipated health plans and employers	State of TN Q 1 & 2, 2006 State of VA planned Q 3 & 4, 2006	Accenture NHIN prototype demonstration, Q1-4, 2006
	Colorado Health Exchange Network, CO					N/A
	Indiana Health Information Exchange, IN					Our initial model relies on data sources to fund delivery of information much as they do now in a "paper" world.
	Maryland/DC Collaborative for Health Information Technology, MD					N/A

## Sources of Reimbursement

ST	Organization	Medicare	Medicaid	Private Payor (Please Specify)	Other Contract (Please Specify)	Other Source
DC	Massachusetts Health Data Consortium (MA-SHARE), MA			<ul style="list-style-type: none"> <li>Blue Cross Blue Shield of MA</li> <li>Harvard Pilgrim Health Care</li> <li>Other TBD</li> </ul>	<ul style="list-style-type: none"> <li>Markle Connecting for Health Record Locator Service Prototype</li> <li>ONCHIT Nationwide Health Information Network (NHIN) Architecture</li> <li>AHRQ-CMS ePrescribing Gateway Pilot</li> <li>Other TBD</li> </ul>	<ul style="list-style-type: none"> <li>Partners Health Care System</li> <li>CareGroup Health Systems</li> <li>Commonwealth of MA Executive Office of Health and Human Services</li> <li>Massachusetts eHealth Collaborative</li> <li>Other TBD</li> </ul>
	National Institute for Medical Informatics, WI					N/A
	Santa Barbara County Care Data Exchange, CA					N/A
	St. Joseph's Hospital Foundation (Whatcom HIE), WA					N/A
	Taconic Educational Research Fund, NY					N/A
FL	<b>BayCare Health System</b>					N/A
	<b>Florida Cancer Research Cooperative, University of South Florida</b>					N/A
	<b>University of Florida College of Dentistry (UFCD)</b>	•	•			Service Contracts
GA	<b>Morehouse School of Medicine</b>					N/A
	<b>Ware County Health Department</b>					N/A
HI	<b>Hawai'i Primary Care Association (HPCA)</b>	•		HMSA, AlohaCare, Quest		
	<b>Moloka'i General Hospital</b>	•	•	HMSA, Blue Cross/Blue Shield		
IA	<b>Iowa Chronic Care Consortium</b>		•			
	<b>Mercy Foundation</b>	•	•	Physicians bill 3 <sup>rd</sup> party insurance carriers		
ID	<b>Clearwater Valley Hospital and Clinics, Inc.</b>					N/A
	<b>Idaho State University, Institute of Rural Health</b>		•			
	<b>North Idaho Rural Health Consortium (NIRHC)</b>		•			
IL	<b>Northern Illinois University/Fermi National Laboratory</b>		•	Blue, IL; Humana; Signa; Aetna		HRSA
	<b>OSF Saint James—John W. Albrecht Medical Center</b>					N/A
	<b>Saint John's Hospital</b>		P	P-To Be Determined		IL Department of Public Health
	<b>Southern Illinois University School of Medicine</b>	•	•	Multiple private Insurers	Veteran's Hospital, Mental Health Hospital	

Sources of Reimbursement

ST	Organization	Medicare	Medicaid	Private Payor (Please Specify)	Other Contract (Please Specify)	Other Source
IN	James Whitcomb Riley Hospital for Children	•		Anthem, Wellpoint, M-Plan, United Health Care		
	Health & Hospital Corporation of Marion County					N/A
KS	University of Kansas Medical Center	•	•	Blue Cross/Blue Shield	Contract for service between Crawford County Mental Health Center and KUMC Child-Adolescent Psychiatry.	State-wide Telekidcare dollars
KY	The James B. Haggin Memorial Hospital					N/A
	Marcum & Wallace Memorial Hospital					N/A
	New Horizons Health Systems, Inc.					N/A
	University of Kentucky Research Foundation—Kentucky TeleCare		•	Atena, Anthem Blue Cross Blue Shield, Beechstreet PPO, UKHMO, CHA Health, Bluegrass Health Network, C&O Employee’s Hospital Association, CCN PPO, CHAMPVA/Tricare, Cigna, Cooperative Care- Bluegrass Care Alliance, Community Health Partnership, Cumberland Health Care, Inc., Direct Care America, Evolution Healthcare Systems, General American, Harrod Community Health Plan, Hospice of the Bluegrass, Humana, National Provider Network PPO, One Health Plan, PPO Next/Healthstar/PHN, United Healthcare	Federal Prison, State prison, State Public Health Dept. for TB Clinic Consultation	Medicare/Medicaid reimbursement only for certain CPT codes  All private payor/commercial insurance companies are mandated by State of KY to reimburse for telehealth consultations in same manner as face –to-face consultations.
LA	Southwest Louisiana Health Care Systems		•	Multiple private insurers		
	Woman’s Hospital	•	•	Aetna, American Lifecare, Blue Cross/Blue Shield of Louisiana, ChoiceCare Network, CIGNA, Community Care Network, Coventry HealthCare, First Health Network, Humana, Multiplan, PPO Plus, Private Healthcare Systems, United Healthcare of Louisiana		Tricare Prime, Tristan
MA	Massachusetts College of Pharmacy and Health Sciences					N/A
	UMass Memorial Medical Center					N/A
ME	Regional Medical Center at Lubec					N/A
MI	Altarum Institute					N/A—Operational funding to be determined in planning process.
	Hillsdale Community Health Center					N/A
	Hurley Medical Center					N/A
	Michigan State University					N/A
	Western Michigan University	•	•			Patient
MN	Fairview Health Services					N/A

Sources of Reimbursement

ST	Organization	Medicare	Medicaid	Private Payor (Please Specify)	Other Contract (Please Specify)	Other Source
MN	University of Minnesota	•	•	Blue Cross/Blue Shield of MN Health Partners Medica Preferred One Workers Compensation Select Care Ucare of Minnesota		
MO	The Curators of the University of Missouri	•		Am. Family, Bankers Life, Blue Shield Alliance, Cigna, Gencare, General American, Health Data Svcs. Claim, Healthlink, Healthnet, John Deer Health Care, Missouri Care MC+, Metropolitan, Mercy Health Plan, Preferred Health Plan, Prudential, United Health Care, Ethix PPO, Time Insurance Co., Cooperative Benefit, First Health, Healthsmart Preferred, Humana, National Telephone, NRECA, Proamerica, Waldsworth Publishing	Fort Leonard Wood, Clark Mental Health Ctr.	
MT	Benefis Healthcare Foundation					N/A
	Billings Clinic Foundation					N/A
	Deaconess Billings Clinic Foundation	•	•	Blue Cross/Blue Shield of Montana, EBMS, New West Health Services		
	Saint Patrick Hospital & Health Foundation	•	•	300+ private payors—EKG interpretation		
	Saint Vincent Healthcare Foundation	•	•	Blue Cross/Blue Shield of Montana/EBMS; Paid by other insurances on case by case basis		Patient self pay
	The University of Montana—Missoula					N/A
NC	Duke University Medical Center					N/A
	Educational and Research Consortium of Western Carolinas					N/A
ND	North Dakota State University College of Pharmacy	•	•	Blue Cross/Blue Shield		Cash pay patients.
	Northland Healthcare Alliance	•	•	Blue Cross Blue Shield of North Dakota. Also have been paid by other commercial payers on a case by case basis.		
NE	Good Samaritan Hospital Foundation	•	•	Blue Cross, Starmark, Equitable Life, Three Rivers Benefit Corp, Physicians Mutual, Pioneer, Mutual Protective, Midlands Choice, Union Banders, AARP, TriCare, Cigna, Bankers Life, UniCare Life & Health, CBSA, Midwest Select, Mutual Protective, Thrivent, Options, AARP Healthcare Options, Mutual of Omaha, Mega Health, Medicaid, State Farm, BDPPO, FMH Benefit, Reserve National, Unicare Life & Health, United Health, Allied Benefits		
	University of Nebraska Medical Center					N/A
NJ	Hackensack University Medical Center					N/A
	Saint Peter's University Hospital					N/A

Sources of Reimbursement

ST	Organization	Medicare	Medicaid	Private Payor (Please Specify)	Other Contract (Please Specify)	Other Source
NM	New Mexico Human Services Department					N/A
	The University of New Mexico Health Sciences Center		•			
NV	Nevada Rural Hospital Partners Foundation					N/A
	University of Nevada, Reno					N/A
NY	Community Health Care Services Foundation, Inc.					N/A
	Genesee Gateway Local Development Corporation, Inc.					N/A
	Integrated Community Alternatives Network, Inc.		•		OCDSS Prevention Contract	
	Long Island Association for Millennium Center for Convergent Technologies					N/A
	Montefiore Medical Center & The Children's Hospital at Montefiore	•	•	Blue Cross/Blue Shield, HIP, AETNA		
	New York Presbyterian Hospital					N/A
	Research Foundation, State University of New York (SUNY) at Buffalo	•	•	Community Blue, Univera, Independent Health,	NYS Dept. of Corrections, Homeland Security, Federal Bureau of Prisons, Immigration Control and Enforcement	
	The Rosalind and Joseph Gurwin Jewish Geriatric Center of Long Island					N/A
OH	Case Western Reserve University					N/A
	Cincinnati Children's Hospital Medical Center					N/A
	Northeastern Ohio Universities College of Medicine (NEOUCOM)					N/A
	Ohio Board of Regents					N/A
	Ohio State University Research Foundation (for the Ohio Supercomputer Center )					N/A
	Southern Consortium for Children		•			
OK	INTEGRIS Health, Inc.		•		Boise City Schools Stringtown Schools Felt Public Schools Milburn Public Schools Keyes Public Schools Tyrone Public Schools Goodwell Public Schools Lindsay Municipal Hospital	
	Oklahoma Office of Rural Health					N/A
	OSU Center for Rural Health					N/A

Sources of Reimbursement

ST	Organization	Medicare	Medicaid	Private Payor (Please Specify)	Other Contract (Please Specify)	Other Source
OR	Asante Health System					N/A
	Tillamook Lightwave IGA					N/A
PA	Clarion University					N/A
	Community Nurses Home Health and Hospice, Inc.					Self Pay
	Geisinger Clinic					N/A
	Good Samaritan Hospital Regional Medical Center					N/A
	Hospice of Metropolitan Erie					N/A
	Jewish Healthcare Foundation					N/A
	Magee Rehabilitation Hospital					N/A
	Mercy Health Partners					N/A
	Mercy Hospital of Pittsburgh					N/A
	Millcreek Community Hospital					N/A
	Oil Region Alliance of Business, Industry, & Tourism					N/A
	Pennsylvania College of Optometry					N/A
	Pennsylvania Homecare Association	•	•	Gateway—MCO UPMC Three Rivers--MCO		
	Penn State University					N/A
	Pennsylvania State University College of Medicine					N/A
	Pinnacle Health System					N/A
	Safe Harbor Behavioral Health					N/A
	SUN Home Health Services					N/A
	Susquehanna Health System					N/A
	Thomas Jefferson University					N/A
Tyrone Hospital					N/A	
University of Pittsburgh School of Nursing Nurse Anesthesia Program					N/A	
Wayne Memorial Hospital					N/A	
RI	Family Resources Community Action					N/A
	Kent County Visiting Nurse Association d/b/a VNA of Care New England	•				
	Thundermist Health Center	•	•	Blue Cross, Blue Shield of RI United Health Care Neighborhood Health Plan of RI		
SC	Advanced Technology Institute (ATI)	•	•			
	Beaufort-Jaspert-Hampton Comprehensive Health Services	•	•			
	Greenville Hospital System					N/A
	Voorhees College					N/A
SD	Avera Health	•	•	Avera Health Plans		



## Sources of Reimbursement

ST	Organization	Medicare	Medicaid	Private Payor (Please Specify)	Other Contract (Please Specify)	Other Source
SD	The University of South Dakota (USD)					N/A
TN	University Health System, Inc.					N/A
	University of Tennessee Health Science Center	•	•	Blue Cross, Blue Shield Cigna General United Healthcare	Tennessee Department of Children's Services	
TX	CHRISTUS Visting Nurse Association of Houston	•	•	Blue Cross/Blue Shield; AETNA; Unicare; Evercare; Humana		
	Cook Children's Medical Center		•	CIGNA, Blue Cross		TDH Title V funding will be available for patients that qualify under those guidelines.
	Harris County Hospital District	•	•			
	University of Texas Health Science Center at San Antonio					N/A
	University of Texas Medical Branch Center to Eliminate Health Disparities	•	•		Counties, Dept. of Criminal Justice, other correctional systems.	
	University of Texas Medical Branch - Galveston				Brazoria County, Liberty County, Raytheon, Zachry, ANICO, TX Department of Criminal Justice, El Paso MHRM, Gulf Bend MHRM, NASA, cruise lines	
UT	Association for Utah Community Health	•		Blue Cross/Blue Shield		
	Dr. Ezekiel R. Dumke College of Health Professions					N/A
	Intermountain Healthcare					N/A
	University of Utah	•	•	Utah payers in general.	Department of Corrections.	
VA	University of Virginia	•	•	Blue Cross/Blue Shield, AG Dillard; Church of the Brethren; Healthcare Resources Group; Klockner-Pentaplast; John Alden Financial; National Benefits Plan; Southeastern Container; Sunnyside Home; Sysco Corp.	Dept. of Corrections.	Anthem Blue Cross/Blue Shield.
VT	The Community Health Center of Burlington					N/A
	The University of Vermont (UVM)	•		Blue Cross/Blue Shield; Cigna PPO	NY State Dept. of Corrections (for dermatology)	

Sources of Reimbursement

ST	Organization	Medicare	Medicaid	Private Payor (Please Specify)	Other Contract (Please Specify)	Other Source
WA	Children's Hospital and Regional Medical Center—Seattle		•	Premera Blue Cross, Regence, BlueShield, Community Health Plan of WA, Molina Healthcare, Pacific Medical, Foundation Health Service-Tricare, DSHS-Medicaid Fee for Service	Lower Columbia Mental Health, Washington State Juvenile Rehabilitation Administration (Naselle), St. Joseph Hospital, Bellingham, Evergreen Hospital, Kirkland, Kennewick General Hospital, Kennewick	
	Inland Northwest Health Services	•	•	Asuris, Premera, L&I, Universal Medical Plan		
	Yakima Valley Memorial Hospital					N/A
WI	La Crosse Medical Health Science Consortium					N/A
	Marshfield Clinic Telehealth Network	•	•	Security Health Plan Wisconsin Physicians Services General American JELD—Wen Benefits Midwest Security Adm. Family Health Center Workers Comp—Lineco. Group Health Aetna US Healthcare WEA Ins. Trust SHP Medicaid Weathershield Corestar Insurance Co. United Healthcare Claim Management Services Select Benefis Ins. Medicare Veterans Administration Cigna Operating Engineers Corp Benefits Services of America NCHPP Wasau Insurance		
	Rural Wisconsin Health Cooperative	•	•	Unicity Health Plan Dean Health Plans Physicians Plus GHP		Section 330
	St. Elizabeth Hospital Community Foundation			Blue Cross/Blue Shield Network Health Plan Aetna WEA Trust		
WV	Appalachian Pain Foundation					N/A
	Robert C. Byrd Center for Rural Health					N/A
	West Virginia University, Mountaineer Doctor TeleVision (MDTV)	•	•	West Virginia Blue Cross/Blue Shield, PEIA		
WY	United Medical Center	•				Grant Funding
	Wyoming Department of Health	•	•			



# Program Settings

**For their respective projects, OAT grantee projects providing clinical telemedicine services were asked to identify the number of sites, the population of Health Professional Shortage Areas (HPSAs)/Medically Underserved Areas (MUAs) that those sites serve, and the number of sites their project has in the Program Settings categories given. Program Settings categories include Assisted Living Facility, Community Health Center (CHC), Correctional Institution, Homes or Units/Agencies, Hospital, Hospice, Nursing Home, Public Health Department, Physician Office, Schools, Non-health Institution (housing complex, workspace, community center), and Other. Grantee responses are indicated in the following section.**

**N/A = Not Applicable**

Program Settings

	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Program Settings											Other Settings (Please Specify)					
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Homes or Units/Agencies	Hospital	Hospice	Nursing Home	Public Health Department	Physician Office	Schools		Non-health Institution (housing complex, workplace, community center)				
ST	Alaska Native Tribal Health Consortium Continued Advancement of Telehealth Capacity in Alaska The Summative Telemedicine Evaluation Project	25	3/7,373			3			1					20			1 Indian Health Center			
																		N/A		
AK	Alaska Psychiatric Institute (API)																Native Regional Health Corporations and Behavioral Health Providers (State of Alaska Only).			
	API TeleBehavioral Health Project	17	17/141,056		9	7			1											
AL	University of South Alabama																			
	Center for Strategic Health Innovation (CSHI) RMEDE/BioTrac Project	30	9/220,000														30 Remote Home Monitoring Sites in Individual Homes			
	Center for Strategic Health Innovation (CSHI) Traditional Telemedicine	13	6/130,000		1	2			9											
AR	University of Arkansas for Medical Sciences																			
	South Arkansas Integrated Telehealth Oncology Program	140	OAT GRANT SITES ONLY: 8 PC HPSA, 3 Dental, 4 Mental HPSA, 11 MUA/200,000		2				8					1			11 of the 140 state-wide sites are specific for oncology.			

Program Settings

ST	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Program Settings											Other Settings (Please Specify)						
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Homes or Units/Agencies	Hospital	Hospice	Nursing Home	Public Health Department	Physician Office	Schools		Non-health Institution (housing complex, workplace, community center)					
AZ	Arizona Board of Regents,, University of Arizona																				
	Arizona Diabetes Virtual Center for Excellence (ADVICE)	12	5/53,385		1	1			2	3										1-mobile clinic	
	Institute for Advanced Telemedicine and Telehealth (THealth)																			N/A	
	Banner Good Samaritan Telemedicine Program																				
	Banner Telehealth Program-Banner Health System	3	2/3/65,000			1				2											
	Maricopa County, Arizona																				
	Correctional Health Services Telemedicine Initiative	5	0/0				5														
	Familia Unida Living with Multiple Sclerosis																				
	Telehealth Grant																				N/A
	Multi-Dimensional Imaging, Inc. of Newport Beach																				
CA	Telemedicine for Improved Health Care and Education	6	HPSA = 1 MUA = 2 72,472																	6	
	San Joaquin County Health Care Services																				
	Automated Drug Dispensing Medication Administration System	12	2/632,760		11																



Program Settings

ST	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Program Settings												Other Settings (Please Specify)	
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Homes or Units/Agencies	Hospital	Hospice	Nursing Home	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)		
DC	Massachusetts Health Data Consortium (MA-SHARE), MA																N/A
	National Institute for Medical Informatics, WI																N/A
	Santa Barbara County Care Data Exchange, CA																N/A
	St. Joseph's Hospital Foundation (Whatcom HIE), WA																N/A
	Taconic Educational Research Fund, NY																N/A
FL	BayCare Health System																
	Electronic medication and Clinical Services Ordering Subsystem	9	1/2,276,000						9								
	Florida Cancer Research Cooperative, University of South Florida																
	Clinical Trial Patient/Physician Information & Education Program																N/A
GA	University of Florida College of Dentistry (UFCD)	5	80/4,000,000														1 - Dental school 4 - Related dental clinics
	Morehouse School of Medicine																
	Diabetes Screening Telehealth Project	2	0/0		1	1											





Program Settings

ST	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Program Settings												Other Settings (Please Specify)	
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Homes or Units/Agencies	Hospital	Hospice	Nursing Home	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)		
ID	Idaho State University																
	Telehealth Idaho	24	36 HPSAs - 330,424 30 DPSAs - 342,114 44 MPSAs - 1,341,131 28 MUAs - 258,795						17					2			Dental-1 State Association-4
ID	North Idaho Rural Health Consortium (NIRHC)																
	Expanding Telehealth to North Idaho Districts (EXTEND)	28	5/186,000			1			5					20			1-North Idaho Behavioral Health 1-Incycye Pathology, Inc.
IL	Northern Illinois University /Fermi National Laboratory																
	Neutron Radiation for Cancer Treatment	1	Unavailable at this time														1-Neutron Therapy Cancer Treatment Center at Fermi National Laboratory
	OSF Saint James-John W. Albrecht Medical Center																
	OSF Saint James Telehealth Network	24	4/55,000			3			1					20			
	Saint John's Hospital																
	Neonatal Telehealth Project in Rural Illinois Located at the Perinatal Center	13	45/1.5 million						13								

Program Settings

ST	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Program Settings													
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Homes or Units/Agencies	Hospital	Hospice	Nursing Home	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)	
IN	Southern Illinois University School of Medicine																
	Downstate Illinois Regional Telehealth Project	16	5/123,000	2			1	10/1	1								
	James Whitcomb Riley Hospital for Children																
	Telemedicine Applications for Riley Hospital for Children	4							4								
IN	Health & Hospital Corporation of Marion County																
	Congressionally-Mandated Telehealth Grants	5	12/104,479			4			1								
	University of Kansas Medical Center																
KS	Expansion of the Kansas Telehealth Network																N/A
	Sustainability and Cost Benefit Evaluation of the Kansas Telehealth Network	12	7/233,775			1			4		1	1	1				1 State Hospital 3 AHECS
KY	The James B. Haggin Memorial Hospital																
	PACS (Picture Archiving and Communication System)																N/A

Program Settings

	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Program Settings												Other Settings (Please Specify)	
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Homes or Units/Agencies	Hospital	Hospice	Nursing Home	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)		
ST	Marcum & Wallace Memorial Hospital																
	Tele radiology Enhancement Project	2	7/62,000						2								Rural Physician Offices—Number unknown at this time.
	New Horizons Health Systems, Inc. Information Technology Development and Improvement																N/A
	University of Kentucky Research Foundation—Kentucky TeleCare																
KY	Improving Health Outcomes for Children in Rural Kentucky Schools	25	7/360,884		4	5				3				13			
	Southwest Louisiana Health Care Systems																
	Community Hospital Telehealth Consortium	22	28/1,465,379					1/1	9				1	4			1 Development Center 5 Public Libraries
	Woman's Hospital																N/A
LA	Expansion of Physician Internet Portal, Woman's POL																N/A
	Massachusetts College of Pharmacy and Health Sciences																
MA	Worcester Campus Distance Learning Initiative																N/A





Program Settings

ST	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Program Settings											Other Settings (Please Specify)				
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Homes or Units/Agencies	Hospital	Hospice	Nursing Home	Public Health Department	Physician Office	Schools		Non-health Institution (housing complex, workplace, community center)			
MT	<b>Deaconess Billings Clinic Foundation</b>																		
	<i>Eastern Montana Telemedicine Network</i>	22	8/58416		1				15				1					N/A	
	<i>Revolutionizing Diabetes Care at Billings Clinic: A Model for Chronic Disease Care</i>																		
	<b>Saint Patrick Hospital &amp; Health Foundation</b>																		
	<i>Montana Cardiology Telemedicine Network</i>	15	8/63,000						10				5						
	<b>St. Vincent Healthcare Foundation</b>																		
	<i>Mansfield Health Education Center (MHEC)</i>	20	18/150,000		1				6				5						7-Rural Clinics 1-MT. Hospital Assoc.
<b>The University of Montana - Missoula</b>																			
	<i>Improving Health Among Rural Montanans (IPHARM)</i>	43	43/149,566		8	2			2									Community Pharmacies-11 Senior Centers-8 PowWow-1 Indian Health Alliance-1	
NC	<b>Duke University Medical Center</b>																		
	<i>Patient Inclusion in a Community-Based Telehealth Network</i>																	N/A	







Program Settings

ST	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Program Settings																
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Homes or Units/Agencies	Hospital	Hospice	Nursing Home	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)				
NY	Community Health Care Services Foundation, Inc.																			
	Introducing Home Telehealth in New York's 20 <sup>th</sup> Congressional District	3	36,114,572					14/3												
	Genesee County Local Development Corporation, Inc.																			
	Upstate New York Telemedicine Study	7P	4HPSA, 5 MUA 212,293		1P					4P								2P		
	Integrated Community Alternatives Network Inc.																			
	Foster Care Tracker and Assessment Tool	2	1/500																2 OCDSs	
	Long Island Association for Millennium Center for Convergent Technologies																		N/A	
	An Electronic Clinical Trial System to Reduce Drug Development Costs																			N/A
	Montefiore Medical Center																			
	Electronic Medical Records Expansion	1	1/20,000				1													
New York Presbyterian Hospital																				
Systems Technology Interfacing Teaching and Community Hospitals (STITCH)																			N/A	











Program Settings

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				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Homes or Units/Agencies	Hospital	Hospice	Nursing Home	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)				
	<b>Pinnacle Health System</b>																			
	Reducing Variability to Deliver Safe Care	21	HPSAs—17 Minor Civil Divisions: MUAs—13 Designated Census Tracts Approximate Population 125,000			3		1	4	1					12					
	<b>Safe Harbor Behavioral Health</b>																			
	Safe Harbor Behavioral Health Telemedicine Program	1	Warren County/40,000			1														
PA	<b>SUN Home Health Services</b>																			
	SUN Home Health Services Network	10	Not Applicable					9												Administration Office-1
	<b>Susquehanna Health System</b>																			
	Regional Electronic Medical Record																			N/A
	<b>Thomas Jefferson University</b>																			
	Integrative Medicine Informatics Feasibility Project																			N/A
	<b>Tyrone Hospital</b>																			
	Integrative Medicine Informatics Feasibility Project																			N/A











Program Settings

ST	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Program Settings												Other Settings (Please Specify)	
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Homes or Units/Agencies	Hospital	Hospice	Nursing Home	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)		
UT	Intermountain Healthcare																
	HRSA Telemedicine Pilot Program for Interpreting Services for the Deaf	10	0/0						10								
	University of Utah																
VA	Utah Telehealth Network Comprehensive Telehealth Services	11	8/196,490		1	1	1		6			2					
	University of Virginia																
	Southwest Virginia Alliance for Telemedicine	3	None 259,000						3								
VT	The Community Health Center of Burlington																
	Community Health Center Technology Upgrade	4	1/6,000		3												
	The University of Vermont (UVM) Pediatric Teletrauma Project	2	25/46,694						2								
WA	Children's Hospital and Regional Medical Center – Seattle																
	Children's Health Access Regional Telemedicine (CHART) Program	12	12/07,384			1			8			1					2-Outpatient Clinics
	Inland Northwest Health Services																
WA	Northwest Telehealth--TeleER	15	12/201,108						14								
	Northwest Telehealth--Telepharmacy	14	12/534,963						14								Air Ambulance-1

Program Settings

ST	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Program Settings												Other Settings (Please Specify)		
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Homes or Units/Agencies	Hospital	Hospice	Nursing Home	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)			
WA	Yakima Valley Memorial Hospital Bedside Medication Management (MAR) System																	N/A
	La Crosse Medical Health Science Consortium																	N/A
	Virtual Population Health Centers in the Rural Midwest																	N/A
	Marshfield Clinic Telehealth Network																	
WI	Marshfield Clinic Telehealth Network	29	22/1,036,035			16	1	2	1	2			1				4 Dental Clinics, 2 Food Safety Labs	
	Rural Wisconsin Health Cooperative																	
	RWHC/WPHCA Telehealth Initiative	12	18/625,000		3					9								
	St. Elizabeth Hospital Community Foundation																	
	Affinity/UW Telemedicine Project	2	0/0			2												
	Appalachian Pain Foundation																	
	Physician Education, Community Outreach Program to Prevent Diversion of Prescription Drugs																	N/A
WV	Robert C. Byrd Center for Rural Health																	
	Marshall University Southern West Virginia Rural Outreach Project																	N/A

Program Settings

ST	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Program Settings															
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Homes or Units/Agencies	Hospital	Hospice	Nursing Home	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)			
WV	West Virginia University, Mountaineer Doctor Television (MDTV)																		
	West Virginia Community Mental Telehealth Project	41	23 HPSAs 26 MUAs 1,815,354			41													
	<b>United Medical Center</b>																		
	Regional Expansion of Telehealth and Distance Learning		5/35,700								5								
	<b>Wyoming Department of Health</b>																		
	Wyoming Network for Telehealth (WYNETTE)	63	18/250,000		2	8		23	28				2						
WY																			





# Technology and Transmission

All OAT grantees were asked if they used Store and Forward technology, Internet Protocols (IP), Internet/World Wide Web, Wireless Technology, and/or Broadband Transmission in delivery of their services (definitions are provided at the end of the table). Grantees were also asked to give a brief explanation of the purposes for the use of the transmission technology. Their responses are indicated in the following section.

N/A = Not Applicable

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
AK	Alaska Native Tribal Health Consortium						
	<i>Continued Advancement of Telehealth Capacity in Alaska</i>	All services except mental health	All network communication relies on IP. No ISDN	Internet used for Store & Forward (S&F) with encryption	All S&F systems use encrypted wireless within clinics	Most clinics have broadband for S&F, video	
	<i>The Summative Telemedicine Evaluation Project</i>			Electronic mail and solicitation of survey responses for Evaluation project			
AK	<b>Alaska Psychiatric Institute (API)</b>						
	<i>API TeleBehavioral Health Project</i>		TCP/IP, to deliver behavioral health services to remote villages in Alaska			Fiber Optic Terrestrial Links T-1 & Satellite to deliver behavioral health services to remote villages in Alaska.	
AL	<b>University of South Alabama</b>						
	<i>Center for Strategic Health Innovation (CSHI) RMEDE/BioTrac Project</i>			Remote Monitoring/ Claims Data			
	<i>Center for Strategic Health Innovation (CSHI) Traditional Telemedicine</i>		Education Programs/Consults			Medical Consults/Education Programs	
AR	<b>University of Arkansas for Medical Sciences</b>						
	<i>South Arkansas Integrated Telehealth Oncology Program</i>	Radiology	T 1 lines for compressed video transmission	Continuing education for health care professionals		Transmit real-time voice/video to all sites	

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
AZ	Arizona Board of Regents, University of Arizona						
	Arizona Diabetes Virtual Center for Excellence (ADVCE)	Ophthalmology	H.323 Video for Podiatry & Interactive Telehealth	Web Site & Streaming Video archives of diabetes education sessions	Planned for late 2005 to connect in mobile clinic in Amado	All connections are broadband at T1 rates except POTS used in Amado. Used for clinical & educational video	
	Institute for Advanced Telemedicine and Telehealth (THealth)		H.323—education	Website & Streaming Video Archives of educational sessions		All connections are broadband at T1 rates for education and training	
	Banner Good Samaritan Telemedicine Program						
	Banner Telehealth Program—Banner Health System	S/F maternal fetal ultrasound reads	IP for clinical services and for education over T1 fractional lines to rural towns				
	<b>Maricopa County, Arizona</b>						
	Correctional Health Services Telemedicine Initiative		IP for clinical services and for education over T1 terrestrial lines				

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
CA	<b>Familia Unida Living with Multiple Sclerosis</b>						Laptops used for community outreach and presentations
	<i>Telehealth Grant</i>			Connect clients with programs & services			
	<b>Multi-Dimensional Imaging, Inc. of Newport Beach</b>						
	<i>Telemedicine for Improved Health Care and Education</i>	Radiology	IP for clinical services and patient education	To be used for Patient Health Education and Behavioral Medicine and administrative services	Satellite to connect Hub to Spoke and vice versa for telehealth consultations with graphic patient image transfer and health education	T1 based land-link to complete connection between satellite, spoke and hub for telehealth consultations and graphic patient education	
	<b>San Joaquin County Health Care Services</b>						
	<i>Automated Drug Dispensing Medication Administration System</i>		IP for CPOE, Nursing and Pharmacy services over hospital backbone	Pharmacy formulary and drug information look-up	Cisco WAPs with handheld devices in reading patient wristbands and medication labels		
	<b>Santa Rosa Memorial Hospital</b>						
	<i>Northern California Telemedicine Network (NCTN)</i>	Ophthalmology				T1 & ISDN for clinical telemedicine and distance education	

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
CO	<b>Avista Adventist Hospital</b>						
	<i>Clinical Integration Through Health Informatics</i>	Radiology	Remote Desktop Protocol and Virtual Private Network	Patient scheduling, lab results, formularies	Laptops in clinics		
CO	<b>University of Colorado Health Sciences Center</b>						
	<i>Native Telehealth Outreach &amp; Technical Assistance Program</i>			Distance Education for CME			CHA (Community Health Advocate) Communications, Project Dissemination
DC	<b>American Red Cross</b>						
	<i>Congressionally Mandated Telehealth Grants</i>		Access application over wide area network (WAN) via T1 circuits				
	<b>Foundation For eHealth Initiative</b>						
	<i>Connecting Communities for Better Health Program</i>						
	CareSpark, TN	Claims data (planned 2006)	Clinical records, patient demographics, (planned 2006)				
	Colorado Health Information Exchange, CO		Codified (standard) health data between distinct institutions (entities)				
Indiana Health Information Exchange, IN	X	X	X			X	
Maryland/DC Collaborative for Healthcare Information Technology, MD							
Massachusetts Health Data Consortium (MA-SHARE), MA			Server-to-server communication and data exchange	Secure Web-based access		Server-to-server communication and data exchange	
National Institute for Medical Informatics, WI	Repository for providers not able to offer real-time retrieval for requests		Secure portal for results, diagnoses, med records planned	Secure portal for results, diagnoses, med records planned			
Santa Barbara County Care Data Exchange, CA	Planned		Support HL7 transactions & peer-to-peer connections	Method of access by users	Some users may use to access WWW	Some users may use to access WWW	

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
DC	St. Joseph's Hospital Foundation (Whatcom HIE), WA	PACS, video for teleradiology and cardiology	Network intranet infrastructure, user and device administration, Hospital network to Community HIE	Health info resources, VPN, PHR, eRx	Between sites and within individual practice locations	Transmission rates vary by facility using the application, i.e., DSL to T3 capacity	All modes support access to hospital EMR, PACS, RIS, health info resources, e-mail, lab results
	Taconic Educational Research Fund, NY	Radiology, laboratory, and transcription	IP is used to facilitate secure "server-to-server" communication and data interchange/exchange between participation solution providers	The solution is delivered through a secure Web-based application architecture providing access to clinical information through a Web browser			
FL	<b>BayCare Health System</b>						
	<i>Electronic Medication and Clinical Services Ordering Subsystem</i>	Radiology		Physicians have access to patients' results, dictated reports, and financial information on the Web through BayCare MD	Patient registration is performed bedside with wireless devices; I/O, and medication using a wireless device		
	<b>Florida Cancer Research Cooperative, University of South Florida</b>						
	<i>Clinical Trial Patient/Physician Information and Education Program</i>	Store of patient profiles for later review and consultation	Extranet call center connectivity	Distribution of clinical trial information			

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
FL	University of Florida College of Dentistry (UFCD)	Distance Learning: Video conferencing & presentation with satellite offices/clinics-Teledentistry Consultation: For capturing, reviewing, manipulation and storing of biopsies. Digital Radiography: For capturing, reviewing, manipulation and storing digital X-ray images	Distance Learning: Used for eLearning, eTransaction & Video conferencing. Teledentistry Consultation: Video conferencing for consultation.-Digital Radiography: For retrieving, and storing digital x-ray images	Distance Learning: eLearning & eTransaction presentation-Teledentistry Consultation: Interactive consultation via Web. Real-time streaming of consultation practices. Digital Radiography: For retrieving & reviewing digital x-ray via QR Web front end system	Distance Learning: For accessing eLearning & eTransaction modules within dental science main building. Can be used for teledentistry consultation from within dental science building. Digital Radiography: Can be used to access digital radiographs stored via QR system	Distance Learning: T1 (1.5mps) access to some clinics (St. Petersburg, Hialeah, HCC, Apopka) and DS3/T3 to JAX from Gainesville Teledentistry Consultation: T1 (1.5mps) access to some clinics (St. Petersburg, Hialeah, HCC, Apopka) and DS3/T3 to JAX from Gainesville Digital Radiography: Broadband access speed within dental science building is 10/100/1000 mps	
GA	Morehouse School of Medicine  Diabetes Screening Telehealth Project	Digital retinal images are obtained and transmitted in emails for interpretation	Training courses are streamed across the internet in real time			Digital retinal images are obtained and transmitted in emails for interpretation	

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
GA	Ware County Health Department					Broadband LAN to connect telemedicine and telehealth sites for clinical consultations and distance learning	
	Rural Health Telemedicine Grant Program						
HI	Hawai'i Primary Care Association					Telemental health sites using ISDN and IP lines. Dental residency program, community health outreach program and other programs using VTC	
	The Hawai'i CHC Telehealth Network Project		Dental Residency Program, community health outreach program and other programs using VTC	Teledermatology Web-based system			
	Moloka'i General Hospital			Telederm Solutions, Inc., store and forward via WWW			Broad Band ISDN for clinical and educational services over a fractional T1 (384K) to urban island sites
IA	Iowa Chronic Care Consortium						
	Congestive Heart Failure and Diabetes Telemanagement Protocols			Monitor patient condition, monitor BP			
	Iowa Medicaid Population Disease Management Demonstration			Internet-based Health Risk Assessments- Chronic Disease Portals with activity logs, self-management tools, education			POTS for patient care & management



## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
IA	Mercy Foundation						
	Midwest Rural Telemedicine Consortium					ISDN-PRI for Clinical, Educational, & Administrative uses	POTS for seclusion and restraint monitoring and diabetes and CHF patient monitoring
	Clearwater Valley Hospital and Clinics, Inc.						
	Clearwater Valley Hospital: Electronic Medical Records		WAN to share software	VPN to share EMR, radiology, digital library	Connect clinics to share EMR	Connect hospitals to share EMR	
ID	Idaho State University, Institute of Rural Health						
	Telehealth Idaho	Planned wound care, dermatology	The majority of IP applications with partner sites are educational due to limits on bandwidth	Telehealth Idaho Toolbox	We are examining wireless LANs for use within facilities		Educational telecommunication, mental health, EHR
	North Idaho Rural Health Consortium (NIRHC)						
	Expanding Telehealth to North Idaho Districts (EXTEND)	Radiology	Pharmacy, education, mental health	Pathology	Electronic Health Record	Rehab services (OT/PT)	
IL	Northern Illinois University/Fermi National Laboratory						
	Neutron Radiation for Cancer Treatment			Interactive website to document and publicize the effectiveness of neutron therapy and advise patients over the Web: www.neutrontherapy.niu.edu/neutrontherapy/		Through a full T3 line with a maximum overhead of 69 meg ingoing/outgoing traffic through Illinois Century Network for billing	
	OSF Saint James-John W. Albrecht Medical Center						
	OSF Saint James Telehealth Network	EKG Carts			Wireless for EKG carts	T-1 lines for telemedicine transmission	

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
IL	<b>Saint John's Hospital</b>	Neonatology Obstetrics Genetics	IP for clinical services and for education over T1 terrestrial lines to rural hospitals				
	<b>Neonatal Telehealth Project in Rural Illinois Located at the Perinatal Center</b>						
IL	<b>Southern Illinois University School of Medicine</b>						
	<b>Downstate Illinois Regional Telehealth Project</b>		Videoconferencing, Instant Messaging, Educational, Clinical & Administrative services over T1 terrestrial lines connected to state backbone	Departmental Web page, scheduling, e-mailing, Grand Rounds educational materials	Internal computer access only	T1 lines, 512 DSL, 512 cable modem for clinical, educational, and administrative	CD-ROM bioterrorism preparedness
IN	<b>James Whitcomb Riley Hospital for Children</b>						
	<b>Telemedicine Applications for Riley Hospital for Children</b>	EEGs, Sleep Studies, Dermatology	Live consultations and CME	CME		Live consultations and CME	T-1 connections between Riley and 3 spoke hospitals for live specialty consultations
	<b>Health &amp; Hospital Corporation of Marion County</b>						
IN	<b>Congressionally-Mandated Telehealth Grants</b>	Picture Archive Communication System (PACS)	IP throughout hospital for radiology and clinics	Clinics use Web access to PACS		Broadband LAN throughout hospital for radiology and clinics	
	<b>University of Kansas Medical Center</b>						
	<b>Expansion of the Kansas Telehealth Network</b>		IP for data collection			ISDN for data collection	
KS	<b>Sustainability and Cost Benefit Evaluation of the Kansas Telehealth Network</b>	Pediatric Echo	IP for clinical services and for education over Kan-ED	Community and patient educational programs		ISDN for telemedicine	
	<b>The James B. Haggin Memorial Hospital</b>						
KY	<b>PACS (Picture Archiving and Communication System)</b>	Imaging	PACS transmission via TCP/IP	Proprietary Web Application		DSL, Fractional T-1 for data transmission	

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
KY	<b>Marcum &amp; Wallace Memorial Hospital</b>						
	<i>Teleradiology Enhancement Project</i>	Radiology	T1 Line to Lourdes Hospital for transmission/archival of radiology procedures	Internet/Web access for physician to review procedures/reports			
	<b>New Horizons Health Systems, Inc.</b> <i>Information Technology Development and Improvement</i>					N/A	
KY	<b>University of Kentucky Research Foundation—Kentucky TeleCare</b>						
	<i>Improving Health Outcomes for Children in Rural Kentucky Schools</i>		IP and T-1 for clinical services, education and Electronic Medical Record over T1 terrestrial lines to rural towns	Teleradiology			
LA	<b>Southwest Louisiana Health Care Systems</b>						
	<i>Community Hospital Telehealth Consortium</i>	Home Disease Management Program	IP for clinical services and for education				ISDN/T1s Distance learning, clinical applications
	<b>Woman's Hospital</b>		Used to connect a Web server to the host server for telemedicine	For physician to communicate on Web server			
MA	<i>Expansion of Physician Internet Portal, Woman's POL</i>						
	<b>Massachusetts College of Pharmacy and Health Sciences</b>						
	<i>Worcester Campus Distance Learning Initiative</i>		For distance education between campuses	For distance education between campuses	For connection to campus networks	For distance education between campuses	
	<b>UMass Memorial Medical Center</b>						
	<i>PACS Teleradiology Project</i>	Radiology	Radiology	Radiology		Radiology	
ME	<b>Regional Medical Center at Lubec</b>						
	<i>Maine Nursing Home Telehealth Network</i>						ISDN for connectivity of video conferencing equipment between network partners

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
MI	Altarum Institute						N/A— Requirements to be determined in current planning process.
	<i>Concepts for a Michigan Health Information Network (MHIN)</i>						
	<b>Hillsdale Community Health Center</b>						
	<i>PACS System</i>	Radiology					
	<b>Hurley Medical Center</b>						
	<i>Clinical Information System Replacement Project</i>		IP for clinical services	Web browser access for remote users of the clinical system; remote users connect using secure VPN access	Internal wireless network for clinical system access	WAN-remote facilities connected by T1s on a SONET with redundant fiber connections	
	<b>Michigan State University</b>						POTS-based video phones for hospice patient and nurse communication
	<i>Telehospiice in Mid-Michigan</i>						
	<b>Western Michigan University</b>						
	<i>The Application of Tele-Allied Health in Rural Counties in Southwest Lower Michigan</i>		Allied Health Consults				
MN	<b>Fairview Health Services</b>						
	<i>Ambulatory Electronic Medical Record System – Twin Cities Metropolitan Care Systems</i>		Epic System on PCs with W2K Citrix Servers IBM AIX Servers CACHE DMS Hitachi SAN	Physician Internet Portal used to access Epic Electronic Medical Record System		WAN with T1 and OS3 transmission systems	
	<b>University of Minnesota</b>						
	<i>Fairview – University of Minnesota Telemedicine Network</i>	Dermatology	Secure IP protocol with quality of service for clinical consults	Secure Website for dermatology and orthopedics		ISDN/2 sites for conducting consults	
	<b>The Curators of the University of Missouri</b>						
MO	<i>Missouri Telehealth Network</i>	Teleradiology	H323 Video for Interactive Telehealth	Access to databases (e.g., Medline)		Frame Relay T1 Connectivity for all services provided	

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
MT	<b>Benefit's Healthcare Foundation</b>						
	<i>MMHA/REACH Telehealth Network Development Project</i>	Radiology	IP for clinical services and for education over T1 terrestrial lines to rural towns				Full dedicated T1 lines for clinical services and education
	<b>Billings Clinic Foundation</b>						
	<i>Effect of an Integrated CIS on Inpatient and Post-Discharge Medication Administration Errors and Chronic Disease Management</i>					Laptops for patient care management	
	<b>Deaconess Billings Clinic Foundation</b>						
	<i>Eastern Montana Telemedicine Network</i>					T1 for videoconferencing	
	<i>Revolutionizing Diabetes Care at Billings Clinic: A Model for Chronic Disease Care</i>	Internal Medicine, Family Medicine, Pediatrics, Endocrinology	Internal Medicine, Family Medicine, Pediatrics, Endocrinology				
	<b>Saint Patrick Hospital &amp; Health Foundation</b>						
	<i>Montana Cardiology Telemedicine Network</i>	Storing of ECG & Echo Images	IP for clinical services over T1 terrestrial lines to rural towns	Cardiology consults			
	<b>Saint Vincent Healthcare Foundation</b>						
NC	<i>Mansfield Health Education Center (MHEC)</i>	Teleradiology Imaging	H323 Video for Interactive Telehealth	Connection for Marketing and Education Services	Connection with St. James Healthcare Network & Internet Technology		
	<b>The University of Montana--Missoula</b>						
	<i>Improving Health Among Rural Montanans (IPHARM)</i>						N/A
	<b>Duke University Medical Center</b>						
	<i>Patent Inclusion in a Community Based Telehealth Network</i>			Health information and notification			

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
NC	<b>Educational and Research Consortium of Western Carolinas</b>						
	<i>Western North Carolina Regional Data Link Project</i>		IP for accessing patient electronic records across regions	Data users access patient electronic records via Web		Hospitals are connected to hosting center through VPN lines	
	<b>North Dakota State University College of Pharmacy</b>						
ND	<i>North Dakota Telepharmacy Project</i>			Prescription Services to patients in rural areas			
	<b>Northland Healthcare Alliance</b>						
	<i>St. Alexius/Northland TeleCare Network</i>	Teleradiology				WAN with dedicated T-1 lines to all sites High speed cable from the hospital to the radiologist's home for teleradiology We are migrating to an ATM network using video over IP	
NE	<b>Good Samaritan Hospital Foundation</b>						
	<i>Mid-Nebraska Telemedicine Network (MNTN)</i>	Teleradiology X-Rays	IP for clinical services and for education over T1 terrestrial lines to rural towns IP 323			IP for clinical services and for education over T1 terrestrial lines to rural towns IP 323	ISDN 384 for clinical and educational services when IP not available
	<b>University of Nebraska Medical Center</b>						
	<i>Distance Education of Undergraduate Nursing Students</i>	Blackboard & video streaming		Class discussions; Pharmacology, Pathophysiology courses	Course access and delivery of content		

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
	<b>Hackensack University Medical Center</b>						
	<i>Implementation of Oncology Patient Management System</i>	Radiology imaging, i.e., PACS connectivity	IP for CIS connectivity to network	Intranet and Internet approved Web sites for medical information, guidelines, etc.	Computing devices for view and data entry (i.e., PC on wheels)	Used for remote access by MD offices to CIS	
NJ	<b>Saint Peter's University Hospital</b>						
	<i>Medical Technology Center for Infants and Children</i>						N/A
	<b>New Mexico Human Services Department</b>						
	<i>New Mexico Tele-Behavioral Health Improvement Project</i>		For 3 sites: T1 DS1 lines; for 2 sites Checks Backbone 1 MB for psychiatric services				
NM	<b>Universities of New Mexico Health Science Center</b>						
	<i>Project TOUCH (Telehealth Outreach for Unified Community Health)</i>			Internet2 used to transmit virtual reality simulation		Internet2 used to transmit virtual reality simulation	
	<i>Rural Health Telemedicine Program</i>		Training			Clinical Services Training	POTS for videophone for clinical consultation
	<b>Nevada Rural Hospital Partners Foundation</b>						
NV	<i>Digital Imaging System for Rural Nevada (DISRN)</i>	Radiology	IP and DICOM for transmission and storage of radiology images	Web access to radiology images		T1 for the transmission of radiology images	
	<b>University of Nevada, Reno</b>						N/A
	<i>Biomedical Imaging Laboratory</i>						
	<b>Community Health Care Services Foundation, Inc.</b>						
NY	<i>Introducing Home Telehealth in New York's 20<sup>th</sup> Congressional District</i>			Home care agencies retrieve patient data using Web			POTS lines to transmit patient home monitoring data

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
NY	<b>Genesee Gateway Local Development Corporation, Inc.</b>		Full T1 connections with IP transmission MPLS network protocols for transfer of clinical information				
	<i>Upstate New York Telemedicine Study</i>						
	<b>Integrated Community Alternatives Network, Inc.</b>			Fractional T1 for mental health services and information transmission			
	<i>Foster Care Tracker and Assessment Tool</i>		IP for Foster Care and Assessments				
	<b>Long Island Association for Millennium Center for Convergent Technologies</b>						
	<i>An Electronic Clinical Trial System to Reduce Drug Development Costs</i>		IP for communication between SBUH and LifeTree	Trial data entered via secure Website		Broadband for communication between SBUH and LifeTree	Category 5 cabling to connect printers and personal computers to the network
	<b>Montefiore Medical Center</b>				Wireless devices 802/11 for order entry, results lookup, problem list		
	<i>Electronic Medical Records Expansion</i>	PACs Radiology Images Discharge Summary Images	IP for clinical services over T1 terrestrial lines	Full access to all clinician related Websites			Exchange of clinical data
	<b>New York Presbyterian Hospital</b>						
	<i>Systems Technology Interfacing Teaching and Community Hospitals (STITCH)</i>		TCP/IP and HL7 for clinical services exchange between Ambulatory clinics and NYP				
<b>Research Foundation of State University of New York (SUNY) at Buffalo</b>							
<i>Telehealth New York</i>	Teledermatology, statewide Hospital Preparedness Information Network	IP and ISDN videoconferencing over T1 terrestrial lines to rural towns and correctional facilities	Distance learning	Roll about telemedicine units	Streaming video distance learning		



## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
NY	The Rosalind and Joseph Gurwin Jewish Geriatric Center of Long Island						
	Demonstration of Implementation of Electronic Medical Record In Skilled Nursing Facility		To submit clinical information to acute care hospitals		Transition to wireless technology for nursing wards in progress		
OH	Case Western Reserve University						
	NetWellness		Consumer Health Information	Consumer Health Information			
	Cincinnati Children's Hospital Medical Center			Patients/parents access the portals through the Medical Center Website			
	Pursuing Perfection—Transforming Health Care Delivery	Radiology and Surgical Services					
	Northwestern Ohio Universities College of Medicine (NEOUCOM)						
	Medical Education Network Teaching Ohio Region III (MENTOR)		Videoconferencing for training	Content delivery and distance education			Archive streaming video
	Ohio Board of Regents						
	Medical Collaboration Network		H.323 videoconferencing w/ H.264 Codec; real time video capture and streaming for education and research collaboration	Web conferencing			Gigabit Ethernet will link hospital and education sites to an OC-48 backbone for education and research collaboration
	Ohio State University Research Foundation (for the Ohio Supercomputer Center)						
	Computational Approaches to Research on Cancer in Children and Others		Utilize secure transport portals for clinical data	De-identified information access	De-identified information access	De-identified information access	
Southern Consortium for Children							
Southern Ohio Telepsychiatric Network			IP for clinical services and for education over T1 terrestrial lines to rural towns				

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
OK	<b>INTEGRIS Health, Inc.</b>						
	<i>INTEGRIS Rural Telemedicine Project</i>	Teleradiology Telewoundcare Telemonitoring		Home Monitoring Website		ATM to Hospitals & Schools for therapy, training, & administration	POTS for use of videophone for home monitoring and intervention
	<b>Oklahoma Office of Rural Health</b>						
	<i>Rural Health Telemedicine Program</i>		IP for clinical services and CME over T1 terrestrial lines to rural areas				
OK	<b>OSU Center for Rural Health</b>						
	<i>Rural Oklahoma Telemedicine Service Expansion</i>		IP for clinical services and CME over T1 terrestrial lines to rural areas				
	<b>Asante Health System</b>						
OR	<i>Asante Clinical Systems Initiative</i>	Radiology and cardiology	IP for lab results, report review and signatures, pediatric clinical services over ISDN lines, fiber and wireless across 3 counties	Radiology reads trans-continental United States & Australia	Satellite to connect clinics, private practice physicians and 5 hospitals to provide telehealth services in 3 counties	Transfer of patient records and images between regional center and rural hospital	
	<b>Tillamook Lightwave IGA</b>						
PA	<i>Tillamook Lightwave Telehealth Technologies for Tillamook County Rural Communities</i>		IP for clinical services between emergency services, county health departments and offered to hospital	Health Dept. vertical private network for local and to OCHAN in Portland		Broadband service between emergency services, county health departments and offered to hospital	
	<b>Clarion University</b>						
	<i>Primary Care Education for the Citizens of Rural Pennsylvania</i>	Women's Health		Blackboard			
	<b>Community Nurses Home Health and Hospice, Inc.</b>						
	<i>Home Telehealth</i>					Telehealth visits	

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
PA	<b>Geisinger Clinic</b>						
	<i>Developing a Stroke Care Educational Program for Rural Pennsylvania</i>		Used for Website www.ruralstroke.com	Website and email			
	<b>Good Samaritan Hospital Regional Medical Center</b>						
	<i>Schuylkill Alliance for Health Care Access</i>			Through the IReach program, we will refer clients to medical providers and track the clients. The process will be interactive between SAHCA and participating medical providers			
	<b>Hospice of Metropolitan Erie</b>						
	<i>Hospice Telehealth Project</i>	Plan of care documents		Real time participation with patient & family	To be determined	Where available-for patient care	
	<b>Jewish Healthcare Foundation</b>						
	<i>Reinventing Healthcare: the Application of the Pittsburgh Regional Healthcare Initiative's Perfecting Patient Care (PPC) System to Chronic Medical Conditions</i>			Utilizing e-mail network connecting all sites for regional learning and peer-to-peer coaching Planned for 2006. Web-based methodology learning modules			
	<b>Magee Rehabilitation Hospital</b>						
	<i>Virtual Reality Technology</i>	Neonatal Radiology		Consumer Websites: Breast Cancer and virtual tour for obstetrics			Audio/Video Teleconferencing for Gender-Based and Cancer Conference
<b>Mercy Health Partners</b>							
<i>Using Information Technology to Enhance Patient Safety</i>				For remote access for physicians	At bedside for nursing documentation	Ethernet 100MB for local provider access	

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
	<b>Mercy Hospital of Pittsburgh</b>						
	<i>Mobile Clinician Project</i>				Wireless (IEEE 802.11b, g standard) for connecting mobile workstations to electronic health record server		
	<b>Millicreek Community Hospital</b>						
	<i>Millicreek Health System Informatics Project</i>		Hospital information system networking infrastructure	Remote access by physicians/ authorized users			
	<b>Oil Region Alliance of Business, Industry, &amp; Tourism</b>						
	<i>The Venango Center for Healthcare Careers (VCHC)</i>			Distance Learning Communication		Teleconferenc e, Delivery of Education	
<b>PA</b>	<b>Pennsylvania College of Optometry</b>						
	<i>Ophthalmic Telehealth</i>	Eye Care	Eye Care	Eye Care		Eye Care	
	<b>Pennsylvania Homecare Association</b>						
	<i>Researching on the Financial Viability of Telehealth and Telehealth's Impact on Home Health Nurses</i>	All 29 agencies are transmitting over POTS					
	<b>Penn State University</b>						
	<i>Digital Informatics and Communications System</i>	Lectures, CME	Videoconferencing, medical consent, telemedicine	Clinical trials network, physician and patient education, intranet			T-1/T3 links between sites for videoconferencing
	<b>Pennsylvania State University College of Medicine</b>						
	<i>Physician-Scientist Initiative</i>	Lectures, CME	Videoconferencing, medical consent, telemedicine	Clinical trials network, physician and patient education, intranet	Satellite to connect clinics to provide teleconsultations in frontier communities		

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
PA	<b>Pinnacle Health System</b>			Remote access to radiology and cardiology PACS; patient demographic and clinical data, including lab and radiology results; medical records imaging; OB link	Enhancements moving from 802.11b to 802.11g to increase number of wireless access points to provide wireless connectivity through all facilities		
	<b>Safe Harbor Behavioral Health</b>						
	<i>Safe Harbor Behavioral Health Telemedicine Program</i>		TCP/IP clinical and educational services	TCP/IP, HTML, PHP-secured child psychiatric services			
	<b>SUN Home Health Services</b>						
	<i>SUN Home Health Services Network</i>	Web Server- Medical Records, Patient Care Training and Community Education	Web Server/Database Server-Medical Records, Visit Entry, Patient & Community Education	Web & Email Server/Citrix MetaFrame-Medical Records, Patient & Community Education	T-1 Frame-Relay/DSL-LAN/WAN Access, Video Conferencing, Telemedicine, Internet Services	Cable modem-LAN/WAN Access, IT management	
	<b>Susquehanna Health System</b>						
	<i>Regional Electronic Medical Record</i>		Electronic medical record	Electronic medical record	Electronic medical record	Redundant ATM and T1 for inter-facility connectivity	
	<b>Thomas Jefferson University</b>						
	<i>Integrative Medicine Informatics Feasibility Project</i>				Web Based Distance Learning and Digital Archive		

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
PA	<b>Tyrone Hospital</b>						
	<i>The Tyrone Hospital Health Information Network</i>		IP will be used as the primary protocol for communication over public Internet to all members	The Internet will be used to communicate to remote providers	Wireless technology will be used within the hospital Satellite Broadband will be used where Cable and DSL are not available	Cable and DSL will be primary means of internet access	
	<b>University of Pittsburgh School of Nursing Nurse Anesthesia Program</b>						
	<i>Nurse Anesthesia Rural and Elderly Expansion Project (NAREEP)</i>		Have IP protocol capability and will use as backup should ISDN line fail				Use PolyCom transmission and Tandberg reception units via ISDN
	<b>Wayne Memorial Hospital</b>						
	<i>Improving Medication and Patient Safety</i>				Wireless tech for portable nurses stations for barcoding		
	<b>Family Resources Community Action</b>						
	<i>HIV/AIDS Comprehensive Psychosocial Support Project</i>						N/A
	<b>Kent County Visiting Nurse Association d/b/a VNA of Care New England</b>						
	<i>Advancing Point-of-Care Technology at VNA of Care New England</i>	Home Health Data Collection					Home Health Data Collection
RI	<i>Increasing Access to Telehealth—Phase II</i>	Clinical data related to cardiac conditions	POTS line via telephone line for patient monitoring	Data is housed in a secure Web portal accessed only through permission			
	<b>Thundermist Health Center</b>						
	<i>Thundermist Health Center Electronic Health Record</i>	Scanned Images, radiology	T-1, Broadband, Ethernet VAN, to connect clinical sites to EHR and PMS	Patient Portal for Diabetics and other groups is planned	Wireless technology on internal LAN only	T-1 lines to connect clinical site to HER and PMS	

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
SC	<b>Advanced Technology Institute (ATI)</b>						
	<i>Healthcare and Emergency Awareness Response for Telehealth (HEART) Phase II</i>	Ophthalmology	IP for transmission of retinal images between CHC and ophthalmologist. IP for access care to diabetes care management data	CM Everywhere diabetes care management Web access for patients			DSL for transmission of retinal images between CHC and ophthalmologist
	<b>Beaufort-Jaspert-Hampton Comprehensive Health Services</b>						
	<i>South Carolina Prostate Cancer/Telehealth Project</i>					Data Sharing Internally, T1 connection for videoconferen ce	
<b>Greenville Hospital System</b>		Patient Management and clinical results sent to our Lifetime Clinical Record are interfaced via HL7 technologies	GHS Network is totally TCP/IP for all applications, clinical and administrative	All our clinical and key patient care systems are deployable via this technology	All clinical and patient care systems can use this technology		All clinical and patient care systems use this technology at our satellite facilities
SD	<b>Voorhees College</b>						
	<i>Developing a Telehealth Infrastructure to Address Health Disparities Through Education and Training</i>					1 Full T1 line at the main site for static VPN with remote sites for education and training	
	<b>Avera Health</b>						
SD	<i>Avera Rural and Frontier Disease Management Telehealth Network</i>		IP over T1 lines for clinical, educational and administrative purposes				POTS for diabetes/CHF program
	<b>University of South Dakota (USD)</b>						
	<i>Growing Our Own: A Nursing Education/Provider Partnership</i>			Delivery of education			LAN - Delivery of Education

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
TN	University Health System, Inc.						
	High-Risk Newborn Services Project		IP for clinical services and for education over T1 terrestrial lines to rural towns	Alcoholism Group Counseling Using Web		Satellite to connect clinics to provide teleconsultations in frontier communities	
	University of Tennessee Health Science Center						
	Delta Health Partnership		IP for clinical services and for education over T1 terrestrial lines to rural towns	Archived educational Broadcasts (Grand Rounds, CDC satellite broadcasts, etc.) presented via the network	Satellite to connect clinics to provide teleconsultations in frontier communities	ISDN for educational broadcasts	
	Mid-Appalachia Telehealth Project	Patient monitoring	IP for clinical services and for education over T1 terrestrial lines to rural towns	Archived educational Broadcasts (Grand Rounds, CDC satellite broadcasts, etc.) presented via the network	Satellite to connect clinics to provide teleconsultations in frontier communities	ISDN for educational broadcasts	
TX	Mid-South Telehealth Consortium		IP for clinical services and for education over T1 terrestrial lines to rural towns	Archived educational Broadcasts (Grand Rounds, CDC satellite broadcasts, etc.) presented via the network	Satellite to connect clinics to provide teleconsultations in frontier communities	ISDN for educational broadcasts	
	Telehealth for Diabetic Patients in Hispanic and Underserved Rural Communities	Patient Monitoring	IP for clinical services and for education over T1 terrestrial lines to rural towns	Archived educational Broadcasts (Grand Rounds, CDC satellite broadcasts, etc.) presented via the network	Satellite to connect clinics to provide teleconsultations in frontier communities	ISDN for educational broadcasts	
	CHRISTUS Visiting Nurse Association of Houston						
Home Monitoring: Demonstration Pilot of Cost Control	Clinical data transmission	IP for Central Station Monitoring utilizing Honeywell HornMed Central Station Software	Communication with MDs and health care team	Satellite for clinical data transmission		Standard phone service when satellite transmission unavailable	



## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
	<b>Cook Children's Medical Center</b>						
	<i>Rural Specialty Health Telemedicine Initiative</i>	Educational programs available on demand via Internet	TCP/IP 10.50.10.49; 10.2.41.10; 192.168.11.1 IP for clinical services	Internet used to transmit/receive over T1/IP line for telemedicine activities. Distance learning available from <a href="http://www.cookchildrens.org">www.cookchildrens.org</a>	Satellite to connect clinics to provide teleconsultations in frontier communities	Dedicated T1 line for telemedicine to Abilene site	WAN and LAN connections used for telemedicine; ISDN, IP and internet connections used for educational and videoconferencing activities
	<b>Harris County Hospital District</b>						
	<i>Specialty Access Through Telemedicine (SAt++)</i>	This will be used with some dermatology consultations when the medical staff at spoke only needs consultation from specialist					T1 Transmissions for Psychiatry and dermatology consults needing direct communication with patient and/or staff at spoke
TX	<b>University of Texas Health Science Center at San Antonio (UTHSCSA)</b>						
	<i>Diabetes Risk Reduction via Community Based Telemedicine (DIRReCT)</i>			IP for clinical services and for education over T1 terrestrial lines to rural townships			
	<b>University of Texas Medical Branch Center to Eliminate Health Disparities</b>						
	<i>The Texas Telehealth Disparities Network</i>						To be determined
	<b>University of Texas Medical Branch - Galveston</b>						
	<i>Electronic Health Network</i>	Radiology Dermatology	H.323 Videoconference telemedicine all specialties, e-mail, FTP, secure server access (SSL), Internet II	<a href="http://www.utmb.edu/telehealth/">http://www.utmb.edu/telehealth/</a> <a href="http://ehp.utmb.edu">http://ehp.utmb.edu</a> for disseminating information and contacts	Videoconferencing, remote telemedicine, 2-way satellite videoconferencing	Satellite downlinks for telemedicine and education	Videoconferencing via satellite network uplink/downlink

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
UT	<b>Association for Utah Community Health (AUCH)</b>						
	<i>Association for Utah Community Health Telehealth Program</i>	Ophthalmology	IP Videoconferencing via T1 and DSL connections for distance learning	Website for Distance Learning			
	<b>Dr. Ezekiel R. Dumke College of Health Professions</b>						
	<i>Health Opportunities Professional Exploration (HOPE)</i>		Teaching distance/rural paramedic courses for credit towards an Associates Degree Development, maintenance and delivery of internet protocols for Web-based course testing	Teaching distance/rural paramedic courses for credit towards an Associates Degree Development, maintenance and delivery of internet protocols for Web-based course testing		Development, installation and use of IP Video Bridge equipment for use in teaching distance/rural paramedic courses for credit towards an Associates Degree	
	<b>Intermountain Healthcare</b>						
	<i>HRSA Telemedicine Pilot Program for Interpreting Services for the Deaf</i>					Video interpreting transmissions	
	<b>University of Utah</b>						
VA	<i>Utah Telehealth Network Comprehensive Telehealth Services</i>	Radiology, cardiology, pharmacy	Videoconferencing, radiology, pharmacy, cardiology, VPNS	Web archives of continuing education programming	Satellite downlinks of continuing education		
	<b>University of Virginia</b>						
VA	<i>Southwest Virginia Alliance for Telemedicine</i>	Pediatric Cardiology Reads, Diabetic Retinopathy, Radiology, Dermatology	Clinical consults and Distance Education programs, Outreach to Military in Iraq and families in US	Clinical Consults, Education	Clinical Consults (Wound Care)	Clinical Consults, Education (State, Nationwide, and International)	

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
VT	<b>The Community Health Center of Burlington</b>			HTML, XML JAVA used with software vendors and outside information sources and for patient education and reference lab interfaces	Used with internal portable laptops accessing electronic medical records	Burlington Telecom used to connect satellite sites at 100MB/s	
	<i>Community Health Center Technology Upgrade</i>		WAN network protocol, and internet use for electronic medical records				
	<b>The University of Vermont (UVM)</b>					ISDN	
	<i>Pediatric Teletrauma Project</i>					Teletrauma, Pediatric Critical Care	
WA	<b>Children's Hospital and Regional Medical Center – Seattle</b>					ISDN for clinical telemedicine	
	<i>Children's Health Access Regional Telemedicine (CHART) Program</i>						
	<b>Inland Northwest Health Services</b>						
	<i>Northwest Telehealth--TeleER</i>		IP for clinical services and for education IHS/EMR, over T1 terrestrial lines to rural towns			IP for clinical services and for education IHS/EMR, over T1 terrestrial lines to rural towns	
	<i>Northwest Telehealth--Telepharmacy</i>		IP for clinical services and for education IHS/EMR, over T1 terrestrial lines to rural towns			IP for clinical services and for education IHS/EMR, to rural towns	
	<b>Yakima Valley Memorial Hospital</b>						
	<i>Bedside Medication Management (MAR) System</i>		TCP/IP Local Area Network 100/1000 Base T and F for point of care medication administration		802.11 b/g; Bluetooth for point of care and medication administration		

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
ST	<b>La Crosse Medical Health Science Consortium</b>						
	<i>Virtual Population Health Centers in the Rural Midwest</i>	DVDs and streaming for radiography on line	4 location sites participated—3 rural Cont. ed for PT and PTAs-Jurisprudence Education-4 locations-3 rural	Students take online portion and then clinical and 11 rural clinics/hospitals			
WI	<b>Marshfield Clinic Telehealth Network</b>						
	<i>Marshfield Clinic Telehealth Network</i>	Dermatology Wound Management EMR is S/F and is used in all consultations	All intranet video is IP	Email only	Tablet PCs for providers and staff	Interactive Video Consultations All clinic operations	ISDN for non-corporate video sites
	<b>Rural Wisconsin Health Cooperative</b>						
	<i>RWHC/PHCA Telehealth Initiative</i>	Teleradiology/ PACS	Videoconferencing and distance education	Teleradiology/ PACS Videoconferencing and distance education			
WV	<b>St. Elizabeth Hospital Community Foundation</b>						
	<i>Affinity/UW Telemedicine Project</i>					ISDN of 345 kbps for office visits	
	<b>Appalachian Pain Foundation</b>						
WV	<i>Physician Education, Community Outreach Program to Prevent Diversion of Prescription Drugs</i>		IP for education and public outreach over T1 terrestrial lines to rural towns	Pain Management Website; information, referral, and education			
	<b>Robert C. Byrd Center for Rural Health</b>						
WV	<i>Marshall University Southern West Virginia Rural Outreach Project</i>	Health Records from Mobile Units; Radiology; Streaming Video Outreach for Health Education	T1 terrestrial lines to 3 sites; T3 lines to 1 site for health education and meetings	Web-based EHR		H.323 connectivity for video conferencing & delivery of outreach education and services	Streaming video outreach for health and educational outreach services

## Technology and Transmission

ST	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
WV	West Virginia University, Mountaineer Doctor Television (MDTV)						
	West Virginia Community Mental Telehealth Project		IP for clinical services and for education over Frame Relay to rural towns				
WY	United Medical Center						
	Regional Expansion of Telehealth and Distance Learning		IP for clinical services and for education using T1 lines to network partners				
	Wyoming Department of Health			Website for information on telehealth projects, policy statements, and sources of support		Videconferencing via H.323 for telepsychiatry	Telephone service for home health monitoring
	Wyoming Network for Telehealth (WYNETTE)		IP for clinical services, resource access, and distance education to rural communities				

## Technology and Transmission

### Definitions:

<u>Store and Forward</u>	Transmission of static images or audio-video clips to a remote data storage device, from which they can be retrieved by a medical practitioner for review and consultation at any time, obviating the need for the simultaneous availability of the consulting parties and reducing transmission costs due to low bandwidth requirements.
<u>Internet Protocol</u>	The messenger protocol of the TCP/IP (Transmission Control Protocol/Internet Protocol), describing software that tracks the Internet address of nodes, routes outgoing messages, and recognizes incoming messages. It facilitates the identification of the Internet Protocol Address (IP Address), of a computer or other device on the Internet (normally printed in dotted decimal form such as 128.127.50.224). The TCP, or Transmission Control Protocol, is the connection-oriented protocol portion of the TCP/IP that first establishes a connection between two systems that exchange data. The TCP/IP facilitates communication through "packet switching" over the Internet and is the protocol used for communication across interconnected networks, between computers, and diverse hardware architectures, including data communications equipment and Ethernet LANs, and various operating systems.
<u>World Wide Web</u>	The universe of accessible information, including graphics, sound, text, and video accessible through the Internet. The Web has a body of software, a set of protocols and defined conventions for accessing such information, including HTML (Hypertext Markup Language), the Web's software language, and TCP/IP, a family of networking protocols providing communication across interconnected networks.
<u>Broadband</u>	For purposes of this questionnaire, a general term for a telecommunications medium of sufficient capacity to transmit high quality voice, data, and video transmissions. Broadband has been defined in many ways: e.g., a Wide Area Network (WAN providing bandwidth greater than 45 Megabits/sec (T3); and voice, data, and/or video communications at rates greater than 1.544 Megabits/sec (T-1), but has been Federally defined as data transmission <u>each way</u> , of 200 kilobits/second or more.
<u>Broadband LAN</u>	A Local Area Network (LAN) that is distributed via broadband coaxial cable normally utilizing CATV technology and broadband modems. Most commonly used with the Ethernet (CSMA/CD) and Token Bus.
<u>Broadband ISDN</u>	Refers to ISDN services offered at rates higher than the Primary access rate (23B+D) of 1.544MB/s or 2.048Mb/s. Proposed broadband ISDN service is defined by CCITT as switched services from 34Mb/s to 680Mb/s using cell relay technology. Channels are designated as "H" channels.

# Homeland Security

**OAT Grantees were asked to describe activities related to homeland security (e. g., surveillance, public health information, distance learning activities, etc.). Information requested included contact information, number of sites involved, role, brief description of activities (exercises, training, mass casualty, surge capacity efforts and/or any other relevant activity), and other entities associated with this activity. Grantee responses are indicated in this section.**

**N/A = Not Applicable**

## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
AK	<b>Alaska Native Tribal Health Consortium</b>	Michael J. Bradley Bioterrorism Coordinator 4141 Ambassador Dr. Anchorage, AK 99508 Ph: 907-729-3653 Fax: 907-729-3652	Assist Alaska tribal health organizations and other Alaska Native entities develop disaster plans and programs designed to give them the capacity to respond to and manage all hazards which might afflict Tribal communities and populations.	12+	Assist local and regional entities develop and improve their emergency plans and programs. Represent Alaska Native interests in working with state agencies to develop State emergency response plans and programs. Assist Tribal emergency planners in developing and revising plans consistent with state programs and federal guidelines for emergency management.	Alaska State Hospital and Nursing Home Association, Alaska Primary Care Association, Emergency Medical Planning Group.
	<b>Alaska Psychiatric Institute (API)</b>	Mark W. Doughty, Safety Officer 2800 Providence Drive. Anchorage, AK 99508-4677 Ph: 907-269-7819 Fax: 907-269-7251 <a href="http://www.hss.state.ak.us/dbh/API">www.hss.state.ak.us/dbh/API</a>	We participate in the Homeland Security activities through Alaska State Hospital and Nursing Association (ASHNA) funded activities and our membership in the Joint Medical Emergency Planning Group (JMEPG).	1	The Safety Officer is the API Representative in the JMEPG Group. Working with Municipal, State, and Federal entities regarding the role of individual hospitals for emergency planning.	N/A
AL	<b>University of South Alabama</b>	Carl Taylor 307 N. University Blvd., HSB 1100 Mobile, AL 36688 Ph: 251-461-1812 Fax: 251 461-1809 <a href="http://www.cshh.southalabama.edu">www.cshh.southalabama.edu</a>	Statewide network provider of Advanced Regional Response Training (ARRT) designed to meet the unique and specific needs of emergency response agencies, healthcare providers, hospitals and public health. Provided training at the USA Center for Strategic Health Innovation AART Center to 500 attendees; 60 hospitals; 11 public health areas. Delivered organized specific ICS and planning sessions for hospitals, community health centers, and public health organizations.	Statewide	CSHH coordinates and delivers response training for all of Alabama, incorporating all tiers of response into the education program; ensures training ties together local, state and federal responsibilities; collaborates with surrounding state of Florida, Mississippi, and Louisiana.	USA College of Medicine, USA College of Nursing, Alabama Department of Public Health, Mobile County Health Department, Alabama Emergency Management Agency, Mobile County Emergency Management Agency, Alabama Hospital Association, USA College of Medicine, USA College of Nursing, Alabama Department of Public Health, Mobile County Health Department, Alabama Emergency Management Agency, Mobile County Emergency Management Agency, Alabama Hospital Association.



## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
AR	<b>University of Arkansas for Medical Sciences</b>	Ann Bynum 1123 South University ST 400 Little Rock, AR 72204 Ph: 501-686-2595 Fax: 501-686-2585 <a href="http://pweb.uams.edu/bportal/">pweb.uams.edu/bportal/</a>	Statewide network for bioterrorism training and Medical Reserve Corps Teams. Continuing education for healthcare professionals in bioterrorism; Statewide conferences; training exercises.	Statewide – 12 Regions	BIOTCE manager based in each region at AHECs, CHCs or Health Depts. Comprehensive and coordinated approach to CE for health care providers, equipping them to work effectively with other local, regional, and State personnel in bioterrorism event. The 22005 Conference had 487 attendees. The first Arkansas Medical Reserve Corps Teams are forming at the AHECs and University Hospital.	Arkansas Department of Health, Arkansas Department of Emergency Management, Community Health Centers of Arkansas, Arkansas Children's Hospital, Veterans Administration, Arkansas Hospital Association
AZ	<b>Arizona Board of Regents, University of Arizona</b>	Richard McNeely PO Box 245032 Tucson, AZ 85724 Ph: 520-626-7343 Fax: 520-626-1027 <a href="http://telemedicine.arizona.edu">telemedicine.arizona.edu</a>	Administrative and Educational Teleconferences in Bioterrorism Emergency Response	162	The Arizona Telemedicine Program provides network services in support of a number of local, regional, and statewide emergency preparedness efforts.	Colleges of Medicine, Nursing, Pharmacy, Public Health, Four Corners Telehealth Consortium, Arizona Emergency Medicine Research Center, Arizona Department of Health Services, Arizona Burn Center, Pima County, University Physicians Hospital at Kino.
	<b>Banner Good Samaritan Telemedicine Program</b>					N/A
	<b>Maricopa County, Arizona</b>					N/A
	<b>Familia Unida Living with Multiple Sclerosis</b>					N/A
CA	<b>Multi-Dimensional Imaging, Inc. of Newport Beach</b>					N/A

## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
CA	San Joaquin County Health Care Services	Kristy Johnson, MSN, RN Clinical Nurse Specialist 500 W. Hospital Road French Camp, CA 95231 Ph: 209-468-6448 Fax: 209-468-6114 <a href="http://www.sjgeneralhospital.com">www.sjgeneralhospital.com</a>	HRSA and BPAC committee representative for hospital. Directly participates in the planning and execution for State and County drills associated with mass casualties, surge capacity and bioterrorism events.	1	In local emergency planning, works on the HRSA and BPAC committees to evaluate and coordinate various plans between all County stakeholders (area hospitals, Public Health, OES, EMS, law enforcement, fire departments, and city managers).	San Joaquin County Public Health Services, Office of Emergency Services (OES), Behavioral Health Services, Emergency Medical Services (EMS) and Sheriff's Office. Also works closely with City of Stockton OES, Police, Fire, and area hospitals (Kaiser, Dameron, Sutter Tracy, St. Joseph's, Lodi Memorial, etc.)
	Santa Rosa Memorial Hospital					N/A
	Avista Adventist Hospital					N/A
CO	University of Colorado Health Sciences Center	David Rivera 4200 E. 9th Ave. Denver, CO 80262 Ph: 303-315-7369 Fax: 303-315-4419	Police and Security Department for the 9th Ave and Fitzsimons Campuses. Patrol Campus, respond to calls for service, take crime reports, investigate crime, monitor electronic security	2	Denver Police and Fire Department Aurora Police and Fire Department Adams County Sheriffs Office State Emergency Preparedness State Homeland Security UASI	Internal of UCHSC, various Departments.
DC	American Red Cross					N/A

## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning	
DC	<b>Foundation for eHealth Initiative</b>	Janet M. Marchibroda Chief Executive Foundation for eHealth Initiative 1500 K Street, NW, Suite 900 Washington, DC 20005 Phone: 202-624-3270 Fax: 202-624-3266 Email: <a href="mailto:janet.marchibroda@ehealthinitiative.org">janet.marchibroda@ehealthinitiative.org</a>	Through its annual survey of state, regional and community-based health information exchange initiatives and organizations, the Foundation for eHealth Initiative tracks the efforts of health information exchange efforts across the US, including several components that would support homeland security and emergency preparedness efforts.  For example, the annual survey, (which included 109 state, regional, and community-based efforts in 2005) tracks the following: -The functionalities of each HIE effort (including public health surveillance); -The types of data being exchanged (e.g., diagnoses, laboratory results, medication histories, etc.); -Stakeholders who are engaged in the HIE effort (including state and local public health agencies).		The results of the Foundation for eHealth Initiative's annual survey, the learning of funded communities, the rapidly growing coalition of state, regional, and community-based initiatives engaged in the Connecting Communities coalition, and the common principles and tools for health information exchange that are being developed and disseminated, can all play a critical role in federal, state, or local emergency planning efforts.		
	CareSpark, TN					N/A	
	Colorado Health Exchange Network, CO					N/A	
	Indiana Health Information Exchange, IN					N/A	
	Maryland/DC Collaborative for Healthcare Information Technology, MD	Dr. Victor Plavner 10420 Little Patuxent Parkway Suite 440 Columbia, MD 21044 Ph: 410-992-5780 <a href="http://www.collaborativeforhlc.org">www.collaborativeforhlc.org</a>	Regional health record connectivity to support public health and surveillance activities in Maryland and Washington, D.C.				
	Massachusetts Health Data Consortium (MA-SHARE), MA						N/A

## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
DC	National Institute for Medical Informatics, WI	Seth Foldy / Ed Barthell NIMI 1251 Glen Oaks Lane Mequon, WI 53092 Ph: 414-290-6725 Email: sfoldy@sbcglobal.net	Public health dashboard includes situational awareness of communicable diseases, weather, security level ("color"), traffic, pollution, and emergency Dept. status; bed counts; alerts Preparedness exercises (tabletop and functional); mass casualty communications and management	9 counties of SE Wisconsin	Feedback to local, state and federal preparedness agencies.	Local and state health departments, county emergency management, health care emergency preparedness consortium, Metro. Medical Response System.
	Santa Barbara County Care Data Exchange, CA					N/A
	St. Joseph's Hospital Foundation (Whatcom HIE), WA					N/A
	Taconic Educational Research Fund, NY					N/A
FL	BayCare Health System					N/A
	Florida Cancer Research Cooperative, University of South Florida					N/A
	University of Florida College of Dentistry (UFCD)					N/A
GA	Morehouse School of Medicine					N/A
	Ware County Health Department					N/A

## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
HI	<b>Hawai'i Primary Care Association</b>	Sandy Pablo 345 Queen Street, Suite 601 Honolulu, HI 96813	Coordinate Homeland Security and Disaster Preparedness activities among the CHCs and integrate them into the state master plan.	13 clinics with 31 sites on 5 islands.	HPCA represents the CHCs at the state level in the ongoing planning and response capabilities system. HCPA participates in a national PCA Emergency Preparedness Network.	Hawaii Department of Health, Healthcare Association of Hawaii, State and County Civil Defense, Emergency Medical Services, Red Cross, US Army, Navy, and Coast Guard, State Airports and Harbors Divisions, Offices of the Governor and Lt. Governor, State Legislature.
	<b>Moloka'i General Hospital</b>					N/A
	<b>Iowa Chronic Care Consortium</b>					N/A
IA	<b>Mercy Foundation</b>	Fred Eastman 1111 - 6th Avenue Des Moines, IA 50314 Ph: 515-643-5225 Fax: 515-643-8928 <a href="http://www.mntc-iowa.org">www.mntc-iowa.org</a>	Public Health Information/Distance Learning Activities	30+	Assist in dissemination of educational/public health information related to public safety/terrorism as requested.	Iowa Department of Public Health; Iowa Center for Public Health Preparedness; Centers for Disease Control
ID	<b>Clearwater Valley Hospital and Clinics, Inc.</b>	Pam McBride 301 Cedar St. Orofino, ID 83544 Ph: 208-289-5509 Fax: 208-289-2437 <a href="http://www.clearwatervalleyhospital.com">www.clearwatervalleyhospital.com</a>	Regional health care work group; local emergency planning committee	5	Collaborates with regional hospitals and medical facilities for surge capacity planning; partners with local law, fire, ambulance services for LEPC.	North Central Public Health District; Clearwater County; City of Orofino.

## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
ID	<p><b>Idaho State University, Institute of Rural Health</b></p>	<p>D. B. Hudnall Stamm, PhD            Campus Box 8174            Pocatello, ID 83209            Ph: 208.282.4436            Fax: 208.282-4074  <a href="http://www.isu.edu/irh">www.isu.edu/irh</a> and <a href="mailto:telida.isu.edu">telida.isu.edu</a></p>	<p>Representation on the State Bioterrorism Preparedness &amp; Response Advisory Committee; provision of digital medical library to 10 hospital sites with bioterrorism response health information; edited and published articles in IEEE Engineering in Medicine and Biology Magazine, Sept/Oct 2002; Dec 2003, Several papers on terrorism and cultural trauma.</p> <p>Statewide network for distributing bioterrorism continuing education training. Distance delivery will include virtual tabletop exercise and drill, simulations, live-event Webcasting (interactive and non-interactive), Webcasts (on-demand), archived Webcasts, Virtual Grand Rounds, workshops, seminars, audioconferences, CD-ROM.</p>	<p>11 44</p>	<p>Representation on the State Bioterrorism Preparedness &amp; Response Advisory Committee</p> <p>Telehealth Idaho coordinates videoconferencing CE education for awareness and preparedness training for health professionals in Idaho; collaborates with surrounding telehealth networks in Idaho and surrounding states; and participates in Idaho's homeland defense planning.</p>	<p>Principal Investigator for National Child Traumatic Stress Network Center for Rural, Frontier, and Tribal Health (SAMSHA # 1UD1 SM56114001); Co-Principal Investigator/Co-Project Director for Bioterrorism Training and Curriculum Development Program grant for Idaho (HRSA T01HP06420), International Society for Traumatic Stress Studies, South African Institute of Rural Health, USAID, Save the Children and various other countries and agencies. Involved with Indonesian government to develop psychosocial recovery plan for Tsunami affected areas. Active internationally in providing aid worker support materials to governments' and NGOs' responses to natural disasters in 2004-2005 (South Asian Tsunami, Hurricane Katrina, etc.) providing aid worker materials. See <a href="mailto:telida.isu.edu">telida.isu.edu</a> for access to materials.</p>
IL	<p><b>North Idaho Rural Health Consortium (NIRHC)</b></p>					<p>N/A</p>
	<p><b>Northern Illinois University/ Fermi National Laboratory</b></p>					<p>N/A</p>

## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
IL	OSF Saint James—John W. Albrecht Medical Center					N/A
	Saint John's Hospital					N/A
	Southern Illinois University School of Medicine	Deborah E. Seale P.O. Box 19682 Springfield, Illinois 62794-9682 Ph: 217-545-7830 Fax: 312-217-545-7839 <a href="http://www.sturned.edu/lelehealth">www.sturned.edu/lelehealth</a>	Collaborated in training of 31 participants; four-part series	5	Primary care providers, administrators, and other health care providers learn how to recognize a bioterrorism event, how to react to an influx of patients, what systems are in place in their community to provide care during an attack. Videconference was taped and reproduced on CD-ROM with resource materials and evaluation.	Western IL AHEC, IL Health Education Consortium, Adams County Health Department, Illinois Department of Public Health, SIU Quincy Family Practice, Montana AHEC-Montana State University.
IN	James Whitcomb Riley Hospital for Children					N/A
	Health & Hospital Corporation of Marion County	Catherine Parker Grants Director HHC 3838 N. Rural St. Indianapolis, IN 46205 Ph: 317-221-2468 Fax: 317-221-2020 Email: <a href="mailto:gparker@hncorp.org">gparker@hncorp.org</a> <a href="http://www.hncorp.org">www.hncorp.org</a>	<ol style="list-style-type: none"> <li>Urban Areas Security Initiative (UASI).</li> <li>HRSA Bed Surge Metropolitan Medical Response System.</li> </ol>	County-wide (1-3)	<ol style="list-style-type: none"> <li>Indianapolis/Marion County/Hamilton County receives funding through UASI for a wide variety of homeland security efforts.</li> <li>For increasing hospital bed surge capacity in the event of an emergency.</li> <li>To increase capacity of public health and hospital system to respond to BT attacks within a 48 hour period.</li> </ol>	<ol style="list-style-type: none"> <li>State of Indiana and all local government agencies.</li> <li>State of Indiana.</li> <li>State of Indiana, City of Indianapolis.</li> </ol>

## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
KS	University of Kansas Medical Center	David Cook, PhD University of Kansas Medical Center Mail Stop 3013 3901 Rainbow Blvd. Kansas City, KS 66160	Several 2-hour bioterrorism and disaster preparedness training sessions throughout the state.	40+	KUCTT will facilitate the delivery of disaster preparedness training sessions through videoconferencing systems located throughout the state. KUCTT will help schedule and monitor the events.	External Affairs Continuing Education
KY	The James B. Haggin Memorial Hospital					N/A
	Marcum & Wallace Memorial Hospital					N/A



## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
KY	<b>New Horizons Health Systems, Inc.</b>	Linda Saur, RNC 330 Roland Avenue Owenton, KY 40359 Ph: 502-484-3663, ext. 2302 Email: <a href="mailto:lsaur@Dellsouth.net">lsaur@Dellsouth.net</a>	<p>Participating (3 Years) with the Kentucky Region 7 Preparedness Committee to develop, implement, and test bioterrorism plan for the northern KY region. Signed Mutual Aid compact with Kentucky Hospital Association to facilitate the ten hospitals in the region working together with the community at large to meet patient needs.</p> <p>Participating in the Region 7 Benchmarking program. Participated in 8/2004 Kentucky Homeland Security regional bioterrorism exercise (Northern Exposure) and in 9/2005 Kentucky Homeland Security regional bioterrorism exercise. Two staff completed the FEMA Emergency Management Institute IS-00700 NIMS in June, 2005. Two staff completed the OSHA Best Practices 16- hour Hospital First Receivers course (06/05) and the OSHA 8-hour First Receivers Train the Trainer Course.</p> <p>(07/05) Developed decon training module for NH staff, purchased decon equipment for hospital and practice in cooperation with Owen County Emergency Management. Participating in community-wide preparation activities with county Emergency Management, regional Hazmat, local, fire, EMS, and Public health entities.</p>	1	Participate with Kentucky Hospital Association in regional and state planning to coordinate services, communication, and other needs.	Kentucky Hospital Association, Kentucky Homeland Security, Owen County Emergent Management, Owen County Public Health.

## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
KY	University of Kentucky Research Foundation—Kentucky TeleCare	Rob Sprang K287 KY Clinic, 740 S. Limestone Lexington, KY 40536-0284 Ph: 859-257-6404 Fax: 859-257-2881 <a href="http://www.rmc.uky.edu/kytelecare">www.rmc.uky.edu/kytelecare</a>	PROACT Statewide network for distributor of bioterrorism training and homeland security alert. Providing lectures from UK Chandler Medical Center, UK Department of Psychiatry/Behavioral Health, Univ. of Louisville Medical Center, KY Dept. of Health	PROACT 17 sites KY Telehealth Network: 53 Sites	Kentucky TeleCare coordinates videoconferencing education for preparedness training for KY; facilitates statewide training for KY Dept. of Health; collaborates with surrounding telehealth networks within KY and with other contiguous states; US Department of Homeland Security, and CDC.	UK Chandler Medical Center, UK College of Agriculture and Dep'ts. Of Plant Pathology, Food Microbiology, Food Safety, Dept. of Animal Sciences, Ag Meteorology, Biosystems and Agricultural Engineering Departments, Veterinary Science; Dept. of Sociology/Agriculture; Cooperative Extension Service; UK College of Pharmacy; UK Department of Psychiatry; UK School of Public Health, Univ. of Louisville Medical Center, U of L Dep'ts. of Nursing and Dentistry, KY State Dept. of Health, KY State Dept. of Agriculture, US Department of Homeland Security, CDC.
	Southwest Louisiana Health Care Systems	Mary Morris Lake Charles Memorial Hospital 1525 Oak Park Blvd Lake Charles, LA 70601 Ph: 337-494-2861 Fax: 337-494-6742 Email: <a href="mailto:mmorris@lcmh.com">mmorris@lcmh.com</a>	Distance Learning, Public Health Information	22	Institutional involvement in local, regional, and state planning.	Louisiana Office of Emergency Preparedness.
LA	Woman's Hospital	Stan Shelton Vice President—Support Services Woman's Hospital 9050 Airline Highway Baton Rouge, LA 70815 Ph: 225-924-8645 Email: <a href="mailto:mis9m@virginia.edu">mis9m@virginia.edu</a> <a href="http://www.womans.com">www.womans.com</a>	Hospital emergency preparedness drills, HEICS	2	Woman's Hospital coordinates disaster-related medical readiness at the Federal, State, and local area through active participation with the Louisiana Office of Emergency Preparedness, the Metropolitan Medical Response System (Louisiana Region 2 Hospital Emergency Event Group), the East Baton Rouge Parish Office of Emergency Management and the Baton Rouge Health Care Forum Emergency Management Group	None

## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
	Massachusetts College of Pharmacy and Health Sciences					N/A
MA	UMass Memorial Medical Center	Gina Smith, RN Emergency Preparedness Coordinator Ph: 508-334-7688 Fax: 508-334-7579 Email: smitho2@ummc.org	UMass Memorial participates in the Massachusetts Department of Public Health Hospital Emergency Preparedness Committee, Metropolitan Medical Response System (MMRS), and the Central Massachusetts Mass Casualty Incident Planning Group. UMass Memorial sponsors a 175-member FEMA Disaster Medical Assistance Team (DMAT)		Planning and practice with state and regional emergency preparedness groups including statewide disaster and hazardous material exposure drills and exercises, personal protective equipment and decontamination training, surge capacity planning, force protection planning, and incident management training. UMass Memorial-sponsored DMAT team deploys a rapid response self-sufficient medical team of 35 within 12-24 hours following a federal disaster declaration.	Collaborative planning with all other regional hospitals and health care facilities, including St. Vincent hospital, Health Alliance Hospital, Henry Haywood Hospital, Clinton Hospital, Wing Hospital, Mary Lane Hospital, and with local, regional, and state emergency medical services, fire services, and public health agencies. Through DMAT team, Dept. of Homeland Security-FEMA, US Public Health Service, US Dept. of Veterans Affairs.
ME	Regional Medical Center at Lubec					N/A
	Altarum Institute					N/A
	Hillsdale Community Health Center	Valerie Fetters 168 S. Howell Hillsdale, MI 49242 Ph: 517-437-5216	Participation with District 1 Regional Medical Response Coalition	1	N/A	N/A
MI	Hurley Medical Center					N/A
	Michigan State University					N/A
	Western Michigan University					N/A

## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
MN	<b>Fairview Health Services</b>	Tom Ormand, Director 323 Stinson Blvd. Minneapolis, MN, 55473 Ph: 612-672-6822 Email: <a href="mailto:tomand1@fairview.org">tomand1@fairview.org</a>	The Ambulatory Electronic Medical Record is used in conjunction with FHS acute care electronic medical record so that Emergency Department physicians and caregivers will have immediate access to patient's recent ambulatory records thus expediting diagnosis and treatment. The AEMR serves as an analytical repository for bio-surveillance and provides aggregate analysis. It also provides automated tracking of immunization and is used for monitoring disease patterns and patient volumes in physician and clinic offices. The data enable atypical disease cluster identification to support reporting to FHS for communication to the Minnesota Department of Health and Centers for Disease Control, as appropriate.	University of Minnesota Medical Center at Fairview Riverside and University Campuses and free-standing clinics (6)  Fairview Southdale Hospital and free-standing clinics (6)  Fairview Ridges Hospital and free-standing clinics (5)	Unknown at this time.	Unknown at this time.
	<b>University of Minnesota</b>		Contracts with the Missouri Dept. of Health and Senior Services (24 sites) and the Missouri Primary Care Association (15 sites); is in the execution process to provide connectivity to DHSS, the Missouri Hospital Association FQHC, and 22 Hospitals for the purpose of bio-attack prepared and response.	39	The Missouri Telehealth Network will simply be a conduit/tool used for planning activities as well as response.	Funding will come from the Missouri Dept. of Health and Senior Services and MPCA with Federal funding from HRSA
MO	<b>The Curators of the University of Missouri</b>	Weldon Webb, MA Missouri Telehealth Network 2401 Lemone Industrial Blvd Columbia, MO 65212 Ph: 573 884-7958 Fax: 573 882-5666 <a href="http://www.telehealth.muhhealth.org">www.telehealth.muhhealth.org</a>				
	<b>Benefis Healthcare Foundation</b>	Jack W. King 1101 26th St So. Great Falls, MT 59405 Ph: 406-455-4285 Fax: 406-455-4141 Email: <a href="mailto:kingjacw@benefis.org">kingjacw@benefis.org</a>	N/A	N/A	Benefis Healthcare Foundation is a partner in a Federal HRSA grant for Bioterrorism Preparedness.	St. Vincent Healthcare
MT	<b>Billings Clinic Foundation</b>	Joe Marcotte 2800 10 <sup>th</sup> Avenue North Billings, MT 59101 Ph: 406-657-4824 Email: <a href="mailto:jmarcotte@billingsclinic.org">jmarcotte@billingsclinic.org</a>	Involved in variety of initiatives—i.e., Surge Capacity Planning funded by HRSA and HAZMAT and Incident Planning funded by Office of Domestic Preparedness	17	Yellowstone County Emergency Planning Committee; Mr. Marcotte—Chair plus other State and National Committees	76 community members including EMS, Law Enforcement, and other Healthcare Facilities

## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
	<b>Deaconess Billings Clinic Foundation</b>	Thelma McClosky Armstrong 2800 Tenth Ave North Billings, MT 59101 Ph: 406 657 4057 Fax: 406 657 4875 <a href="http://www.emtn.org">www.emtn.org</a>	Planning and Training	1	Developing process for activating networks across state	Montana Healthcare Telecommunications Alliance
	<b>Saint Patrick Hospital &amp; Health Foundation</b>					N/A
<b>MT</b>	<b>Saint Vincent Healthcare Foundation</b>	Deborah Peters, Director NWREI	HRSA funded Bioterrorism Grant: 1. Statewide infectious disease exercise; 2. Remote (robot) simulation.	State of Montana.	1. Engaged 30 hospitals that responded with surge capacity data. 2. Treated patient while containing an infectious disease.	Department of Public Health & Human Services, Yellowstone County Local Emergency Planning Council, State Department of Emergency Services, Montana Hospital Association, and Indian Health Service, Montana.
	<b>The University of Montana—Missoula</b>					N/A
<b>NC</b>	<b>Duke University Medical Center</b>	Jim Chang, Emergency Management Coordinator Duke University Hospital, Box 3521 Durham, NC 27710 Ph: 919-681-2933 Email: <a href="mailto:james.chang@duke.edu">james.chang@duke.edu</a>	Comprehensive all-hazards emergency planning to address DUH's response to a mass casualty event. Planning activities include: vulnerability assessments, security enhancements, surge capacity planning, training and drills.	1	Participate in Durham County Emergency Management and Health Department planning activities. Participate in North Carolina Division of Public Health and Emergency Management planning and exercise activities.	North Carolina Hospital Association
	<b>Educational and Research Consortium of Western Carolinas</b>					N/A
<b>ND</b>	<b>North Dakota State University College of Pharmacy</b>					N/A

## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
ND	<p><b>Northland Healthcare Alliance</b></p>	<p>Derek Hanson, Safety Officer St. Alexius Medical Center 900 E Broadway Bismarck, ND 58506-5510 Ph: 701-530-8620 Email: <a href="mailto:dhanson@primcare.org">dhanson@primcare.org</a></p>	<p>Participates with all hospitals in the state in statewide bioterrorism and emergency preparedness training over the state Bioterrorism Wide Area Network managed by the North Dakota Healthcare Association.</p>	<p>42</p>	<p>Mr. Hanson is certified in bioterrorism event and command center management. We have been told we are the most prepared hospital in the state. We regularly hold drills and have assisted in informing and training rural hospitals, through the network on bioterrorism preparedness and infection control safeguards.</p>	<p>ND State Health Dept. ND State Office of Emergency Preparedness ND State Trauma Committee Bismarck/Burleigh Emergency Preparedness Task Force State, county, and city law enforcement and fire orgs County Public Health North Dakota Healthcare Association North Dakota Medical Association North Dakota Long Term Care Association PrimeCare Health Network (PHO)</p>
NE	<p><b>Good Samaritan Hospital Foundation</b></p>	<p>David Lawton Health Alert Network Coordinator NE HHS</p>	<p>Developing a connected network of Hospitals, Public Health Dept. labs &amp; HHS</p>	<p>14</p>	<p>Participating in the emergency preparedness program establishing the statewide communication network to be utilized in any emergency. Another avenue of communication and administrative connectedness.</p>	<p>NHA, NHHS, Various Nebraska health departments, UNMC, Nebraska bioterrorism labs, Nebraska information technologies.</p>
NE	<p><b>University of Nebraska Medical Center</b></p>	<p>Phyllis A. Muellenberg UMA 3578 983135 Nebraska Medical Center Omaha, NE 68198-3135 Ph: 402-559-7628 Email: <a href="mailto:pmuellen@unmc.edu">pmuellen@unmc.edu</a></p> <p>Steven H. Hinrichs, MD Director, NPHL 986495 Nebraska Medical Center Omaha, NE 68198-6495 Ph: 402-559-4116 <a href="http://nphl.org">nphl.org</a> and <a href="http://www.unmc.edu/bioterrorism">www.unmc.edu/bioterrorism</a></p>	<p>UNMC Bioterrorism/Public Health Curricular Enhancement: Design, develop and deliver 8 course modules via the Web for health professions students including a mass casualty drill component)</p> <p>Nebraska Public Health Laboratory is a cooperative partnership with Nebraska Department of Health and Human Services System. Available are: a surveillance system designed for early detection of a bioterrorism outbreak, a mobile lab able to test as many as 1,000 suspected bioterrorism victims per hour, a Health Professions Tracking Center database and alert system, and a variety of available training and education opportunities.</p>	<p>Four campuses of UNMC (Omaha, Lincoln, Kearney, Scottsbluff, Nebraska)</p>	<p>UNMC personnel direct the Bioterrorism Center of Excellence established by the U. of NE and collaborate in all statewide efforts NE DHHS; Omaha Metro Medical Response; NE Center for Bioterrorism Education; Nebraska AHECS</p>	<p>NE DHHS; Omaha Metro Medical Response; NE Center for Bioterrorism Education; Nebraska AHECS</p>

## Homeland Security

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NJ	Hackensack University Medical Center					N/A
	Saint Peter's University Hospital					N/A
NM	New Mexico Human Services Department					N/A
	The University of New Mexico Health Sciences Center	Anthony Cahill, PhD Ph: 505 272-2290 Email: <a href="mailto:acahill@salud.unm.edu">acahill@salud.unm.edu</a>	Training and technical assistance to first responders on emergency procedures for people with disabilities.	Statewide	Coordination with FEMA, CDC, other Federal and State agencies.	
NV	Nevada Rural Hospital Partners Foundation					N/A
	University of Nevada, Reno	L.D. Brown, MD, MPH NV State Health Laboratory 1660 N. Virginia St. Reno, NV 89503 Ph: 775-688-1335 Fax: 775-688-1460 Email: <a href="mailto:lbrown@med.unr.edu">lbrown@med.unr.edu</a>	State Public Health Laboratory System, part of the Laboratory Response Network (LRN)	2	Advisory role in laboratory preparedness issues/grant preparation and logistics of the emergency laboratory response.	Integrates planning with State & District (i.e. Metropolitan) Health and Emergency Response entities.
NY	Community Health Care Services Foundation, Inc.					N/A
	Genesee Gateway Local Development Corporation, Inc.					N/A

## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
	Integrated Community Alternatives Network, Inc.					N/A
	Long Island Association for Millennium Center for Convergent Technologies					N/A
NY	Montefiore Medical Center	Brian Currie, MD 111 East 210 <sup>th</sup> St. Bronx, NY 10467 Ph: 718-920-6078 <a href="http://www.montefiore.org">www.montefiore.org</a>	Montefiore has participated with City, State, and Federal agencies on the following events: 2004-Shea Stadium Mass Casualty Drill; 2004-Table top drill Mass Casualty involving 64 NYC hospitals, DOHMH, OEM, NYFD, NYPD and the GNYHA; 2005-Screening and Isolation drills at each of our 3 divisions; and 2005-Citywide tabletop drill again involving all the agencies named above.	3	Montefiore participates in Quarterly DOHMH BT Coordinator Meetings. Other agencies represented include the Office of Emergency Management, Greater New York Hospital Association, United States Postal Services, and all other NYC hospitals.	Montefiore is part of the North Bronx Coalition that includes: Jacobi Medical Center, North Central Bronx Hospital, Calvary Hospital, Lincoln Medical Center, NYPD, NYFD, and Empress Ambulance Corp. We meet quarterly and share Emergency Management plans and resources.
	New York Presbyterian Hospital	Ahema Asare, MBA 161 Fort Washington Avenue, H1P 14 New York, NY, 10032 Ph: 212-305-3990 Fax: 212-927-8447 <a href="http://www.nyp.org">www.nyp.org</a>	Create a Regional Health Information Infrastructure to empower doctors, nurses, and patients with information so that patients can receive quality care wherever they are	18	NA	NA
	Research Foundation, State University of New York (SUNY) at Buffalo	William Dice, MD ECMC, 462 Grider St. Buffalo, NY 14215 Ph: 716-858-8701 Fax: 716-858-8701	Specialized Medical Assistance and Response Team (SMART); Mobile deployable wireless Disaster LAN; Store-and-Forward Emergency Network; Emergency Department Triage Surveillance; Simulation; Joint exercises; DVD video training	28	Dr. Dice is invited speaker for national WMD / Disaster conferences; State EP Committees; Erie County Commissioner of Health is also Regional EMS Director; SMART Telehealth Division (DEllis).	Regional Air National Guard Unit; Coast Guard
	The Rosalind and Joseph Gurwin Jewish Geriatric Center of Long Island					N/A



## Homeland Security

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	Case Western Reserve University					N/A
	Cincinnati Children's Hospital Medical Center	Nathan Timm, MD 3333 Burnet Ave. MLC 2008 Cincinnati, OH 45229 Ph: 513-636-7972 Fax: 513-6360-7697	As the primary and tertiary center for Pediatric care in the region, CCHMC conducts 2 - 3 disaster drills annually. In addition, we participate in community wide drills. Our training program for medical students and residents includes disaster preparedness. The medical center utilizes the Hospital Emergency Command System, as the model for conduct of a disaster drill or event.	12	CCHMC is represented by Dr. Timm for disaster planning at the Greater Cincinnati Health Council. We also provide representation to the Disaster Preparedness Committee in the Ohio Department of Health. Additionally, CCHMC is involved in the planning process with the local chapter of the American Red Cross, Hamilton County Emergency Management Agency	Within CCHMC the Department of Emergency Medicine has primary responsibility for planning and implementation of disaster preparedness, with many other divisions, including infectious diseases and surgical services.
OH	Northeastern Ohio Universities College of Medicine (NEOUCOM)					N/A
	Ohio Board of Regents	David Barber, 36th Fl., 30 E. Broad St. Columbus, OH 43214 Phone: 614-752-9530 Fax: 614-466-5866 <a href="http://www.regents.state.oh.us">www.regents.state.oh.us</a>	Joint development of training and conduct of simulation between sites offering specialized homeland security training.	2	Both sites offer training programs for local government and emergency services personnel	N/A
	Ohio State University Research Foundation (for the Ohio Supercomputer Center)					N/A

## Homeland Security

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OH	Southern Consortium for Children	John Borchard Director of Program Development Southern Consortium for Children 20 Circle Drive, Unit 37206 PO Box 956 Athens, OH 45701 Ph: 740-593-8293 Fax: 740-592-4170 Email: Borchard@frognet.net	Regional All Hazards training for Red Cross; Emergency Response to Trauma Symposium; additional distance learning programs	13 SOTN sites; capable of connecting 19 Ohio University College of Osteopathic Medicine sites and 16 Ohio Department of Mental Health sites	Distance learning	
OK	INTEGRIS Health, Inc.					N/A
	Oklahoma Office of Rural Health					N/A
	OSU Center for Rural Health					N/A
OR	Asante Health System					N/A
	Tillamook Lightwave IGA					N/A
	Clarion University					N/A
PA	Community Nurses Home Health and Hospice, Inc.					N/A
	Geisinger Clinic	Scott Bitting 100 North Academy Avenue Danville, PA 17822-1540 Ph: 570-271-5631 Email: sbitting@geisinger.edu	Surveillance, Distance Learning, Public Health Information	1	Participation with regional counter terrorism task force. Regional activity to coordinate health and medical response.	Montour County Emergency Management Agency, Pennsylvania Dept. of Health and PE/MA.
	Good Samaritan Hospital Regional Medical Center					N/A

## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
	Hospice of Metropolitan Erie	Karen Moski Email: <a href="mailto:KarenMoski@hospiceerie.org">KarenMoski@hospiceerie.org</a>	Agreement to provide assistance to locate and rescue trail hospice patients	1	As requested, we would make Telehealth available.	Erie County Dept. of Health, cooperative agreement.
	Jewish Healthcare Foundation					N/A
	Magee Rehabilitation Hospital					N/A
	Mercy Health Partners					N/A
	Mercy Hospital of Pittsburgh					N/A
	Millicreek Community Hospital	Dr. Paul Kohut 5515 Peach Street Erie, PA 16509 Ph: 814-864-4031	Mass casualty / disaster preparedness training	1	Respond to local/statewide disaster drills (deploy health care professionals accept casualties).	
PA	Oil Region Alliance of Business, Industry & Tourism					N/A
	Pennsylvania College of Optometry					N/A
	Pennsylvania Homecare Association					N/A
	Penn State University					N/A
	Pennsylvania State University College of Medicine					N/A

## Homeland Security

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	<b>Pinnacle Health System</b>	Christopher P. Markley, Esq. 409 South Second Market Street Harrisburg, PA 17105-8700 Ph: 717-231-8210 Fax: 717-231-8157 <a href="http://www.pinnaclehealth.org">www.pinnaclehealth.org</a>	Bioterrorism surveillance	4	De-identified data are sent from our hospital emergency rooms to the University of Pittsburgh and to the administrator of Pennsylvania's RODS (Real-time Outbreak Disease Surveillance) Program	University of Pittsburgh; Siemens Health Services
	<b>Safe Harbor Behavioral Health</b>	Julie Kresge 1330 W. 26 <sup>th</sup> St. Erie, PA 16508 Ph: 814-451-2206 Fax: 814-451-2280 Email: <a href="mailto:Julie.Kresge@shbh.org">Julie.Kresge@shbh.org</a>	This program has no activity directly related to homeland security. Safe Harbor's emergency management plan is intended to provide for the management of a variety of situations that might affect the normal routine of Safe Harbor and require emergency procedures to be implemented on an immediate basis to protect life and property. Safe Harbor's emergency management includes preparing for various types of emergencies, training all staff in emergency procedures, conducting drills, testing equipment, and coordinating activities internally as well as with the community.	1	None.	None.
PA	<b>SUN Home Health Services</b>	Steven B. Richard 61 Duke Street, PO Box 232 Ph: 570-473-7625 Fax: 570-473-3070 <a href="http://www.sunhomehealth.com">www.sunhomehealth.com</a>	Member of the East Central and North Central Regional Emergency Management/Bioterrorism Task Force. Participates in regional planning and insuring that homecare, as well as the Telehomecare resources are included in emergency planning. Staff use computer connectivity for emergency preparedness training and bioterrorism education.	9	Member of the East Central and North Central Regional Emergency Management/Bioterrorism Task Forces for the Commonwealth of Pennsylvania.	Pennsylvania Department of Health, Geisinger Medical Center, Bloomsburg Hospital, Evangelical Hospital, Sunbury Community Hospital, Berwick Hospital, and Emergency Management Services from all involved counties.
	<b>Susquehanna Health System</b>	Charles G. Stuzman 777 Rural Ave. Williamsport, PA 17701 Ph: 570-321-2398 Fax: 570-321-3650 Email: <a href="mailto:gtuxman@shscares.org">gtuxman@shscares.org</a>	Emergency Preparedness Decon Center MCI Surge Capacity Organization Drill participation	3	Participates in NCCTF on various committees and assist with health and medical response both prehospital and hospital responses.	N/A

## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
PA	<b>Thomas Jefferson University</b>	<p>Program Director Edward Jasper, MD Center for Bioterrorism and Disaster Preparedness 8330 Gibbon Building 111 South 11<sup>th</sup> St. Philadelphia, PA 19107 Ph: 215-955-1777 <a href="http://www.jeffersonhospital.org/bioterrorism/">www.jeffersonhospital.org/bioterrorism/</a></p>	<p>Coordinated multi-hospital citywide drill with over 300 fully moulagged victims.  Provide education and training sessions to emergency medicine physicians, EMS personnel, etc., utilizing simulation mannequins.</p>	<p>On-site at TJUH Local Fire Dept., Conferences, etc.</p>	<p>Participates in Penn. Dept. of Health advisory committees related to statewide preparedness.  Chair, Philadelphia Center City Emergency Healthcare Support Zone.</p>	
		<p>Eric Williams (Admin. Contact) 2210C Gibbon Building Hospital Administration Thomas Jefferson Un. Hospital 111 South 11<sup>th</sup> St Philadelphia, PA 19107 Ph: 215-955-9345 Fax: 215-955-2197</p>	<p>Working with the PA Dept. of Health to provide educational content related to terrorism preparedness on the Learning Management System (Web-based distance learning tool).</p>	1	Participates in Region-wide planning efforts.	All regional healthcare and hospital providers.
		<p>Craig Hattler Tyrone Hospital 1 Hospital Drive Tyrone, PA 16686 Ph: 814-684-1255 Fax: 814-684-6395</p>	<p>Participating in Pennsylvania statewide effort to prepare hospital Emergency Departments for bioterrorism.</p>			N/A
		<p>University of Pittsburgh School of Nursing Nurse Anesthesia Program Wayne Memorial Hospital</p>				
RI	Family Resources Community Action					N/A

## Homeland Security

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	Kent County Visiting Nurse Association d/b/a VNA of Care New England					N/A
RI	Thundermist Health Center	Ernest Balasco, COO Thundermist Health Center 450 Clinton Street Woonsocket, RI 02895 Ph: 401-767-4100 x 3491 Fax: 401-235-6899 <a href="http://www.thundermisthealth.org">www.thundermisthealth.org</a> Email: ErnieB@thundermisthealth.org	Municipal network for distribution of medication in the event of a bioterror or natural outbreak of infectious disease. Surge capacity for hospital overflow. Participant in disease surveillance for the RI Dept. of Health.	9	Thundermist participates in statewide planning efforts with all other CHCs, coordinated through the RI Dept. of Health.	RI Health Center Association, RI Dept. of Health, Hospital Association of RI, and RI EMA
SC	Advanced Technology Institute (ATI)	Joseph E. Jones 5300 International Blvd. N. Charleston, SC 29418 Ph. 843-760-3649 Fax 843-207-5458 <a href="http://www.atcorp.org">www.atcorp.org</a>	Public Health Information, Distance Learning	4	Health screening, distance learning	
	Beaufort-Jasper-Hampton Comprehensive Health Services					N/A

## Homeland Security

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SC	<p style="text-align: center;"><b>Greenville Hospital System</b></p>	<p>Greg Reed, EMC Chair            Phone: 864-455-5179            Fax: 864-455-6725            Email: greed@ghs.org            GHSnet</p>	<p>GHS features: HEICS command model Liaison to local emergency management / ESF 8 / public health. Participates with local and State public health conducting disease surveillance Hazmat decontamination capabilities A NDMS receiver site. Participation in grants: HRSA, DOJ &amp; State Homeland Defense regional. Ongoing CBRNE training continues "T andburg" distance learning system for external training opportunities SCHA /DHEC/ WMD/Biological/ HEICS/NIMS/local medical annex exercises/LEPC, etc. Ongoing drilling and exercises, such as walk-in hazmat / site impact. Region-wide covert biological event SNS delivery &amp; distribution system. Tabletops - HEICS command &amp; AOC training. Regional mutual aid with 28 other healthcare entities.</p>	<p>4 acute care campuses            2 ambulatory surgery centers, multiple business settings including clinical practices</p>	<p>GHS membership on regional Disaster Planning with public health/DHEC, epidemiological membership to state level task force, Academy of Public Health Emergency Preparedness participant 2004-2005, HEICS consultation to sister organizations. Mutual Aid Agreement program design &amp; maintenance in collaboration with sister organizations.</p>	<p>Interact with:            Greenville County Office of Emergency Preparedness; Appalachian II District Public Health; SCDHEC; and SC Hospital Association. Local / regional emergency: Fire, Hazmat, COBRA, Military / NDMS, CDC / Epidemiological programming, and other HC organizations throughout region.</p>
	<p style="text-align: center;"><b>Voorhees College</b></p>		<p>While Dr. Erickson serves as the contact for Avera Health, each regional facility also has its own contact for emergency preparedness. The regional facilities are involved at varying levels within their community and region. For example: at Avera McKennan, various distance learning opportunities have occurred and there is on-going cooperation with the state bioterrorism contact and activities, as well as regular coordination activities with the local community activities.</p>			N/A
SD	<p style="text-align: center;"><b>Avera Health</b></p>	<p>David Erickson            3900 W. Avera Drive            Sioux Falls, SD 57108            Phone: 605-322-4550            Fax: 605-322-4522  <a href="http://www.avera.org">www.avera.org</a></p>	<p>While Dr. Erickson serves as the contact for Avera Health, each regional facility also has its own contact for emergency preparedness. The regional facilities are involved at varying levels within their community and region. For example: at Avera McKennan, various distance learning opportunities have occurred and there is on-going cooperation with the state bioterrorism contact and activities, as well as regular coordination activities with the local community activities.</p>	<p style="text-align: center;">Varies</p>	<p>While there is system-wide representation at the state level, each regional facility has a different role in their local planning activities.</p>	
	<p style="text-align: center;"><b>The University of South Dakota (USD)</b></p>					N/A
TN	<p style="text-align: center;"><b>University Health System, Inc.</b></p>					N/A

## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
TN	University of Tennessee Health Science Center	Karen Fox, PhD Vice Chancellor, Office of Community Affairs 920 Madison, Suite 434 Memphis, TN 38163 Ph: 901-448-2611 Fax: 901-448-4344 <a href="http://www.utmem.edu/telemedicine">www.utmem.edu/telemedicine</a>	Statewide network for distribution of bioterrorism training and homeland security alert. Providing lectures from UT Health Science Center, UT Graduate School of Medicine, UT College of Vet Medicine, UT Martin, TN Dept. of Agriculture, TN Dept. of Health, Radiation Emergency	64	UT Telehealth Network coordinates videoconferencing education for preparedness training for Middle and East Tennessee; collaborates with surrounding telehealth networks in Tennessee and surrounding states; and participates in the Tennessee Homeland Security Consortium.	UT College of Veterinary Medicine, UT Medical Center at Knoxville, UT Health Science Center, UT Martin, Oak Ridge National Laboratory, Tennessee Emergency Management Agency, Knoxville Emergency Management Agency, Tennessee Department of Health, University of Kentucky, Memphis/Shelby County Health Department, West TN AHEC and Vanderbilt University.
	CHRISTUS Visiting Nurse Association of Houston					N/A
TX	Cook Children's Medical Center	Wendy Cotton, Safety Officer 801 Seventh Avenue Fort Worth, Texas 76104 Ph: 682-885-1346 Fax: 682-885-3995 Program Web Site: <a href="http://www.cookchildrens.org">www.cookchildrens.org</a>	Cook Children's participates in a community-wide disaster exercise annually and conducts at least one internal readiness exercise for our hospital annually. Cook Children's last community-wide disaster exercise involved many of the hospitals in the Dallas/Fort Worth metropolis. During the last two external exercises Cook Children's has conducted decontamination of patients in a cooperative effort with Harris Methodist Hospital of Ft. Worth.	1	Cook Children's has several hospital employees involved in local committees including the Local Emergency Planning committee, DFW Hospital Council, MM/RFS with the City of Ft Worth, and Departments of Health, both city and statewide. Cook Children's employees who sit on these committees participate in writing and implementing local policies and procedures for the local area. Additionally, Cook Children's is an NDMS member hospital, whereby Cook may receive casualties if a federal disaster is declared.	Cook Children's is an active member in the DFW Hospital Council. Also, Cook Children's works with the Tarrant County Office of Emergency Management in planning local response from the medical community.



## Homeland Security

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TX	<p><b>Harris County Hospital District</b></p>	<p>Kim Dunn, MD, PhD Associate Dean for Academic Affairs UT School of Information Sciences 7000 Fannin Street, Suite 600 Houston, TX 77030 Ph: 713-500-3907 Fax: 713-500-3907 Email: <a href="mailto:Kim.Dunn@uth.tmc.edu">Kim.Dunn@uth.tmc.edu</a></p> <p>Jerry Collier, Coordinator Harris County Medical Reserve Corps 3611 Emmis Houston, TX 77004 Ph: 713-783-4616 Fax: 713-785-3077 Email: <a href="mailto:jerry_collier@hcthd.tmc.edu">jerry_collier@hcthd.tmc.edu</a></p>	<p>Project to Collect and Analyze Data related to Admission to Emergency Rooms every 10 minutes to identify potential patterns that may suggest a developing public health emergency or terrorist attack.</p> <p>Recruit and train health care professionals to respond in the event of a declared emergency.</p>	<p>3+</p> <p>1</p>	<p>Develop Protocols and methods for system monitoring to provide an early alert of a developing crisis.</p> <p>The MRC recruits and provides coordination of health care professionals in the event of a declared emergency. Although the focus is on the local region, members are notified of calls from response in other parts of the country and international emergencies and many have responded.</p>	<p>Memorial Hermann Hospital, LBJ Hospital, Ben Taub Hospital, and others.</p> <p>All 150+ member and affiliated organizations of the Harris County Community Access Collaborative are linked to the Emergency Plans for the Harris County Region through the MRC and are prepared to respond as needed. In the recent Katrina/Rita crisis, virtually all of them responded and helped support health services to the evacuees that came to the Region. 2,400+ health care professionals volunteered via the MRC.</p>
	<p><b>University of Texas Health Science Center at San Antonio</b></p>	<p>Primary Contact: Dr. Harold Timboe Director of Regional Medical Operations Center (RMOC) Ph: 210-567-0779 Fax: 210-567-7120</p> <p>Health Science Center Videoconference Operations Unit Contact: Rudy De L Cruz, Jr. MPA, MA Manager of Videoconference Operations Ph: 210-567-4404</p>	<p>In cases of disaster level emergencies requiring the deployment of large numbers of casualties to hospitals and emergency medical centers throughout south Texas, the RMOC will be activated to assist in the efficient execution of the activity previously described.</p>	<p>89 sites on the Health Sciences Center Videoconference Network</p>	<p>They train for tasks such as supporting health authorities administer mass inoculations, establishing alternate non-hospital treatment sites, staffing Call Centers to answer health questions from the public, and assisting with other unforeseen homeland security activities related to protecting and restoring public health.</p>	<p>Unit detachments established in border areas where the UT Health Science Center has campuses, such as Harlingen, Laredo, and Edinburg.</p>
	<p><b>University of Texas Medical Branch Center to Eliminate Health Disparities</b></p>					<p>N/A</p>

## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
TX	<b>University of Texas Medical Branch - Galveston</b>	Glen G. Hammack, OD, MSHI, FAAO UTMB Electronic Health Network (EHN) 301 University Blvd. Galveston, TX 77555-0145 Ph: 409-747-5290 Fax : 409-747-5297 ehn.utmb.edu and <a href="http://www.utmb.edu/telehealth/">www.utmb.edu/telehealth/</a>	Created in 2004, the UTMB Electronic Health Network (formerly Telehealth Center) centralizes all of UTMB's considerable skills, competencies, and technical resources into one entity. The EHN is charged with operating, analyzing, and making available to others the systems and programs that prove effective in the area of telemedicine. The Electronic Health Network takes an inclusive, enterprise-level view of integrating all health.	1	Telemedicine resource management coordination for State and Regional Response within the Western Regional Center of Excellence for Biodefense and Emerging Infectious Diseases.	Provide instruction for American Medical Association Disaster Life Support Courses. Provision of innovative technology applications for the National Homeland Security Foundation.
UT	<b>Association for Utah Community Health (AUCH)</b>	Josh Wood 2570 W. 1700 S. Salt Lake City, UT 84104 Ph: 801-974-5522 x-2851 Fax: 801-974-5563 <a href="http://www.auch.org">www.auch.org</a>	Distance learning and other training events regarding bioterrorism, pandemic preparedness and general emergency management.	19	N/A, member organization roles vary by site.	Member FQHCs, Utah Department of Health.
	<b>Dr. Ezekiel R. Dumke College of Health Professions</b>					N/A
	<b>Intermountain Healthcare</b>					
	<b>University of Utah</b>	Deb LaMarche 585 Komas Drive, Suite 204 Salt Lake City, UT 84108 Ph: 801-587-6190 Fax: 801-585-7083 <a href="http://www.utahtelehealth.net">www.utahtelehealth.net</a>	Connect local health departments for training and planning. Health Department fund UTM activity with Health Alert Network & BT funding.	13	Health Departments are part of the State and Federal Bioterrorism Preparedness grant program	N/A

## Homeland Security

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VA	University of Virginia	Marge Sidebottom Director of Emergency Preparedness 1222 Jefferson Park Ave. Charlottesville, VA 22901 Ph: 434-924-8745 Fax: 434-243-9524 Email: <a href="mailto:mjs9m@virginia.edu">mjs9m@virginia.edu</a> <a href="http://www.healthsystem.virginia.edu">www.healthsystem.virginia.edu</a>	Operate the regional emergency preparedness network and expand out to the entire UVA Telemedicine network if necessary. Work closely with Blue Ridge Poison Control, CDC, State and National operations as it relates to Emergency Preparedness.	12 (regional) 50 plus statewide	UVA Telehealth network coordinates videoconferencing education for preparedness training for central Virginia; collaborates with surrounding telehealth networks in Virginia and surrounding states; and participates in the Richmond and Washington homeland defense planning.	Blue Ridge Poison Control Center, UVA is responsible for 80% of Virginia and South Carolina after normal duty hours. Office of Telemedicine manages the Emergency preparedness and Blue Ridge Poison Control Networks.
	The Community Health Center of Burlington	Michael Caputo University of VT College of Medicine 89 Beaumont Avenue Given Bldg D-104C Burlington, VT 05405 Ph: 802-656-9658 Email: <a href="mailto:Michael.caputo@uvm.edu">Michael.caputo@uvm.edu</a>				N/A
VT	The University of Vermont (UVM)	William Charash, MD Fletcher Avenue Health Care 111 Colchester Ave. Fletcher 466 Burlington, VT 05401 Ph: 802-847-0819 Email: <a href="mailto:Bill.charash@vtmednet.org">Bill.charash@vtmednet.org</a>	-Established teletrauma network. -Educational activities for MDs, nurses, and EMS. -FAST STAR mobile telemedicine in ambulance -Disaster drills -Regional collaboration on Homeland Security Issues.	N/A	N/A	N/A
WA	Children's Hospital and Regional Medical Center—Seattle					N/A

## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
WA	Inland Northwest Health Services	Renee Anderson 157 S. Howard, Suite 500 Spokane, WA 99201 Ph: 509-232-8155 Fax: 509-232-8357 <a href="http://www.rnwtehealth.org">www.rnwtehealth.org</a>	(WEMESIS) Washington EMS Information System, which will result in a comprehensive collection of EMS data from participating EMS agencies. Both EMS and hospital data are needed to analyze regional system status and identify needs.	4	State Requirement for EMS agencies.	Regional hospital emergency preparedness committees, Homeland Security, Combined Communications Center, Tribal EMS, Volunteer EMS, Ambulance.
	Yakima Valley Memorial Hospital	Jeanne Fasano 2811 Tieton Dr. Yakima, WA 98902 Ph: 509-249-5245	Participate in regional planning meetings and exercises. Educate and train staff in local/State/Federal procedures.	1	Assist with the development and updating of regional plans. Participate in at least one regional exercise per year.	Washington State PHEPR Region 8 Hospital Planning Committee.
WI	LaCrosse Medical Health Science Consortium		In planning and development			
	Marshfield Clinic Telehealth Network	Nina M. Antoniotti RN, MBA, PhD 1000 N. Oak Avenue Marshfield, WI 54449 Ph: 715-389-3694 Fax: 715-387-5225	Internal Bioterrorism response protocols	43	Corporate member of local municipal planning group.	State FEMA State Bioterrorism Committee.
	Rural Wisconsin Health Cooperative					N/A
WV	St. Elizabeth Hospital Community Foundation	Greg Gibbons 1506 S. Oneida St. Appleton, WI 54915 Ph: 920-738-2000	Affinity Health System is part of statewide network for bioterrorism training and homeland security alert	3	Affinity Health System works with other partners throughout our state to maintain preparedness for acts of bioterrorism, natural disaster, and homeland security	Unavailable at this time.
	Appalachian Pain Foundation					N/A
	Robert C. Byrd Center for Rural Health					N/A

## Homeland Security

ST	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated with in Emergency Planning
WV	West Virginia University, Mountaineer Doctor Television (MDTV)					N/A
WY	United Medical Center					N/A
	Wyoming Department of Health	Fran Cadez, JD, MBA 211 W. 19 <sup>th</sup> St., Suite 120 Cheyenne, WY 82001	Emergency Medical Services Continuing Education	23 Statewide	None.	None.



# Demographics of Population Served

**All OAT grantees were asked whether their projects served the following populations: African-American, Hispanic/Latino, American Indian/Alaska Native, and Asian American or Pacific Islander. The grantees' responses are indicated below.**

**N/A = Not Applicable/Not Available**

## Demographics of Population Served

ST	Organization	African-American	Hispanic/Latino	American Indian/Alaska Native	Asian American or Pacific Islander
AK	<b>Alaska Native Tribal Health Consortium</b>				
	<i>Continued Advancement of Telehealth Capacity in Alaska</i>			.	
	<i>The Summative Telemedicine Evaluation Project</i>			.	
	<b>Alaska Psychiatric Institute (API)</b> <i>API TeleBehavioral Health Project</i>	.	.	.	.
AL	<b>University of South Alabama</b>				
	<i>Center for Strategic Health Innovation (CSHI) RMEDE/BioTrac Project</i>	.			
	<i>Center for Strategic Health Innovation (CSHI) Traditional Telemedicine</i>	.			
AR	<b>University of Arkansas for Medical Sciences</b>				
	<i>South Arkansas Integrated Telehealth Oncology Program</i>	.	.	.	.
AZ	<b>Arizona Board of Regents, University of Arizona</b>				
	<i>Arizona Diabetes Virtual Center for Excellence (ADVANCE)</i>	.	.	.	
	<i>Institute for Advanced Telemedicine and Telehealth (THealth)</i>	.	.	.	.
	<b>Banner Good Samaritan Telemedicine Program</b>				
	<i>Banner Health Telehealth Program—Banner Health System</i>		.	.	
	<b>Maricopa County, Arizona</b> <i>Correctional Health Services Telemedicine Initiative</i>	.	.	.	.
CA	<b>Familia Unida Living with Multiple Sclerosis</b>				
	<i>Telehealth Grant</i>	.	.	.	.
	<b>Multi-Dimensional Imaging, Inc. of Newport Beach</b>				
	<i>Telemedicine for Improved Health Care and Education</i>	.	.	.	.
	<b>San Joaquin County Health Care Services</b>				
	<i>Automated Drug Dispensing Medication Administration System</i>	.	.	.	.
	<b>Santa Rosa Memorial Hospital</b> <i>Northern California Telemedicine Network (NCTN)</i>	.	.	.	.
CO	<b>Avista Adventist Hospital</b>				
	<i>Clinical Integration Through Health Informatics</i>		.		



## Demographics of Population Served

ST	Organization	African-American	Hispanic/Latino	American Indian/Alaska Native	Asian American or Pacific Islander
CO	<b>University of Colorado Health Sciences Center</b>				
	<i>Native Telehealth Outreach/Technical Assistance Program</i>			•	
DC	<b>American Red Cross</b>				
	<i>Congressionally Mandated Telehealth Grants</i>	•	•	•	•
	<b>Foundation For eHealth Initiative</b>				
	<i>Connecting Communities for Better Health</i>	•	•	•	•
	CareSpark, TN	•	•		
	Colorado Health Exchange Network, CO				N/A
	Indiana Health Information Exchange, IN	•	•		•
	Maryland/DC Collaborative for Healthcare Information Technology, MD	•	•	•	•
	Massachusetts Health Data Consortium (MA-SHARE), MA	•	•	•	•
	National Institute for Medical Informatics, WI	•	•	•	•
	Santa Barbara County Care Data Exchange, CA	•	•	•	•
	St. Joseph's Hospital Foundation (Whatcom HIE), WA	•	•	•	•
	Taconic Educational Research Fund, NY	•	•	•	•
FL	<b>BayCare Health System</b>				
	<i>Electronic Medication and Clinical Services Ordering Subsystem</i>		•		
	<b>Florida Cancer Research Cooperative, University of South Florida</b>				
	<i>Clinical Trial Patient/Physician Information and Education Program</i>	•	•	•	•
FL	<b>University of Florida College of Dentistry (UFCD)</b>				
	<i>University of Florida College of Dentistry (UFCD)</i>	•	•	•	•
GA	<b>Morehouse School of Medicine</b>				
	<i>Diabetes Screening Telehealth Project</i>	•	•		•
GA	<b>Ware County Health Department</b>				
	<i>Rural Health Telemedicine Grant Program</i>	•	•		
HI	<b>Hawai'i Primary Care Association (HPCA)</b>				
	<i>The Hawai'i CHC Telehealth Network Project</i>				•
	<b>Moloka'i General Hospital</b>				
	<i>Moloka'i Telehealth Network</i>				•

## Demographics of Population Served

ST	Organization	African-American	Hispanic/Latino	American Indian/Alaska Native	Asian American or Pacific Islander
IA	<b>Iowa Chronic Care Consortium</b>				
	<i>Congestive Heart Failure and Diabetes Telemanagement Protocols</i>	.	.	.	.
	<i>Iowa Medicaid Population Disease Management Demonstration</i>	.	.	.	.
	<b>Mercy Foundation</b>				
	<i>Midwest Rural Telemedicine Consortium</i>	.	.	.	.
ID	<b>Clearwater Valley Hospital and Clinics, Inc.</b>				
	<i>Clearwater Valley Hospital: Electronic Medical Records</i>	.	.	.	.
	<b>Idaho State University, Institute of Rural Health</b>				
	<i>Telehealth Idaho</i>	.	.	.	
	<b>North Idaho Rural Health Consortium (NIRHC)</b>				
	<i>Expanding Telehealth to North Idaho Districts (EXTEND)</i>				N/A
IL	<b>Northern Illinois University/ Fermi National Laboratory</b>				
	<i>Neutron Radiation for Cancer Treatment</i>	.	.		.
	<b>OSF Saint James-John W. Albrecht Medical Center</b>				
	<i>OSF Saint James Telehealth Network</i>	.	.		.
	<b>Saint John's Hospital</b>				
	<i>Neonatal Telehealth Project in Rural Illinois Located at the Perinatal Center</i>	.	.	.	
IN	<b>Southern Illinois University School of Medicine</b>				
	<i>Downstate Illinois Regional Telehealth Project</i>	.			
IN	<b>James Whitcomb Riley Hospital for Children</b>				
	<i>Telemedicine Applications for Riley Hospital for Children</i>	.	.		
	<b>Health &amp; Hospital Corporation of Marion County</b>				
	<i>Congressionally-Mandated Telehealth Grants</i>	.	.	.	.
KS	<b>University of Kansas Medical Center</b>				
	<i>Expansion of the Kansas Telehealth Network</i>	.	.	.	.
	<i>Sustainability and Cost Benefit Evaluation of the Kansas Telehealth Network</i>	.	.	.	.
KY	<b>The James B. Haggin Memorial Hospital</b>				
	<i>PACS (Picture Archiving and Communication System)</i>	.	.		.

## Demographics of Population Served

ST	Organization	African-American	Hispanic/Latino	American Indian/Alaska Native	Asian American or Pacific Islander
KY	<b>Marcum &amp; Wallace Memorial Hospital</b>				
	<i>Teleradiology Enhancement Project</i>	.	.		
	<b>New Horizons Health Systems, Inc.</b>				
	<i>Information Technology Development and Improvement</i>	.	.	.	.
	<b>University of Kentucky Research Foundation</b>				
	<i>Improving Health Outcomes for Children in Rural Kentucky Schools</i>	.	.		
LA	<b>Southwest Louisiana Health Care Systems</b>				
	<i>Community Hospital Telehealth Consortium</i>	.	.		
	<b>Woman's Hospital</b>				
	<i>Expansion of Physician Internet Portal, Woman's POL</i>	.	.	.	.
MA	<b>Massachusetts College of Pharmacy and Health Sciences</b>				
	<i>Worcester Campus Distance Learning Initiative</i>	.	.	.	.
	<b>UMass Memorial Medical Center, Inc.</b>				
	<i>PACS Teleradiology Project</i>	.	.	.	.
ME	<b>Regional Medical Center at Lubec</b>				
	<i>Maine Nursing Home Telehealth Network</i>			.	
MI	<b>Altarum Institute</b>				
	<i>Concepts for a Michigan Health Information Network (MHIN)</i>	.	.	.	.
	<b>Hillsdale Community Health Center</b>				
	<i>PACS System</i>	.	.		
	<b>Hurley Medical Center</b>				
	<i>Clinical Information System Replacement Project</i>	.	.	.	.
	<b>Michigan State University</b>				
	<i>Telehospice in Mid-Michigan</i>	.	.	.	.
	<b>Western Michigan University</b>				
	<i>The Application of Tele-Allied Health in Rural Counties in Southwest Lower Michigan</i>	.	.	.	.
MN	<b>Fairview Health Services</b>				
	<i>Ambulatory Electronic Medical Record System – Twin Cities Metropolitan Care Systems</i>	.	.	.	.
	<b>University of Minnesota</b>				
	<i>Fairview – University of Minnesota Telemedicine Network</i>	.	.	.	.
MO	<b>The Curators of the University of Missouri</b>				
	<i>Missouri Telehealth Network</i>	.	.		.

## Demographics of Population Served

ST	Organization	African-American	Hispanic/Latino	American Indian/Alaska Native	Asian American or Pacific Islander
MT	<b>Benefits Healthcare Foundation</b>				
	<i>NMHA &amp; REACH Telehealth Network Development Project</i>	.	.	.	
	<b>Billings Clinic Foundation</b>				
	<i>Effect of an Integrated CIS on Inpatient and Post-Discharge Medication Administration Error and Chronic Disease Management</i>	.		.	
	<b>Deaconess Billings Clinic Foundation</b>				
	<i>Eastern Montana Telemedicine Network</i>	N/A	N/A	N/A	N/A
	<i>Revolutionizing Diabetes Care at Billings Clinic: A Model for Chronic Disease Care</i>	.	.	.	.
	<b>Saint Patrick Hospital &amp; Health Foundation</b>				
	<i>Montana Cardiology Telemedicine Network</i>	.	.	.	.
	<b>Saint Vincent Healthcare Foundation</b>				
	<i>Mansfield Health Education Center (MHEC)</i>	.	.	.	.
	<b>The University of Montana - Missoula</b>				
<i>Improving Health Among Rural Montanans (IPHARM)</i>			.		
NC	<b>Duke University Medical Center</b>				
	<i>Patient Inclusion in a Community-Based Telehealth Network</i>	.	.	.	.
	<b>Educational and Research Consortium of Western Carolinas</b>				
<i>Western North Carolina Regional Data Link Project</i>	.	.	.	.	
ND	<b>North Dakota State University College of Pharmacy</b>				
	<i>North Dakota Telepharmacy Project</i>	.	.	.	.
	<b>Northland Healthcare Alliance</b>				
<i>St. Alexius/Northland Telecare Network</i>			.		
NE	<b>Good Samaritan Hospital Foundation</b>				
	<i>Mid-Nebraska Telemedicine Network (MNTN)</i>		.		
	<b>University of Nebraska Medical Center</b>				
<i>Distance Education of Undergraduate Nursing Students</i>				.	
NJ	<b>Hackensack University Medical Center</b>				
	<i>Implementation of Oncology Patient Management System</i>	.	.		.

## Demographics of Population Served

ST	Organization	African-American	Hispanic/Latino	American Indian/Alaska Native	Asian American or Pacific Islander
NJ	<b>Saint Peter's University Hospital</b>				
	<i>Medical Technology Center for Infants and Children</i>	.	.	.	.
NM	<b>New Mexico Human Services Department</b>				
	<i>New Mexico Tele-Behavioral Health Improvement Project</i>		.	.	
	<b>University of New Mexico Health Sciences Center</b>				
	<i>Project TOUCH (Telehealth Outreach for Unified Community Health)</i>				N/A
	<i>Rural Health Telemedicine Program</i>		.	.	
NV	<b>Nevada Rural Hospital Partners Foundation</b>				
	<i>Digital Imaging System for Rural Nevada (DISRN)</i>	.	.	.	
	<b>University of Nevada, Reno</b>				
	<i>Biomedical Imaging Laboratory</i>				N/A
NY	<b>Community Health Care Services Foundation, Inc.</b>				
	<i>Introducing Home Telehealth in New York's 20<sup>th</sup> Congressional District</i>	.	.		.
	<b>Genesee Gateway Local Development Corporation, Inc.</b>				
	<i>Upstate New York Telemedicine Study</i>	.	.		
	<b>Integrated Community Alternatives Network, Inc.</b>				
	<i>Foster Care Tracker and Assessment Tool</i>	.	.	.	.
	<b>Long Island Association for Millennium Center for Convergent Technologies</b>				
	<i>An Electronic Clinical Trial System to Reduce Drug Development Costs</i>	.	.		.
	<b>Montefiore Medical Center</b>				
	<i>Electronic Medical Records Expansion</i>	.	.		.
	<b>New York Presbyterian Hospital</b>				
	<i>Systems Technology Interfacing Teaching and Community Hospitals (STITCH)</i>	.	.	.	.
	<b>Research Foundation of State University of New York (SUNY) at Buffalo</b>				
	<i>Telehealth New York</i>	.	.	.	
	<b>The Rosalind and Joseph Gurwin Jewish Geriatric Center of Long Island</b>				
<i>Demonstration of Implementation of Electronic Medical Record in Skilled Nursing Facility.</i>	.	.	.	.	

## Demographics of Population Served

ST	Organization	African-American	Hispanic/Latino	American Indian/Alaska Native	Asian American or Pacific Islander
OH	<b>Case Western Reserve University</b>				
	<i>NetWellness</i>	•	•	•	•
	<b>Cincinnati Children's Hospital Medical Center</b>				
	<i>Pursuing Perfection—Transforming Health Care Delivery</i>	•	•		•
	<b>Northeastern Ohio Universities College of Medicine (NEOUCOM)</b>				
	<i>Medical Education Network Teaching Ohio Region III (MENTOR)</i>	•	•		•
	<b>Ohio Board of Regents</b>				
	<i>Medical Collaboration Network</i>	•	•	•	•
	<b>Ohio State University Research Foundation (for the Ohio Supercomputer Center)</b>				
	<i>Computational Approaches to Research on Cancer in Children and Others</i>	•	•		•
OK	<b>Southern Consortium for Children</b>				
	<i>Southern Ohio Telepsychiatric Network</i>	•	•	•	•
	<b>INTEGRIS Health, Inc.</b>				
	<i>INTEGRIS Rural Telemedicine Project</i>	•	•	•	
	<b>Oklahoma Office of Rural Health</b>				
OR	<i>Rural Health Telemedicine Program</i>	•	•	•	
	<b>OSU Center for Rural Health</b>				
	<i>Rural Oklahoma Telemedicine Service Expansion</i>	•	•	•	
PA	<b>Asante Health System</b>				
	<i>Asante Clinical Systems Initiative</i>	•	•	•	•
PA	<b>Tillamook Lightwave IGA</b>				
	<i>Tillamook Lightwave Telehealth Technologies for Tillamook County Rural Communities</i>				N/A
	<b>Clarion University</b>				
	<i>Primary Care Education for the Citizens of Rural Pennsylvania</i>				N/A
	<b>Community Nurses Home Health and Hospice, Inc.</b>				
	<i>Home Telehealth</i>	•			•
	<b>Geisinger Clinic</b>				
	<i>Developing a Stroke Care Educational Program for Rural Pennsylvania</i>	•	•		
<b>Good Samaritan Hospital Regional Medical Center</b>					
PA	<i>Schuylkill Alliance for Health Care Access</i>				N/A
	<b>Hospice of Metropolitan Erie</b>				
	<i>Hospice Telehealth Project</i>	•			

## Demographics of Population Served

ST	Organization	African-American	Hispanic/Latino	American Indian/Alaska Native	Asian American or Pacific Islander
PA	<b>Jewish Healthcare Foundation</b>				
	<i>Reinventing Healthcare: The Application of the Pittsburgh Regional Healthcare Initiative's Perfecting Patient Care (PPC) System to Chronic Medical Conditions</i>	.	.		.
	<b>Magee Rehabilitation Hospital</b>				
	<i>Virtual Reality Technology</i>	.	.	.	.
	<b>Mercy Health Partners</b>				
	<i>Using Information Technology to Enhance Patient Safety</i>	.	.	.	.
	<b>Mercy Hospital of Pittsburgh</b>				
	<i>Mobile Clinician Project</i>	.			
	<b>Millcreek Community Hospital</b>				
	<i>Millcreek Health System Informatics Project</i>	.	.	.	.
	<b>Oil Region Alliance of Business, Industry, &amp; Tourism</b>				
	<i>The Venango Center for Healthcare Careers (VCHC)</i>	.			
	<b>Pennsylvania College of Optometry</b>				
	<i>Ophthalmic Telehealth</i>	.	.		.
	<b>Pennsylvania Homecare Association</b>				
	<i>Researching on the Financial Viability of Telehealth and Telehealth's Impact on Home Health Nurses</i>				N/A
	<b>Penn State University</b>				
	<i>Digital Informatics and Communications System</i>	.	.		.
	<b>Pennsylvania State University College of Medicine</b>				
	<i>Physician-Science Initiative</i>	.	.		.
	<b>Pinnacle Health System</b>				
	<i>Reducing Variability to Deliver Safe Care</i>	.	.	.	.
	<b>Safe Harbor Behavioral Health</b>				
	<i>Safe Harbor Behavioral Health Telemedicine Program</i>	.	.	.	.
	<b>SUN Home Health Services</b>				
	<i>SUN Home Health Services Network</i>				N/A
	<b>Susquehanna Health System</b>				
<i>Regional Electronic Medical Record</i>	.	.	.	.	
<b>Thomas Jefferson University</b>					
<i>Integrative Medicine Informatics Feasibility Project</i>	.	.		.	
<b>Tyrone Hospital</b>					
<i>The Tyrone Hospital Health Information Network</i>	.				

## Demographics of Population Served

ST	Organization	African-American	Hispanic/Latino	American Indian/Alaska Native	Asian American or Pacific Islander
PA	<b>University of Pittsburgh School of Nursing Nurse Anesthesia Program</b>				
	<i>Nurse Anesthesia Rural and Elderly Expansion Project (NAREEP)</i>	.	.		.
	<b>Wayne Memorial Hospital</b>				
	<i>Improving Medication and Patient Safety</i>	.	.		
RI	<b>Family Resources Community Action</b>				
	<i>HIV/AIDS Comprehensive Psychosocial Support Project</i>	.	.	.	
	<b>Kent County Visiting Nurse Association d/b/a VNA of Care New England</b>				
	<i>Advancing Point-of-Care Technology at VNA of Care New England</i>	.	.	.	.
	<i>Increasing Access to Telehealth—Phase II</i>	.	.	.	.
	<b>Thundermist Health Center</b>				
	<i>Thundermist Health Center Electronic Health Record</i>	.	.	.	.
SC	<b>Advanced Technology Institute (ATI)</b>				
	<i>Healthcare and Emergency Awareness Response for Telehealth (HEART) Phase II</i>	.	.	.	
	<b>Beaufort-Jaspert-Hampton Comprehensive Health Services</b>				
	<i>South Carolina Prostate Cancer/Telehealth Project</i>				N/A
	<b>Greenville Hospital System</b>				
	<i>ICU Telemedicine Project</i>	.	.	.	.
SD	<b>Voorhees College</b>				
	<i>Developing a Telehealth Infrastructure to Address Health Disparities Through Education and Training</i>	.			
	<b>Avera Health</b>				
	<i>Avera Rural and Frontier Disease Management Telehealth Network</i>		.	.	
SD	<b>The University of South Dakota (USD)</b>				
	<i>Growing Our Own: A Nursing Education/Provider Partnership</i>	.			
TN	<b>University Health System, Inc.</b>				
	<i>High-Risk Newborn Services Project</i>	.	.		



## Demographics of Population Served

ST	Organization	African-American	Hispanic/Latino	American Indian/Alaska Native	Asian American or Pacific Islander
TN	<b>University of Tennessee Health Science Center</b>				
	<i>Delta Health Partnership</i>	.	.		
	<i>Mid-Appalachia Telehealth Project</i>	.	.		
	<i>Mid-South Telehealth Consortium</i>	.	.		
	<i>Telehealth for Diabetic Patients in Hispanic and Underserved Rural Communities</i>		.		
TX	<b>CHRISTUS Visiting Nurses Association of Houston</b>				
	<i>Home Monitoring: Demonstration Pilot of Cost Control</i>	.	.		.
	<b>Cook Children's Medical Center</b>				
	<i>Rural Specialty Health Telemedicine Initiative</i>	.	.		
	<b>Harris County Hospital District</b>				
	<i>Specialty Access Through Telemedicine (SA++)</i>	.	.	.	.
	<b>University of Texas Health Science Center at San Antonio (UTHSCSA)</b>				
	<i>Diabetes Risk Reduction via Community Based Telemedicine (DiRReCT)</i>		.		.
	<b>University of Texas Medical Branch Center to Eliminate Health Disparities</b>				
	<i>The Texas Telehealth Disparities Network</i>	.	.		
	<b>University of Texas Medical Branch - Galveston</b>				
	<i>Electronic Health Network</i>	.	.		.
UT	<b>Association for Utah Community Health (AUCH)</b>				
	<i>Association for Utah Community Health Telehealth Program</i>	.	.	.	.
	<b>Dr. Ezekiel R. Dumke College of Health Professions</b>				
	<i>Health Opportunity Professional Exploration (HOPE)</i>	.	.	.	.
	<b>Intermountain Healthcare</b>				
	<i>HRSA Telemedicine Pilot Program for Interpreting Services for the Deaf</i>	.	.	.	.
	<b>University of Utah</b>				
	<i>Utah Telehealth Network Comprehensive Telehealth Services</i>			.	
VA	<b>University of Virginia</b>				
	<i>Southwest Virginia Alliance for Telemedicine</i>	.	.		.
VT	<b>The Community Health Center of Burlington</b>				
	<i>Community Health Center Technology Upgrade</i>	.	.	.	.

## Demographics of Population Served

ST	Organization	African-American	Hispanic/Latino	American Indian/Alaska Native	Asian American or Pacific Islander
VT	<b>The University of Vermont (UVM)</b>				
	<i>Pediatric Teletrauma Project</i>	•	•	•	•
WA	<b>Children's Hospital and Regional Medical Center – Seattle</b>				
	<i>Children's Health Access Regional Telemedicine (CHART) Program</i>	•	•	•	•
	<b>Inland Northwest Health Services</b>				
	<i>Northwest Telehealth--TeleER</i>	•	•	•	•
	<i>Northwest Telehealth—Telepharmacy</i>	•	•	•	•
	<b>Yakima Valley Memorial Hospital</b>				
	<i>Bedside Medication Management (MAR) System</i>	•	•	•	•
WI	<b>La Crosse Medical Health Science Consortium</b>				
	<i>Virtual Population Health Centers in the Rural Midwest</i>			•	
	<b>Marshfield Clinic Telehealth Network</b>				
	<i>Marshfield Clinic Telehealth Network</i>		•	•	•
	<b>Rural Wisconsin Health Cooperative</b>				
	<i>RWHC/WPHCA Telehealth Initiative</i>	•	•	•	•
	<b>St. Elizabeth Hospital Community Foundation</b>				
	<i>Affinity/UW Telemedicine Project</i>	•	•	•	•
WV	<b>Appalachian Pain Foundation</b>				
	<i>Physician Education, Community Outreach Program to Prevent Diversion of Prescription Drugs</i>	•			
	<b>Robert C. Byrd Center for Rural Health</b>				
	<i>Marshall University Southern West Virginia Rural Outreach Project</i>	•	•	•	•
	<b>West Virginia University, Mountaineer Doctor (MDTV)</b>				
	<i>West Virginia Community Mental Telehealth Project</i>	•	•		
WY	<b>United Medical Center</b>				
	<i>Regional Expansion of Telehealth and Distance Learning</i>	•	•	•	•
	<b>Wyoming Department of Health</b>				
	<i>Wyoming Network for Telehealth (WyNETTE)</i>	•	•	•	•

# **Project Descriptions by State**

In this section, OAT Grantees were asked to provide a brief narrative description of their projects by providing information about Network Partners, Project Purpose, Outcomes Expected, Service Area, Services Provided, Equipment, and Transmission.

University of South Alabama (USA)  
307 N. University Blvd., HSB 1100  
Mobile, AL 36688  
[www.cshi.southalabama.edu](http://www.cshi.southalabama.edu)

Carl W. Taylor  
Dawn Hicks, MPH  
Ph: 251-461-1810  
Fax: 251-461-1809  
Email: [cwtaylor@usouthal.edu](mailto:cwtaylor@usouthal.edu)

**Network Partners:**

University of South Alabama Health System  
Alabama Department of Public Health  
Alabama State Medicaid Agency  
Jason Harrah, MD

**Project Purpose:**

The Representational Medical Environment for Data Exchange (RMEDE) project will build upon the existing BioTrac program, which utilizes home monitoring tools to provide vital patient data of enrolled patients suffering from a chronic illness. The RMEDE project will further demonstrate the power of aggregated patient specific information when made available to the physician. This VMR (Virtual Medical Record) will use claims data to create a true 360-degree view of the patient providing data regardless of whom/where a provider has been seen. Using the BioTrac project the primary care physician will not only have access to claims data but also vital data submitted via the patient's home telephone using monitoring tools.

**Outcomes Expected:**

Outcome measurement for the RMEDE project will use a risk indices (RI) approach for each patient. The patient will be assigned a number (RI) based on the number of hospital admits, ER admits, clinic visits, etc. This number will then be adjusted (ARI) at the conclusion of the project where comparisons will be made between the RI and the ARI. It is anticipated that a decrease in numbers will be found showing increases in patient cooperation and improvement. The BioTrac project will utilize evaluation tools to measure perceived outcomes of the study. Such outcomes include the patient's hospital/ER admission status, self reported data and a provider's input of the study. It is anticipated that fewer hospitalizations and emergency room visits will be experienced when compared to previous admissions of enrolled patients, thereby reducing overall costs of healthcare.

**Service Area:**

The RMEDE project will solely focus initially in Baldwin County Alabama while the BioTrac project focuses on Alabama Department of Public Health areas statewide.

**Services Provided:**

Services provided include a VMR with home health monitoring of patients suffering with chronic diseases such as diabetes, chronic heart failure, and asthma.

**Equipment:**

BioTrac program uses CyberNet Medical with A and D peripherals.

**Transmission:**

Home-based program uses Plain Old Telephone System (POTS) with Internet access on the provider site.

University of South Alabama (USA)  
307 N. University Blvd., HSB 1100  
Mobile, AL 36688  
[www.cshi.southalabama.edu/](http://www.cshi.southalabama.edu/)

Carl W. Taylor  
Dawn Hicks, MPH  
Ph: 251-461-1810  
Fax: 251-461-1809  
Email: [cwtaylor@usouthal.edu](mailto:cwtaylor@usouthal.edu)

**Network Partners:**

University of South Alabama Health System  
Alabama's Children's Rehabilitative Services  
Alabama Department of Public Health  
Southwest Alabama Abuse Network (SWAN)  
Baptist Health System  
Six Rural Hospitals

**Project Purpose:**

The core mission of our program is extending medical education and clinical outreach services to rural care delivery sites and to provide a network to support the medical and educational activity needs of our partners. Each of the projects we review has a common theme in improving healthcare and through telemedicine we are able to achieve this goal. Using traditional means of transmitting telemedicine images has afforded remote locations with services which otherwise would not be available. Through traditional telemedicine venues, we are able to support and provide additional tools and services to the most remote locations in Alabama.

**Outcomes Expected:**

Outcome measurement is a major focus of the CSHI telemedicine program. Being able to provide sound data of achieved outcomes is paramount in improving future programs. Attendees participating in videoconferencing programs are asked to complete evaluations scoring the program's worth. Additionally, physicians conducting telemedicine consults are asked on a quarterly basis to complete evaluations of consults conducted during the timeframe. These evaluations are reviewed and changes are made accordingly.

**Service Area:**

Primary service areas include six (6) rural hospitals located in rural Alabama, one (1) urban clinic, one (1) Public Health Clinic, one (1) state Public Health Department, and four (4) urban hospital sites.

**Services Provided:**

Services provided include, but are not limited to traditional telemedicine services for Children's Rehabilitative Services of Alabama, Children's Sexual Abuse and Psychiatric examinations, Peer Review through the SWANN network, HIV patient examinations, Homeland Security/Disaster Training (under other CDC HRSA funding), and videoconferencing services.

**Equipment:**

Includes traditional telemedicine equipment using legacy apparatus such as Polycom, RX Rovers, Polycom Bridge, and patient exam units utilizing AMD peripherals.

**Transmission:**

IP and ISDN transmission with PRI access to statewide video. Desktop platform utilizing DSL platform or better.

Alaska Telehealth Advisory Council  
4000 Ambassador Drive  
Anchorage, AK 99508  
[www.anthc.org](http://www.anthc.org)

Thomas Nighswander, MD, MPH  
Ph: 907-729-3682  
Fax: 907-729-1901  
Email: [tnighswander@anthc.org](mailto:tnighswander@anthc.org)

**Network Partners:**

The Alaska Telemedicine Advisory Council (ATAC) has partnered with the Alaska Native Tribal Health Consortium Division of Information/Technology, the Alaska Federal Health Care Access Network (AFHCAN), the University of Alaska Anchorage, and the Alaska Physician's EHR Alliance to conduct this project.

**Project Purpose:**

The Alaska Telehealth Advisory Council supports five projects that contribute to further electronic health information exchange in Alaska and to the development statewide of electronic information infrastructure. This is done by contributing to Telehealth expansion, providing a statewide health information exchange organization structure (RHIO), developing a private physician office pilot, using health information electronic exchange across State lines, and training in the use of this technology.

**Outcomes Expected:**

The formation of an Alaska RHIO; development of a functioning and interoperable HER in 20 private clinical offices in Alaska; functioning telemedicine programs in three non-tribal federally sponsored Community Health Centers with ten (10) specialty referral physician sites; operational telemedicine consultation between ANMC and the Yakama Nation; and faculty from the Community Health Aide Program trained in the use of telemedicine for distant education tools.

**Service Area:**

One project additionally serves the Yakama Nation in Washington.

**Services Provided:**

These efforts are primarily infrastructure development, but also include faculty training in the use of telemedicine for distance education, provider training in delivery of telemedicine services, and ENT consultation.

**Equipment:**

For Community Health Center expansion and ENT Center of Excellence, equipment will include AFHCAN Telemedicine Software, digital cameras, scanners, electro cardiograms, video otoscope, teleradiology equipment and videoconferencing units.

**Transmission:**

Dedicated telephone line connectivity, with variable bandwidth.

Alaska Telemedicine Advisory Council  
4141 Ambassador Drive  
Anchorage, AK 99508  
[www.anthc.org](http://www.anthc.org)

Tom Nighswander, MD, MPH  
Ph: 907-729-3682  
Fax: 907-729-1901  
Email: [tnighswander@anthc.org](mailto:tnighswander@anthc.org)

**Network Partners:**

The Alaska Telemedicine Advisory Council (ATAC) has partnered with the University of Alaska to conduct this project.

**Project Purpose:**

The Summative Telemedicine Evaluation Project (STEP) comprehensively evaluated the Alaska Federal Health Care Access Network (AFHCAN), a 4-year project (1998-2002) funded through OAT. Supplemental funding also supported an International Symposium on Telehealth, and development of policy recommendations and future plans. A no cost carryover of OAT funding added several dimensions to the STEP project, including business model development, telehealth billing and publication of abstracts from the conference.

**Outcomes Expected:**

STEP outcomes include assessment of provider attitudes, and shifts in attitudes and skills; changes in acceptance of telemedicine initiatives, and analysis of changes in rural Alaska telecommunications infrastructure and services. Policy recommendations were developed, and the International Symposium was sponsored and showcased telehealth evaluations around the world. Outcomes of final efforts will include business models, published conference abstracts and analysis of telehealth billing barriers.

**Service Area:**

State of Alaska.

**Services Provided:**

The project has conducted a comprehensive evaluation of the effectiveness of, and gaps in, telemedicine in Alaska. Findings have formed the basis for recommendations for the future of telemedicine in Alaska. Completion in February 2006.

**Equipment:**

Not applicable.

**Transmission:**

Not applicable.

Alaska Psychiatric Institute (API)  
2800 Providence Drive  
Anchorage, Alaska 99508-4677  
[www.hss.state.ak.us/dbh/API](http://www.hss.state.ak.us/dbh/API)

Ms. Robin Hobbs, MSW, Project Coordinator  
Ph: 907-269-7278  
Fax: 907-269-7278  
Email: [Robin\\_Hobbs@health.state.ak.us](mailto:Robin_Hobbs@health.state.ak.us)

**Network Partners:**

AK Department of Health and Social Services, Alaska Telemedicine Advisory Council, Alaska Mental Health Trust Authority, Tanana Chiefs Conference (Fairbanks), Ft. Yukon Health Center (Ft. Yukon), Edgar Nollner Health Center (Galena), Mt. Sanford Tribal Consortium (Chistochina), Dena'ina Clinic (Kenai), Alaska Native Tribal Healthcare Consortium, Norton Sound Regional Health Corporation (Nome), The Sunshine Community Health Center (Talkeetna), Central Peninsula General Hospital (Soldotna), and the Camai Health Clinic (Nanek).

**Project Purpose:**

The mission of the TeleBehavioral Health Project is “to create, promote, and maintain access to Behavioral Health services through advanced technology in rural and frontier Alaska.” Alaska Psychiatric Institute has developed a TeleBehavioral Health Program to: (1) to provide behavioral health services via video-teleconferencing to remote areas not served by mental health professionals; (2) to develop distance delivered psychoeducation to consumers and continuing education to caregivers in remote villages. Pilot sites have been in operation with the intent to expand the network. The expanded TeleBehavioral Health Network will reduce the need to transport consumers to hub facilities for standard outpatient behavioral health services.

**Outcomes Expected:**

(1) Increased ability for rural behavioral health providers and primary health clinics to provide standard outpatient services in their respective facilities (tracking types and frequencies of services provided, number of consultations and continuing education events, patient referral patterns); (2) Development of a sustainable business model (explore operational strategies, develop collaborative business relationships, explore and implement funding opportunities); (3) Develop a sustainable distributive model of care to deliver services using local mid-level practitioners, village health aides, and village counselors); and (4) Develop collaborative relationships with other Alaskan telemedicine providers to use existing infrastructures.

**Service Area:**

Southeast Alaska (Ketchikan, Metlakatla, Wrangel, Petersburg); Kenai Peninsula; Interior Alaska (Fairbanks, Galena, Bethel, Ft. Yukon); Northern Alaska (Barrow, Nome, Kotzebue).

**Services Provided:**

Psychiatric assessment and evaluation services for children, youth, adults; neuro-psych screening; developmental pediatric assessment; FAS/FAE evaluation; psychological testing; psychopharmacology; counseling. Licensure supervision, case consultation.

**Equipment:**

Polycom VSX 7000.

**Transmission:**

Full and fractional T-1 lines.



Arizona Telemedicine Program  
1501 N. Campbell Avenue, PO Box 245105  
Tucson, AZ 85718  
[www.telemedicine.arizona.edu/](http://www.telemedicine.arizona.edu/)

Ronald S. Weinstein, MD  
Sandy Beinar  
Ph: 520-626-2493  
Fax: 520-626-1027  
Email: [beinars@u.arizona.edu](mailto:beinars@u.arizona.edu)

**Network Partners:**

Arizona Foundation for the Eye, Phoenix, Children's Clinics for Rehabilitative Services, Tucson, St. Elizabeth's of Hungary Clinic, Tucson, Mariposa Community Health Center, Nogales, Tuba City Regional Healthcare Corp and the Tonalea and Cameron Chapter Houses, Tuba City, schools in Tuba City and Nogales; homes, Saporì Elementary School and Community Food Bank in Amado.

**Project Purpose:**

Create the Arizona Diabetes Virtual Center of Excellence (ADVICE) network to establish a comprehensive telemedicine program for prevention, assessment and management; create and evaluate innovative distance learning programs on diabetes for patients, families, children, community-based allied health professionals and physicians in rural areas, thereby creating a community-based infrastructure for diabetes health education; and provide access to specialty health care for people with diabetes and pre-diabetes in rural areas.

**Outcomes Expected:**

Science fair educational value & fact conveyance (measure) – survey (tool)  
Student Health Professional telemedicine knowledge (measure) – survey (tool)  
Promotora telemedicine training (measure) – time-motion studies & survey (tool)  
Educational impact (measure) – satisfaction & knowledge survey (tool)  
Clinical services impact (measure) – patient record evaluation & OAT forms (tool)  
Outcomes studies will demonstrate participation, knowledge gained, and satisfaction with education and clinical activities with school children, community, patients, caregivers, health professionals and providers.

**Service Area:**

Pima, Santa Cruz, Navajo and Coconino Counties serving three MUAs, three HPSAs, one Primary Care Association (PCA), one border community and one Native American site.

**Services Provided:**

The Arizona Telemedicine Program has been in existence since July of 1996 and has provided clinical consultations in over 55 specialties. Under this grant, services will be provided for diabetes care & management, ophthalmology, podiatry, wound management and nutrition.

**Equipment:**

Tandberg 6000 videoconference unit, Canon CR6-45NM Non-Mydriatic Retinal Camera System, Digital Stethoscope Receive Unit, Tandberg HCS III, PCs with Telemed Software, Tele-Home Health Central Station and Remote Units (various).

**Transmission:**

Full T1, Internet, POTS, Video teleconference (VTC) Bridge.

Arizona Telemedicine Program  
1501 N. Campbell Avenue, PO Box 245105  
Tucson, AZ 85178  
[www.telemedicine.arizona.edu](http://www.telemedicine.arizona.edu)

Ronald S. Weinstein, MD  
Sandy Beinar  
Ph: 520-626-2493  
Fax: 520-626-1027  
Email: [beinars@u.arizona.edu](mailto:beinars@u.arizona.edu)

**Network Partners:**

During year one of this grant, the other project partners will be the Colleges at the Arizona Health Sciences Center in Tucson, including the College of Medicine, the College of Nursing, the College of Pharmacy, and the College of Public Health. All of the Colleges have active programs with the Arizona Telemedicine Program and are integral to the Program.

**Project Purpose:**

Establish the Institute for Advanced Telemedicine and Telehealth (THealth) at a new campus of the University of Arizona, College of Medicine to be located in Phoenix, Arizona. THealth will include a state-of-the-art THealth Learning Center designed for contextual-based learning by interdisciplinary teams. Curricula will be developed to take advantage of both on-site and extramural telemedicine patients. Serve as Telemedicine Training Center for healthcare workers in Arizona.

**Outcomes Expected:**

THealth will be regarded as a next generation video-conferencing facility that leverages accessibility to a combination of content-rich education and training resources, including traditional learning modalities, multi-media programming, faculty-student video-conferencing, and telemedicine patient encounters, to provide students with a rich, multi-disciplinary, interactive, learning experience. Provide enriched learning for healthcare workers involved in the delivery of healthcare services by telemedicine.

**Service Area:**

THealth will be linked to the adjacent biomedical communications control room. This will provide access to the entire Arizona Telemedicine Program Network that links to 150 sites in Arizona and adjacent states. Initially the service area will be Tucson and Phoenix.

**Services Provided:**

Initially, this will be used as a supplemental curriculum, designed to complement and broaden the medical school curriculum. A track being developed will emphasize advanced technologies and medical informatics. Medical simulation, virtual reality, robotics, and telemedicine clinics will be important features of this new curriculum pathway. Didactic presentations on telemedicine/telehealth, which are components of the telemedicine courses of the Arizona Telemedicine Program, will be held as well.

**Equipment:**

Digital dermascope, digital otoscope, digital ophthalmoscope, digital stethoscope, and other patient input devices. Several video monitors, specialized control and monitoring devices, headsets for the electronic stethoscope, and viewing equipment for home and school telenursing. All to be used in Telemedicine Training Center.

**Transmission:**

THealth will be linked to the adjacent biomedical communications control room. This will provide access to the entire Arizona Telemedicine Program that links to 150 sites in Arizona and adjacent sites.

Telemedicine Department, WT-1  
Banner Good Samaritan Medical Center  
1111 East McDowell Road  
Phoenix, AZ 85006

Marshall L. Smith, MD, PhD  
Jim Lombardi  
Ph: 602-239-5927  
Fax: 602-239-2472  
Email: [jim.lombardi@Bannerhealth.com](mailto:jim.lombardi@Bannerhealth.com)

**Network Partners:**

Payson Regional Medical Center; Payson, Arizona; Page Hospital; Page, Arizona; Arizona Telemedicine Program; Navajo Nation.

**Project Purpose:**

Develop subspecialty support for Page Hospital and Arizona; provide telehealth clinics reducing need to travel to Phoenix; develop interactive Grand Rounds for Arizona, supplementing programs of the Arizona Telemedicine Network over the state; develop telehealth programs of current and special interest for healthcare providers of Arizona (e.g., special statewide lectures on diabetes, infectious diseases, etc.); develop neurological and gastrointestinal disease clinic to support Payson Medical Center, OB ultrasound and high risk prenatal care for Navajo Nation.

**Outcomes Expected:**

Increased ability of rural providers to provide care in their facility; tracking numbers of clinical encounters and visits; tracing acceptance and satisfaction of patients and referring physicians; numbers of visits are increasing and are expected to continue to climb; satisfaction surveys of patients and referring providers are very positive. CME intake forms at rural areas (required for ACGME accreditation), and monitor satisfaction and relativity responses.

**Service Area:**

Payson Regional Medical Center—Multispecialty 66-bed facility, serving all of Northern Gila County (pop. 49,051) with extensive rural areas that are HPSAs and MUAs. Page Hospital—Rural 25-bed hospital, serving the Navajo reservation, rural communities, and thousands of tourists from Lake Powell and Grand Canyon that are HPSAs and MUAs.

**Services Provided:**

Telemedicine movement disorder clinic to Payson and soon to entire state, AML support to state. Cardiology support imminent to Page. Monthly Grand Rounds and other CME and educational programs to state. Subspecialty support in 2005 to rural areas of state includes OB/GYN, gastrointestinal, and maternal fetal ultrasound.

**Equipment:**

BGSMC—Tandberg 6000 videoconferencing units, AMD—3550 Smart Stethoscope (2). Payson Regional Medical Center—Page and Payson Hospital—Tandberg Intern II Mobile Tele-HealthCare Unit, AMD—3550 Smart Stethoscope; Arizona, Polycom FX units.

**Transmission:**

Full and fractional T-1 lines.

Correctional Health Services  
234 North Central  
Phoenix, AZ 85003  
[www.maricopa.gov](http://www.maricopa.gov)

Linda Maschner, RN  
Rebecca Nicholson  
Ph: 602-876-7115  
Fax: 602-442-8659  
Email: [renichol@mail.maricopa.gov](mailto:renichol@mail.maricopa.gov)

**Network Partners:**

Maricopa County Sheriff's Substations—Avondale & Mesa  
Maricopa County Jail—Durango Medical  
Maricopa County Jail—Lower Buckeye Mental Health  
Maricopa County Jail—4<sup>th</sup> Avenue Medical

**Project Purpose:**

Through the use of the Arizona Telemedicine Network, Correctional Health Services will be able to perform consultations with any entity connected to the network. This network will improve access to health care and reduce costs associated with unnecessary transports and referrals. Correctional Health Services has one of the largest in-patient psychiatric units in the State of Arizona. Psychiatric consultations utilizing interactive telemedicine will greatly improve our ability to stabilize the seriously mentally ill inmates. An intra-jail network will also be established. Select jail locations will be able to perform telemedicine consults and share information with each other.

**Outcomes Expected:**

Provide medical screening at remote booking sites to reduce police agency time in transporting.  
Reduce inmate transfers out of the facilities (jails) for primary care.  
Improve public safety by treating more inmates in the secure jail setting.  
Discourage false medical claims by inmates.  
Provide inmates with an improved level of medical care, thus reducing litigation.  
Improve the access time to specialty care.

**Service Area:**

Arizona Department of Corrections (ADC).  
Maricopa County Public Health Services (PHS).  
Maricopa County Sheriff's Office.  
Maricopa Integrated Health Systems.

**Services Provided:**

Remote booking substation initial medical exams.  
Continuing Medical Education.  
Psychiatric consultation.  
Intra-jail network and communication.

**Equipment:**

Tandberg HCSIII/6000 Healthcare Unit-Standard Systems.  
Tandberg Director Unit.  
American Medical Development—Welch Allyn VDX-300 ENT scope.

**Transmission:**

A full T-1 bandwidth is currently being used.

UAMS Rural Hospital Program  
1123 S. University, Suite 400  
Little Rock, AR 72204  
<http://rhp.uams.edu>

Ann Bynum, Ed.D.  
Ph: 501-686-2595  
Fax: 501-686-2585  
Email: [bynumcarola@uams.edu](mailto:bynumcarola@uams.edu)

**Network Partners:**

Network partners include the tertiary care hub center (20 sites) at UAMS in Little Rock, plus 34 rural hospitals, 7 Area Health Education Centers, 2 community health centers, 1 county health department, 90 schools, and 6 human development centers. Additional health departments and hospitals are being added this year.

**Project Purpose:**

Expand existing Telehealth network to include Tele-oncology using the Wagner model for chronic disease. The project links locally based rural providers, the health care infrastructure and targeted populations with evidence-based prevention, screening, treatment and palliative care guidelines for oncology. The project is extending specialty oncology consultation services into rural areas of South Arkansas, in addition to providing continuing education for rural practitioners and consumer education and cancer support programs for the public.

**Outcomes Expected:**

Improved access to treatment and follow up for chronic cancer conditions, strengthened referral patterns, improved health care outcomes due to regular and timely consultations with oncologist, better informed provider and patient population, increased rural and minority patient participation in clinical trials. Implementation and progress evaluation will be conducted using OAT GPRA Performance Measures along with a 244-item data form that is scanned into a Microsoft SQL server database.

**Service Area:**

Statewide service area covers 50 counties, with a specific target area of 10 counties and 11 sites for this project. All 11 project sites are located in MUAs, including 8 Primary Medical Care HPSAs, 3 Dental HPSAs, and 4 Mental Health HPSAs.

**Services Provided:**

Dermatology, diabetes care and management, high-risk obstetrics and genetics, cardiology, neurology, endocrinology, mental health, pediatrics, pharmacy, oncology, continuing education, case conferences, and public education, professional and public education in cancer prevention, detection, and treatment. The network has been operational since 1995. New services offered this year to transplant patients, including patients with acute complications from transplants and wait list patients and their families, include pre-operative education and follow-up for transplant recipients in rural areas.

**Equipment:**

Polycom View Stations, V-Tel 127 TCD, Tanberg, ELMO-400 document cameras, otoscope, illuminator, colon fiberscope, ophthalmoscope, stethoscope, dermascope, videophones, exam camera, ultrasound, PAC system.

**Transmission:**

Fractional T1, ISDN, IP, H.323 and H.320.

Familia Unida Living with Multiple Sclerosis  
4716 E. Cesar Chavez Ave. Bldg. A  
Los Angeles, CA 90022  
[www.msfamiliaunida.org](http://www.msfamiliaunida.org)

Irma Resendez, MSW  
Edmundo Castellanos, AA  
Ph: 323-261-5565  
Fax: 323-261-5999  
Email: [ecastellanos@msfamiliaunida.org](mailto:ecastellanos@msfamiliaunida.org)

**Network Partners:**

White Memorial Medical Center.

**Project Purpose:**

To acquire needed technology equipment such as wireless laptops, video equipment for storytelling, testimonies of clients served, research, and navigating resources, PowerPoint presentations, basic computer training. Additionally, the website will be updated to display health updates, employment opportunities on the Internet, including links to the employer networks.

**Outcomes Expected:**

Strengthen our ability to provide super services to our clients more effectively and efficiently.  
Outreach to homebound clients and those without transportation.

**Service Area:**

The targeted area for this application is the northeast area of the City of Los Angeles, including East Los Angeles. This area is home to the largest concentration of Latino immigrant and native language speakers in the County of Los Angeles.

**Services Provided:**

We offer services in English, Spanish, Mandarin, Cantonese and American Sign Language. Currently, we have served over 11,000 clients and their families per year with food pantry, home technology visits, monthly support group meetings, ticket to work (Unlimited Access Program) assisting with social security benefits planning, and outreach services to program eligible clients.

**Equipment:**

Our present information system consists of 11 stand-alone computers and work stations, 1 laptop and 3 outdated printers.

**Transmission:**

The funding will be used to develop a web-based data collection system for use by staff working either in the field, at clients' homes or within the office. Other applications include making the website more accessible to blind and hearing impaired clients through the use of the most state-of-the-art software and hardware.

Multi-Dimensional Imaging, Inc.  
12 Corporate Plaza Drive, Suite 120  
Newport Beach, CA 92660  
<http://www.mdivac.com>

Harvey Eisenberg, MD  
Beth Eisenberg, PhD  
Ph: 949-278-8890  
Fax: 949-200-4689  
Email: [HCEisenberg@healthview.com](mailto:HCEisenberg@healthview.com)

**Network Partners:**

Not Applicable.

**Project Purpose:**

Develop a prototype Mobile Preventive Medicine model system designed to bring cutting-edge advanced technologies in diagnostic screening and behavioral medicine through telemedicine, improved informatics and interactive health education to a wide public, including workplace and rural America.

**Outcomes Expected:**

Transmission of large patient data files will be successfully sent from Spoke to Hub and clarity of audio-visual transmission will be sent from Hub to Spoke for patient consultation. Administrative services will be streamlined with successful transmission of payment from Spoke to Hub, successful intake and transmission of health and patient satisfaction forms, using Likert-type scales. Patient education videos will be created to improve understanding of preventive medicine concepts and strategies for improving health outcomes.

**Service Area:**

Counties served include sites in Los Angeles, San Bernardino, and Orange County, as well as individuals from all Counties in Southern California. We have provided services to individuals nationwide and worldwide. Our current project aims to include more rural communities.

**Services Provided:**

Multi-Dimensional Imaging has been in existence since 1992, developing products and technologies for the purpose of early disease detection capabilities, graphic patient education, behavioral medicine, and telepresent therapies. Products developed by MDI have been managed since 1997 by HealthView Services and are currently utilized by Body Scan International.

**Equipment:**

Refurbished and ruggedized, Multidetector, Spiral CT (MDCT) and will be replaced by a VAC system with future funding. PCs with several form factors for CT data reconstruction, analysis and display and patient intake/education system. Multiple-to-one video processors for screen control.

**Transmission:**

Satellite Internet system on the spoke utilizing approximately 1MB/s of bandwidth, coupled with a full T1 at the hub secured at each end with a VPN. Teleconferencing is secured using AES encryption.

San Joaquin General Hospital  
PO Box 1020  
Stockton, CA 95201  
[www.sjgeneralhospital.com](http://www.sjgeneralhospital.com)

Jennifer Hirai, PharmD  
Donald Johnston, Jr.  
Ph: 209-468-6790  
Fax: 209-468-6546  
Email: [djohnston@sjgh.org](mailto:djohnston@sjgh.org)

**Network Partners:**

Not Applicable in this phase, but bar-code standards on Patient Identification and Medication Labeling will be adopted for all of Health Care Services once validated at San Joaquin General Hospital (SJGH).

**Project Purpose:**

Reduce medication errors and adverse drug events by installing the network infrastructure necessary to support bedside medication verification. This infrastructure will include upgrading our network switches to support higher volumes of data, installing barcode printers and scanners at key workflow locations (Registration, Laboratory, Pharmacy, Medical Records, etc.) and introducing portable wireless devices and wireless access points to support nurses with verifying medication at the bedside. This grant is not sufficient to fund the acquisition of a new Pharmacy system, which will be necessary to fully automate bedside medication verification, but will fund the installation of the infrastructure necessary for the planned system.

**Outcomes Expected:**

We will directly replace 12 older switches in our inpatient/outpatient areas to provide full gigabit bandwidth over those links. Bandwidth increase will be verified by measuring transfer rates and response times of representative clients on each network segment. Wristband and label suitability from barcode equipment will be measured against developing SJGH specification, interface support with existing and planned software applications, and actual testing in a clinical setting. Key patient areas will be covered by a wireless network. Wireless access points and security will be verified following industry standards.

**Service Area:**

San Joaquin County, in the central valley of California, which is a low-income HPSA and a full-county MUA.

**Services Provided:**

San Joaquin County's Health Care Services is the safety-net provider for the community. San Joaquin General Hospital, originally established in 1857, is a general acute care facility providing a full range of inpatient services including General Medical/Surgical Care, High-Risk Obstetrics and Neonatal Intensive Care, Pediatrics and Acute Physical Medicine and Rehabilitation.

**Equipment:**

The hosting systems are a mixture of IBM UNIX mainframe and Intel Windows/Citrix servers. The hospital network backbone will be based on Cisco routers and switches, after project completion. Barcode printer and scanner vendors to be used will be determined during the course of the project.

**Transmission:**

Full T1 lines and/or the County ATM WAN connect the hospital, Public Health Services and Behavioral Health Services. DSL connections are used for the remote clinic locations in the County.



CALIFORNIA, Sonoma County  
Northern California Telemedicine Network (NCTN)  
Santa Rosa Memorial Hospital

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CMP FY 00, 01

Santa Rosa Memorial Hospital  
Northern California Telemedicine Network  
1287 Fulton Road  
Santa Rosa, CA 95401-4923

Gary Greensweig, DO  
Sharon McComb, MS  
Ph: 707-543-2006  
Fax: 707-543-2429  
E-mail: [smccomb@srm.stjoe.org](mailto:smccomb@srm.stjoe.org)

**Network Partners:**

Anderson Valley Health Center; Eureka Community Health Center; K'ima:w Indian Health Center; Mendocino Coast Clinics; Northern California Center for Well-Being; Redwood Coast Medical Center; Redwoods Rural Health Center; Round Valley Indian Health Center; Southern Trinity Health Services; University of CA, Davis Health System; UCSF Intensive Care Nursery at Santa Rosa Memorial Hospital.

**Project Purpose:**

Improve and expand access to specialty medical services for residents in Northern California's medically underserved communities through the use of telecommunication technologies. Project goals include: (a) Provide specialty medical services to low income patients remotely; (b) Educate rural health care providers via CME and Nursing distance education video-conferencing programs; (c) Educate rural patients via Health Education distance learning video-conferencing programs; and (d) Utilize video-conferencing system for non-clinical applications (i.e., administrative meetings; community business meetings, etc.) at remote spoke sites.

**Outcomes Expected:**

(a) Patients have greater access to specialty medical services/Review NCTN Telemedicine Specialty Clinic Consult Log; (b) Providers have improved access to CME & Nursing Education programs/Review NCTN Non-Clinical Use of System Log; (c) Patients have improved access to Health Education distance learning programs/Review NCTN Non-Clinical Use of System Log; (d) Spoke sites have increased use of video-conferencing systems for non-clinical applications/Review NCTN Non-Clinical Use of System Log.

**Service Area:**

4 counties in Northern California serving 6 dental HPSAs, 5 mental health HPSAs and 3 MUAs.

**Services Provided:**

NCTN has been operational since April 2001. Services include: (a) specialty medical services in Behavioral Health (Mental Health Medication Management, Counseling, and Evaluation), Endocrinology, Dermatology, Rheumatology, Pediatric Cardiology, Infectious Disease, and Nutrition; (b) CME distance education for providers; and (c) Health Education distance learning classes for patients.

**Equipment:**

PolyCom Viewstation FX and Tandberg videoconferencing systems.

**Transmission:**

ISDN and Fractional T1.

Integrated Physician Network Avista  
1913 S 88<sup>th</sup> St.  
Superior, CO 80027  
[www.avistaadventist.org](http://www.avistaadventist.org)  
[www.ipnavista.com](http://www.ipnavista.com)

Christopher D. Sprowl, MD  
Rochelle Hass: Director of Operations  
Ph: 303-661-4440  
Fax: 303-661-4449  
Email: [rochellehass@centura.org](mailto:rochellehass@centura.org)

**Network Partners:**

Integrated Physician Network (21 locations, private practices).  
Clinica Campesina Family Health Clinic (FQHC).  
Boulder County Public Health.

**Project Purpose:**

1.) Electronic Medical Record shared between Avista Hospital, Clinica Campesina, and 21 private practice locations; 2.) Institute a Quality Improvement Program (QIP) using evidence-based medicine; and 3.) Implement decision support for providers at the time of care using a knowledge warehouse.

**Outcomes Expected:**

Improve communications between providers—implementation of shared Electronic Medical Record.  
Improve quality of care—diabetes registry, lab results for HbA1c and eye exam, protocols embedded in EMR, and registries for 4 other health disparities.  
Improve the value of the value of the health care dollar—decreases in operating expenses in private practices, in premium rates, in overhead for payers, and new model of health care delivery.

**Service Area:**

Congressional District—Colorado 2. Colorado Counties—Boulder, Adams, Broomfield.

**Services Provided:**

Allergy, Asthma, Diabetes, Mental Health, Nutrition, OB, Orthopedics, Pediatrics, Pharmacy, Trauma/ER, Acute Hospital, Dental. Cardiology and Pulmonology: 2006, lab interfaces.

**Equipment:**

Laptops, projectors, fax servers, multi-page scanners, ID card scanner, desk top computers, PDAs, cell phones, NextGen EPM-EMR software, MediTech.

**Transmission:**

Full T1 lines between providers and server, DSL lines to providers' home computers, and Internet for patient contact.

University of Colorado Health Sciences Center  
PO Box 6508, Campus Box F800  
Aurora, CO 80045-0508  
[www.uchsc.edu/ai](http://www.uchsc.edu/ai)  
[www.uchsc.edu/ai/cnatt](http://www.uchsc.edu/ai/cnatt)

Spero M. Manson, PhD  
Rhonda Wiegman Dick  
Ph: 303-724-1448  
Fax: 303-724-1474  
Email: [Rhonda.Dick@uchsc.edu](mailto:Rhonda.Dick@uchsc.edu)

**Network Partners:**

Oglala Lakota College, Pine Ridge, SD  
Si Tanka Community College, Eagle Butte, SD  
Seattle Indian Health Board, Seattle, WA  
Sinte Gleska University, Rosebud, SD

**Project Purpose:**

To apply state-of-the-art telecommunications technologies to high priority American Indian health disparities via education and community dissemination. Activities include: 1) developing and updating health-related coursework to be disseminated by tribal colleges and universities via both self-directed Internet-based and real-time interactive videoconferencing, and 2) providing a venue for community champions both at the lay and health-professional levels, to develop prevention and intervention projects that focus on high priority local health concerns.

**Outcomes Expected:**

Participants will complete a survey of closed- and open-ended questions that assess all goal-relevant activities (e.g., dates of task initiation/completion, participant identities, training dates, number, background of trainees, attendance records, frequency of web-based accession, rates of training completion, task survey responses, etc.), and outcomes (e.g., performance scores on job-skill competency tests).

**Service Area:**

Mission, South Dakota – Todd County – HPSA, MUA  
Pine Ridge, South Dakota – Shannon County – HPSA, MUA  
Eagle Butte, South Dakota – Dewey County – HPSA, MUA  
Seattle, Washington – King County - MSA

**Services Provided:**

Distance education opportunities (CME-accredited) for local community health professionals; providing a programmatic and technical training for community health advocates and professionals to develop and disseminate prevention and intervention projects that focus on high priority local health concerns.

**Equipment:**

Polycom videoconferencing unit, Epson Scanner, Marantz CD/Cassette Combo Deck, iMac G4 800Mhz computer, JVC MiniDV/SVHS Dub/VCR, Final Cut Pro3, JVC S-VHS Recorder, Canon XL1 MiniDV Camcorder, Sony Mavica Digital Camera, Macromedia MX Suite, WebCT, Panasonic DVD Recorder.

**Transmission:**

Full T1, Internet, ISDN.

American Red Cross  
BioArch Program  
2025 E Street NW  
Washington, DC 20006  
[www.redcross.org](http://www.redcross.org)

Cindy Payne  
Ph: 202-303-4171  
Fax: 202-638-3967  
Email: [PayneC@usa.redcross.org](mailto:PayneC@usa.redcross.org)

**Network Partners:**

None.

**Project Purpose:**

To provide training services related to the implementation of the eProgesa COTS product for BioArch Program which includes the replacement of the Red Cross Biomedical Services blood manufacturing and services IT applications and the underlying operational technology platform, and the associated business process re-engineering that support the collection, processing, validation, and distribution of blood and blood components. The Red Cross processes over 6 million blood donations through 11 Biomedical Services Divisions and 36 Regional areas across the United States and Puerto Rico, providing approximately 50% of the nation's blood supply.

**Outcomes Expected:**

The ePROGESA COTS product is a configurable "state of the art" software application that provides the requisite feature functionality to facilitate the blood banking process from donor recruitment, blood collection, manufacturing and testing through distribution of blood products. Students, referred to as "Super Users," responsible for configuring the eProgesa software application, will be trained in the complex configuration techniques, requirements and priorities. As part of the training, each student is tested following each major module of training and required to pass with 80% accuracy.

**Service Area:**

The "super users" will set up the ePROGESA COTS system to be used across the United States by Red Cross' 11 business divisions in support of the blood donation, testing, processing, and distribution to hospitals and clinics. Over 6 million blood donations annually are expected to be processed through this system.

**Services Provided:**

Services within the scope of this effort include blood collection (blood drives) including donor health histories and phlebotomy, testing, manufacturing and distribution to hospital and clinic consumers based on product orders. The BioArch program is scheduled for implementation beginning in late 2006.

**Equipment:**

Equipment includes ePROGESA application host computers located in Red Cross' National Headquarters (NHQ) data center in Falls Church, VA, mobile laptops used on blood drives, and various required peripheral devices, such as bar code scanners, scales, and blood product label printers.

**Transmission:**

The Regional blood banking staffs will access the ePROGESA application via the Red Cross "wide area network" (WAN) to the host computers in the Red Cross NHQ data center. The Regions are connected to the NHQ via Frame Relay T1 circuits.

Foundation for eHealth Initiative  
818 Connecticut Avenue, Suite 500  
Washington, DC 20006  
[www.ehealthinitiative.org](http://www.ehealthinitiative.org)  
[www.ccbh.ehealthinitiative.org](http://www.ccbh.ehealthinitiative.org)

Janet M. Marchibroda  
Ph: 202-624-3270  
Fax: 202-624-3266  
Email: [janet.marchibroda@ehealthinitiative.org](mailto:janet.marchibroda@ehealthinitiative.org)

**Network Partners:**

To date, the Connecting Communities for Better Health Program has funded nine community-based multi-stakeholder collaboratives that are improving health and healthcare through health information exchange (HIE) with additional awards expected in 2006 and supported stakeholders engaged in more than 200 State, regional, and community-based health information exchange projects across the US.

**Project Purpose:**

The Connecting Communities for Better Health Program improves the quality, safety and efficiency of healthcare by supporting the mobilization of information across disparate systems through health information exchange. The Program provides seed funding and technical support to state, regional, and community-based collaborative initiatives that are improving health and healthcare through health information exchange and develops and disseminates tools and resources to support healthcare stakeholders who are navigating the clinical, financial, legal, organizational, and technical aspects of health information exchange.

**Outcomes Expected:**

Increase in the number of sustainable health information exchange initiatives across the US that are enabling the mobilization of information to support better health and healthcare.  
Increase in the number of the providers, purchasers, and payers that recognize the value of health information exchange and are actively engaged in such efforts at the state, regional, and local levels.  
Increase in the number of principles and tools available to health information exchange initiatives to support their navigation of clinical, financial, organizational, and technical aspects of HIE.

**Service Area:**

The Program supports stakeholders in every state and has provided funding to: CareSpark, TN; Colorado HIE, CO; IHIE/Regensrief Institute, IN; Massachusetts Health Data Consortium (MA-SHARE), MA; MD DC Collaborative for HIT, MD; National Institute for Medical Informatics, WI; Santa Barbara County Care Data Exchange, CA; Taconic Educational Research Fund, NY; & St. Joseph's Hospital Foundation, WA.

**Services Provided:**

The Program provides seed funding to communities who are improving healthcare through HIE; develops common principles and tools for: getting started, organization and governance, value creation and financing, practice transformation and quality, health information sharing policies, and technical aspects; and disseminates information through learning forums, an online resource center, and direct technical assistance.

**Equipment:**

A broad range of equipment for health information exchange: hardware, software, and other equipment.

**Transmission:**

A broad range of transmission methods including store and forward, Internet protocols, the Internet / WWW, wireless technology, and broadband transmission.

BayCare Health System  
18331 Bay Vista Drive  
Clearwater, FL 33760

Lauri D'Angelo, MS, Senior Systems Analyst  
Ph: 727-734-6433  
Fax: 727-734-6486  
Email: [Lauri.Dangelo@BayCare.Org](mailto:Lauri.Dangelo@BayCare.Org)

**Network Partners:**

St. Anthony's Health Care, Morton Plant Mease Health Care, and St. Joseph's-Baptist Healthcare systems: St. Anthony's Hospital, Morton Plant Hospital, Mease Dunedin Hospital, Mease Countryside Hospital, NorthBay Hospital, St. Joseph's Hospital, St. Joseph's Women's Hospital, Tampa Children's Hospital, South Florida Baptist Hospital (Pinellas, Pasco, Hernando, and Hillsborough Counties & Tampa Bay Area)

**Project Purpose:**

BayCare Health System's overall I.S. strategic plan is to create an Electronic Health Record (EHR) to enable the transformation of care delivery and business practices throughout BayCare and the community we serve. A subsystem of the EMR is the implementation of a Computerized Physician Order Entry (CPOE) system; the system will use rules and clinical knowledge-based information to improve clinical processes and reduce errors. This will support reduction of medication errors and subsequent adverse drug events by decreasing transcription, dispensing and drug administration errors, and providing physicians with warnings about drug interactions.

**Outcomes Expected:**

Medication errors will be reduced by flagging unusual doses, universally noting patient allergies, and displaying key lab values influencing medication dosing. Number and type of errors (measure). Duplicate orders will be reduced by increased online availability of previous encounter information. Number of duplicate orders (measure). Utilization of the clinical system rules engine and corresponding patient alerts will enable prospective management of critical findings and automate routine protocols. Number of adverse drug events (measure). Rules engine (tool). Time available for direct patient care will increase with online documentation systems for clinicians. Increase Patient Satisfaction, Quality Data Management scores (tool).

**Service Area:**

Tampa Bay area of Florida including counties: Pinellas, Pasco, Hernando, and Hillsborough.

**Services Provided:**

Cardiology, gynecology, diabetes care and management, mental health, oncology, orthopedics, radiology, surgery and rehabilitation services.

**Equipment:**

IBM RS6000 CPU, servers, workstations, database software, application software, desktop software, and integration engine.

**Transmission:**

Data Center to facilities via a 20MB ATM. Facilities to the desktop via 100MB Ethernet.

FLORIDA, Hillsborough County  
Clinical Trial Patient/Physician Information & Education Program  
Florida Cancer Research Cooperative, University of South Florida

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CMP FY 04, 05

University of South Florida  
3500 E. Fletcher Ave., Suite 225  
Tampa, FL 33613  
[www.floridacancertrials.com](http://www.floridacancertrials.com)

Karen Moffitt, Ph.D./Nina Entrekin, MS, RN  
Karen Moffitt, PhD  
Ph: 813-975-6958  
Fax: 813-975-6596  
Contact Person [kmoffitt@tempest.coedu.usf.edu](mailto:kmoffitt@tempest.coedu.usf.edu)

**Network Partners:**

American Cancer Society/Florida Division, AARP of Florida, Shands Cancer Center University of Florida, Mayo Clinic Jacksonville, Florida Atlantic University, H. Lee Moffitt Cancer Center and Research Institute, FLASCO, Sylvester Cancer Center University of Miami, M.D. Anderson Orlando, NAACP Florida Conference EmergingMed Com, Inc., plus 50 other organizations and hospitals.

**Project Purpose:**

The project has launched an interactive Web-based Clinical Trials Information and Matching Service that provides cancer patients and other users with information about the active cancer clinical trials available in Florida. Users have the ability to search a comprehensive database to identify trials for more than 20 different kinds of cancers in which they might be eligible. The Web site provides access to pertinent information about cancer clinical trials that patients can print and discuss with their physicians. Florida residents who do not have Internet access or who prefer one-on-one assistance can obtain the same information by calling a toll-free number.

**Outcomes Expected:**

Maintain and expand clinical trials information system—Report Data Files.  
Promote availability of database—Participant evaluation data, Report Data Files, Focus groups.  
Promote clinical trials and database to special populations—Report Data Files, training reports.  
Clinical trials tracking system—Tracking system data, Participant feedback.

**Service Area:**

Entire State of Florida, including all ACOS approved hospitals in Florida.

**Services Provided:**

Cancer clinical trials information and matching service.  
Patient and physician education on importance of clinical trials.  
Extensive media campaign promoting value of clinical trials.

**Equipment:**

4 Dell Powered Servers, Altigen IP PBX phone system, Checkpoint Firewall, Siemens phone switch, Genesys, etalk.

**Transmission:**

Three dedicated full T-1 lines, POTS lines.

University of Florida College of Dentistry  
PO Box 100405  
Gainesville, FL 32610-0405  
www.dental.ufl.edu

Teresa A. Dolan, DDS, MPH/Linda Tyson, MA, CPPB  
Jean Sweitzer, MHA, MS  
Ph: 352-273-5787  
Fax: 352-392-3070  
Email: [jsweitzer@dental.ufl.edu](mailto:jsweitzer@dental.ufl.edu)

**Network Partners:**

N/A.

**Project Purpose:**

The University of Florida College of Dentistry (UFCD) is seeking to enhance its Statewide Network for Community Oral Health to include expanded capabilities in the areas of distance learning and teledentistry.

**Outcomes Expected:**

By enhancing its video-conferencing, educational video production and web technology, UFCD seeks to dramatically improve the clinical and educational experiences of dental students, residents and practitioners at our community-based clinics and better serve the needs of people with poor access to oral health care. Instruments will be developed to measure participants' expectations, knowledge gained and overall experience with teledentistry.

**Service Area:**

University of Florida Gainesville campus to health facilities located throughout the state, specifically, Jacksonville, St. Petersburg and Hialeah. Counties where clinics are located include Pinellas, Alachua, Duval and Miami-Dade. Web-based technology will give us a presence throughout the statewide network for community oral health.

**Services Provided:**

Dental services provided will include teledentistry consultations and digital radiography. In addition, Distance Learning technology will be upgraded and expanded to include area practitioners across the State of Florida. The existing statewide network has been operational for over 10 years.

**Equipment:**

Video Conferencing Equipment: Polycom VSX 8000, Sony Cameras, Polycom Practitioner Cart, Polycom Gateway; Dell PowerEdge, Medicor; EMC Centera; Dell Optiplex GX270 PCs, Cisco Routers & switches, etc.

**Transmission:**

TCP/IP over Full T3, T1s and ISDN telecommunication circuits.



Morehouse School of Medicine  
720 Westview Drive  
Atlanta, GA 30310  
[www.msm.edu](http://www.msm.edu)

Eric L. Jackson  
Ph: 404-752-1786  
Fax 404-752-1971  
Email: [elj@msm.edu](mailto:elj@msm.edu)

**Network Partners:**

Oakhurst Medical Center, Dr. Carmen Wilson: Ophthalmologist, National Center for Primary Care (NCPC), SERCN Community Health Center Sites, Division of Information Technology Services (DITS), and Southeastern Universities Research Association, Inc. (SURA).

**Project Purpose:**

To establish the technical infrastructure necessary to allow for communication of public health information, continuing medical education, and distance learning to the broadest audience possible.  
To design a training program for health care professionals aimed at achieving optimal health outcomes through evidence based care, use of common communications technology, and health system change to promote effective delivery of patient centered care.  
To train nurses to obtain and electronically transmit digital retinal images and photographs to an ophthalmologist.

**Outcomes Expected:**

Ability to deliver web based video programs to every CHC organization, beginning with the Southeast Cluster (eight States of Region IV).  
Broadcast the entire program of large conferences held at the National Center for Primary Care at Morehouse School of Medicine, including the Annual Morehouse Primary Care and Prevention Conference.  
Broadcast HRSA-sponsored conferences such as the Annual Primary Care Consortium meetings and the East Coast Migrant Stream Forum.  
Improved access to eye screening using a digital retinal camera will lead to the early detection of ocular complications in diabetic patients.

**Service Area:**

The CME/Training content delivery network serves the southeastern United States.  
The Diabetes pilot takes place at Oakhurst Medical Center, Morehouse Medical Associates, and the Morehouse School of Medicine.

**Services Provided:**

Digital retinal images will be obtained and transmitted in real time for interpretation. Dr Wilson interprets the images and provides an assessment & treatment plan to the primary care provider. Any severe abnormalities such as retinal detachments, requiring acute treatment are referred.

**Equipment:**

Sonic Foundry Mediasite Streaming server, Cisco IP/TV, Tandberg Health Care System III, Cisco MCU, Cisco ISDN/IP Gateway, Movaz CWDM Optical Switch. One Nidek Digital Fundus Camera, NAVIS Screener Patient Database Imaging Software, eye lane equipment.

**Transmission:**

ISDN Lines and Metropolitan Ethernet.

Ware County Health Department  
Southeast Health Unit  
1101 Church Street  
Waycross, GA 31501

Diane Watson  
Telehealth Director  
Ph: 912-287-4890  
Fax: 912-287-4033  
Email: [dcwatson9@gdph.state.ga.us](mailto:dcwatson9@gdph.state.ga.us)

**Network Partners:**

Ware County Health Department, Medical College of Georgia, Memorial Health University Medical Center, Grady Health System, Georgia Department of Human Resources, Wayne, Toombs, Bulloch, and Coffee Wellness Centers, Coffee Regional Medical Center, Coffee County Health Department, Bulloch County Health Department, Appling County Health Department, Tattnall County District Health Office, Children's Medical Services, DAISY Clinic, Southeast Health District WIC Program.

**Project Purpose:**

To impact health care provision through improved access, quality, and availability. The project established a critical service link for children with special health care needs and has now embarked on program changes to implement the same necessary health care for clients with HIV/AIDS. The project will also focus on completion of a distance learning system for use in the 16 county public health area.

**Outcomes Expected:**

- Improved perinatal health outcomes.
- Decrease in travel costs.
- Increase in number of specialty health care services provided locally.
- Increase in utilization of telehealth equipment by rural public health staff.
- Establishment of coordinated telehealth activities with other public and private telehealth systems.
- Program sustainability post OAT funding.

**Service Area:**

The service area is comprised of 16 rural public health counties in Southeast Georgia. The area is roughly the size of the state of Massachusetts that is made of predominantly medically underserved towns.

**Services Provided:**

Children with Special Needs clinics provided through the program include genetics, asthma/allergy, sickle cell. Primary care for HIV/AIDS clients are provided at 4 Wellness Centers with a 5<sup>th</sup> center to be added by 1/06. The perinatal health clinic provides Level II ultrasound, genetics counseling, and OB services.

**Equipment:**

Polycom iPower 970 videoconferencing units are located in 2 sites, Polycom 9400 in 16 sites and the new Polycom 7000 is located in one site.

**Transmission:**

All Wide Area Network (WAN) connections are T1 dedicated private line data circuits.

Hawai'i Primary Care Association (HPCA)  
345 Queen Street, Suite 601  
Honolulu, HI 96813  
[www.hawaiiipca.net](http://www.hawaiiipca.net)

Christine Ma'i'i Sakuda  
Telehealth Director  
Ph: 808-536-8442  
Fax: 808-524-0347  
Email: [csakuda@hawaiiipca.net](mailto:csakuda@hawaiiipca.net)

**Network Partners:**

All Federally Qualified Community Health Centers (FQHCs), Native Hawaiian Health Care Systems (NHHCS), Queen Emma Clinics, Pacific Telehealth and Technology Hui, (A Department of Defense/Veteran Affairs joint venture), University of Hawai'i John A. Burns School of Medicine, Hawai'i Area Health Education Center (AHEC), Dr. Doug Johnson (dermatologist).

**Project Purpose:**

Help the FQHCs prepare for the effective, practical, and seamless use of telehealth in clinical, administrative, and educational settings, by creating a positive experience of telehealth among Community Health Center (CHC) providers, administrators, and patients. Three primary objectives are 1) increase remote access to health care using telecommunications, 2) encourage consultations among CHCs that have or need shareable clinical capacity, and 3) use telehealth to meet important non-clinical needs: administration, education, and outreach.

**Outcomes Expected:**

(1) Increase the number of patients accessing needed specialists in Hawai'i's FQHCs, primarily through dermatology and behavioral health, (2) develop and support sustainable, on-going VTC programs—CMEs, grand rounds, community health education, community outreach, (3) increase the number of telehealth consults in FQHCs, (4) decrease PT and Provider travel costs.

**Service Area:**

There are 13 FQHCs with 37 locations across the State of Hawai'i serving roughly 72% of Hawai'i's population. 80% of these represent Medically Underserved Populations (MUPs), 20% represent Medically Underserved Areas (MUAs) and is comprised largely of Native Hawaiians, Immigrants, Migrants from the Freely Associated States of the Marshall Islands, Micronesia, and Palau, homeless people, and uninsured people.

**Services Provided:**

Teledermatology, behavioral health, audio and video multi-point conferencing services, distance education (for example, Lutheran Dental Residency Program), Community Health Education Program, Website development, electronic practice management/health records procurement collaborative, Medicine Bank online database.

**Equipment:**

Tandberg MCU bridge, Tandberg/Sony/PictureTel/Polycom VTC units, Nikon CoolPix cameras, general exam cameras, document reader, dermoscopes, otoscopes, ophthalmoscopes.

**Transmission:**

A mix of PRI, IP T-1 lines, frame-relay, DSL, and ISDN. MCU is mostly supported by an ISDN PR and cable broadband IT transport. Most spoke sites have 384 KB/s ISDN connectivity but some are migrating to IP.

Molokai General Hospital  
PO Box 408  
Kaunakakai, HI 96748

Desiree Puhi RN, BSN  
Ph: 808-553-3191  
Fax: 808-553-3112  
Email: [dpuhi@queens.org](mailto:dpuhi@queens.org)

**Network Partners:**

Queen's Medical Center, Honolulu, HI, Hawaii Pacific Health, Honolulu, HI, University of Hawaii, Honolulu, HI, TeleDerm Solutions, Inc, San Antonio, TX, Oncare Hawaii, Honolulu, HI.

**Project Purpose:**

To develop telemedicine linkages in order to expand and increase access to urban medical specialists. This will reduce travel costs and improve disease management.

**Outcomes Expected:**

Patient satisfaction: 7-point Likert Scale Provider satisfaction, 7 point Likert Scale Patient Usage, OAT GPRA Data Collection tool.

**Service Area:**

The entire island of Molokai, with a resident population of just over 7,000. It is designated as both a primary care HPSA and as a mental health HPSA.

**Services Provided:**

Diabetes Care Management, Oncology Case Management, Fetal Ultrasound/Genetic Counseling, Psychiatry, Dermatology, Teleradiology, Professional Development.

**Equipment:**

Tandberg Health Care System (HCS) III (2), Tandberg 880 videoconferencing unit (2), Tandberg 800 videoconferencing unit (1), digital camera, Sony video camera, ultrasound machine.

**Transmission:**

Fetal ultrasound: ISDN @ 768 Kbps, Dermatology: Store and Forward,  
All other services: ISDN @ 384 Kbps.

Clearwater Valley Hospital and Clinics, Inc. Administration  
301 Cedar St.  
Orofino, ID 83209-8174  
<http://www.clearwatervalleyhospital.com>

Pam McBride  
Ph: 208-289-5509  
Fax: 208-289-2437  
Email: peterpam@tds.net

**Network Partners:**

St. Mary's Hospital, 701 Lewiston St., Cottonwood, ID 83522; clinics in Orofino, Cottonwood, Kamiah, Pierce, Kooskia, Nezperce, Craigmont, and Grangeville, ID.

**Project Purpose:**

Bring safer, more effective health care to clinics and hospitals in a 3-county region of frontier north-central Idaho. Hardware and software will be purchased and installed for a joint electronic medical records deployment involving 2 critical access hospitals and 12 associated clinics. Intensive training will be provided for effective use of the software. Physicians will be able to view patient charts instantly from any system location or from home. Standardized patient records will alert busy physicians to drug contraindications, allergies, and anomalous lab results.

**Outcomes Expected:**

Hardware and software installation—task completion on project tracking system; paid invoices; training—task completion on project tracking system; go-live implementation for each software module.

**Service Area:**

3 contiguous counties in frontier north-central Idaho, serving 14 HPSAs and 3 MUAs. All have whole country Geographic Mental Health HPSAs. Clearwater—MUA and Geographic Primary Care HPSA and pending low-income Population Group HPSA in Primary Care, also a whole county Population Group HPSA in Dental Health for low-income; Lewis—Geographic and Facility Primary Care HPSAs, MUA and MUP designations; Idaho—low-income Population Group and Geographic HPSAs in Primary Care, Geographic HPSA in Dental Health.

**Services Provided:**

Clearwater Valley and St. Mary's Hospitals and their associated clinics joined forces in 1998. They provide primary and acute care services, including surgery, OB, home health, and physical therapy. Both hospitals have digital library services. All sites expect to implement EMR in 2006. Teleradiology services may be expanded.

**Equipment:**

Meditech and LSS Data software modules; network servers and personal workstations and printers.

**Transmission:**

Full T1 lines between hospitals and Kamiah clinic; wireless or dial-up internet access at clinic sites; vpn tunnel between sites.

Telehealth Idaho  
ISU Campus Box 8174  
Pocatello, ID 83209-8174  
[www.isu.edu/irh](http://www.isu.edu/irh) & [www.telida.isu.edu](http://www.telida.isu.edu)

B. Hudnall Stamm, PhD  
Ph: 208-282-4436  
Fax: 208-282-4074  
Email: [telida@isu.edu](mailto:telida@isu.edu)

**Network Partners:**

Community: 12 hospitals, 2 clinics, 1 dental practice, 1 hospital network (5 hospitals), and 4 State associations. University: The College of Pharmacy, Idaho Health Sciences Library, Dental Sciences, Clinical Psychology, Dept. of Family Medicine, and Hispanic Health Research & Education Center. Corporate: Healthwise, Inc. and Well Diagnostics.

**Project Purpose:**

Improve access in rural and frontier Idaho and support a Statewide telehealth resource center designed to improve access across the spectrum of health care, including oral, physical, and mental/behavioral health. The program takes a three-pronged approach to improving access by (a) increasing the number of providers through new and upgraded education, (b) extending the reach of existing providers by using telehealth-based supervision, consultation, home health and (c) preserving the existing workforce through professional support and increasing their professional quality of life and retention.

**Outcomes Expected:**

Telehealth Idaho is based on the hypothesis that telehealth can be used as an effective intervention for reducing the negative effects and increasing the positive effects of working in isolated and low-infrastructure areas. It has a variety of expected outcomes and methods of measuring them. Below is a generalized summary of the evaluation of the project.

- 1) *Increased Professional Quality of Life* –outcome measures: Life Status Review & ProQOL (<http://www.isu.edu/~bhstamm/tests.htm>), increased recruitment and retention, increased access to professional supports, increased use of educational and consultative activity, perceived increase in ability to do job, increased perception of changing practice habits based on additional knowledge and resources.
- 2) *Patient/provider/student satisfaction* – outcome measures: 1 to 10-item self-report.
- 3) *Increased use of telehealth tools* (education, consultation, and informatics) – Outcome measures: OAT GPRA Performance measures, automated web utilization data, quarterly self-report of utilization data, key informants, focus groups, and public health data.

**Service Area:**

Entire state of Idaho. The 44 counties include 36 HPSAs, 30 DPSAs, 44 MPSAs, 28 MUAs.

**Services Provided:**

Technical support, digital medical library, clinical services, new and continuing health professions education, and the Tel Ida Toolbox, a health informatics website. Specializations include professional quality of life, geriatrics, traumatic brain injury, community integration, mental health, health services, health economics, traumatic stress, and cultural competency.

**Equipment:**

Wide range, including virtual program centers and Webconferencing applications, as requested by partners. Emphasis is on interoperability, data security, and HIPAA compliance.

**Transmission:**

Hybrid, utilizing what is available (i.e. POTS, ISDN, ADSL, cable, and wireless).

**IDAHO, Bonner County**  
**Expanding Telehealth to North Idaho Districts (EXTEND)**  
**North Idaho Rural Health Consortium (NIRHC)**

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**CMP FY 02, 03, 04, 05**

North Idaho Rural Health Consortium  
Bonner General Hospital  
P.O. Box 1448  
Sandpoint, ID 83864  
[www.nirhc.org](http://www.nirhc.org)

Sue Fox, MPH  
Ph: 208-265-3390  
Fax: 208-265-6276  
Email: [suefox@sandpoint.net](mailto:suefox@sandpoint.net)

**Network Partners:**

Five northern Idaho county hospitals in St. Maries, Sandpoint, Bonners Ferry, Coeur d' Alene, and Kellogg; three school districts in Wallace, Kootenai, and Priest River; and North Idaho Behavioral Health.

**Project Purpose:**

1. Extend existing service providers, by further developing and expanding telehealth treatment applications, to better serve the rural population of northern Idaho.
2. Increase access to quality healthcare and improve patient safety through the use of telecommunications and digital technologies specifically in the areas of mental health, hospital and school based rehabilitative therapies, pathology, pharmacy, and electronic medical records.

**Outcomes Expected:**

EXTEND will evaluate of the feasibility, quality of care, cost-effectiveness, satisfaction, and outcomes data related to delivering healthcare using telehealth techniques. Quantitative and qualitative measurements are integrated into each telehealth application.

**Service Area:**

5 counties in northern Idaho.

**Services Provided:**

Electronic Medical Records (2005), telepharmacy (2004), telepathology (2004), hospital and school based telerehabilitative therapies (2003), telemental health (2002), professional continuing medical education (1996), distance learning (1996), and administrative meetings (1996).

**Equipment:**

Tandberg 880 videoconferencing unit, Polycom FX viewstation, and Vtel TC2000 videoconferencing unit.

**Transmission:**

IP Wide Area Network (WAN) between hospitals with Primary Rate ISDN gateway access to the school district networks.

Division of Research and Graduate Studies  
Lowden Hall 301  
DeKalb, IL 60115  
[www.neutrontherapy.niu.edu/neutrontherapy/](http://www.neutrontherapy.niu.edu/neutrontherapy/)

Rathindra N. Bose, PhD  
Ph: 815-753-1883  
Fax 815-753-1631  
Email: [rbose@niu.edu](mailto:rbose@niu.edu)

**Network Partners:**

Fermi National Accelerator Laboratory.

**Project Purpose:**

To disseminate the usage of neutron radiation for cancer treatment, select and treat advanced cancer patients, and establish new CPT code specific for neutron radiation for widespread application of neutron therapy across the nation.

**Outcomes Expected:**

1. Create an interactive website to document and publicize the effectiveness of neutron therapy and advise patients over the web.
2. Secure a new CPT code so that neutron therapy finds widespread application for societal benefit.
3. Treat selected advanced cancer patients to demonstrate the efficacy of the method; and present seminars and workshops to the public and to the medical community.

**Service Area:**

For cancer treatment, preference will be given to patients from rural and urban areas of Illinois. However, resources and time permitting, we also plan to service patients outside Illinois and the United States.

**Services Provided:**

Seminars to the public; oncology consulting service to patients (approximately 5 patients/week); treatment for a limited number of advanced cancer patients.

**Equipment:**

Proton linear accelerator, vertical CT-scanner, windows server 2000 with NET platform and ASP scripting as well as SQL server access.

**Transmission:**

Through a full T3 line with a maximum overhead of 69MB ingoing/outgoing traffic through Illinois Century Network.



OSF Saint James-John W. Albrecht Medical Center  
2500 W. Reynolds  
Pontiac, IL 61764  
[www.osfsaintjames.org](http://www.osfsaintjames.org)

Brian Schofield  
Ph: 815-842-6810  
Fax: 815-842-4919  
[brian.schofield@osfhealthcare.org](mailto:brian.schofield@osfhealthcare.org)

**Network Partners:**

3 Rural Family Practice Clinics (Dwight, Chenoa and Fairbury)  
OSF Saint James-John W. Albrecht Medical Center (Pontiac)  
Heartcare Midwest—Pontiac Cardiology  
OSF Medical Group

**Project Purpose:**

The goal is to enhance efficiency and effectiveness of health delivery through the use of telemedicine by developing a Telehealth Network. This Network is a collaborative effort that focuses on developing interconnected healthcare units that include Clinic/Hospital Support and Specialist Support. The specific focus will be to connect three rural Family Practice Clinics with OSF Saint James and to determine protocols and procedures that are most effective. The secondary focus will be to connect with a Cardiology specialty group.

**Outcomes Expected:**

Cost savings from reduced drive times and Press Ganey Patient Satisfaction scores of 85%+ for telemedicine visits.

**Service Area:**

The Telehealth Network covers five counties, including all of Livingston and portions of McLean, Ford, Iroquois and Woodford. Two are full HPSAs and two are partial HPSAs. Approximately 25% of the area is at poverty level. Livingston County is rural and ranks 4<sup>th</sup> in the state in geographic land size. The total service area has a population of 55,000.

**Services Provided:**

The OSF Saint James Telehealth is currently in progress. Core services will include optional care, specialty consults, education, grand rounds and meetings using video teleconferencing.

**Equipment:**

4 Polycom Medlink Mobile Workstations with peripherals, including AMD General Exam camera, Electronic Stethoscope, Digital Spirometer, Otoscope and 20 Via Videos. Also Equipment for Digital EKGs, including MAC 5000 Wireless and Remote Query Option (3) and MAC 1200 and office cart (9).

**Transmission:**

T1 circuits with ISDN or IP, IP backbone.

Perinatal Center, St. John's Hospital  
415 North 9<sup>th</sup> Street, Room 4W16  
Springfield, IL 62769  
[www.st-johns.org](http://www.st-johns.org)

Dennis Crouse MD, PhD, FAAP  
Ph: 217-544-6464, ext. 30460  
Fax: 217-757-6844  
Email: [dcrouse@siumed.edu](mailto:dcrouse@siumed.edu)

**Network Partners:**

Richland Memorial Hospital, Blessing Hospital, St. Vincent Memorial Hospital, St. Francis Hospital.

**Project Purpose:**

Develop neonatal and perinatal telehealth and telemedicine services for the patients in rural Illinois. Specifically, educational programs in newborn resuscitation, newborn examination and evaluation, common newborn problems, maternal evaluation, emergency deliveries, and maternal evaluation will be developed and provided. Prenatal consults will be provided negating unnecessary travel for high-risk mothers.

**Outcomes Expected:**

Physicians, nurses and technicians will be able to provide emergency services to high-risk mothers and newborns reducing morbidity and mortality. Unnecessary travel for high-risk mothers will be negated. Continuing medical educational (CME) activities will be provided to rural physicians, nurses and technicians.

**Service Area:**

The service area for this project will coincide with the South Central Perinatal Center region as specified by the Illinois Department of Public Health Regional Perinatal Health Care guidelines. This area is rural and is mostly underserved as evidenced by 45 MSU areas.

**Services Provided:**

The services provided will be specifically for neonatal and perinatal services and education.

**Equipment:**

Two Polycom videoconferencing systems will be employed at St. John's Hospital.

**Transmission:**

The transmission will occur over T1 connections using IP addresses.

SIU Telehealth Networks & Programs  
913 N. Rutledge St, Ste 1253  
PO Box 19682  
Springfield, IL 62794-9682  
[www.siumed.edu/telehealth](http://www.siumed.edu/telehealth)

Deborah E. Seale  
Ph: 217-545-7830  
Fax: 217-545-7839  
Email: [dseale@siumed.edu](mailto:dseale@siumed.edu)

**Network Partners:**

Participating sites include: Area Health Education Centers, family practice clinics, universities and colleges, Critical Access Hospitals, small rural hospitals, rural mental health hospitals, large urban hospitals, Veteran Affairs Hospital, home health agency. Content providers include: universities, state agencies, hospitals, associations and consortia.

**Project Purpose:**

Develop community-institutional partnerships to strengthen local health care capacity through the use of advanced technologies. Provide medical education and training to 52 rural hospitals – including 32 critical access hospitals – using videoconferencing, satellite broadcasts and web streaming. Provide health information to patients and information support to practitioners through online resources. Provide direct patient care and medical consultation using store-and-forward and videoconference technologies. Ensure the delivery of appropriate, affordable services through program evaluation and outcomes research.

**Outcomes Expected:**

Appropriate, seamless, affordable service as measured by participant (patient, learner, educator, practitioner) and support staff (technical and coordinator) surveys. Technical quality including videoconference audio/video, store-and-forward and other audio/visual tools. Level of support as measured by training delivered, protocols developed, and user error. Improved access as measured by the number of sites, participants, programs, services delivered as well as duration. Evaluate project development timeline.

**Service Area:**

96 counties in downstate Illinois including 4 frontier counties, 70 rural non-metropolitan counties; 16 partial rural metropolitan counties; 93 Primary Care HPSAs; 52 Mental HPSAs with 11 designations pending; 83 Dental HPSAs; 24 whole county MUA/MUPs and 53 partial county MUA/MUPs.

**Services Provided:**

Educational programs included Grand Rounds for internal medicine, psychiatry, neurology, and otolaryngology, Burdick Rural Interdisciplinary Fellowship, patient safety, terrorism preparedness and response, and grant writing. Clinical telehealth services include dermatology, neurology, and psychiatry.

**Equipment:**

ISDN PRI and IP videoconferencing, medical and distance education peripherals, multipoint control bridge, satellite, online chat, multi-media streaming and push technologies.

**Transmission:**

T1 circuits with ISDN or IP, State IP backbone, State ISDN backbone, and ISDN dialup services connecting at 128 to 384 as appropriate for need.

Clarian Health Partners  
1633 North Capitol Avenue  
Indianapolis, IN 46202  
[www.rileyhospital.org/document.jsp?locid=2404](http://www.rileyhospital.org/document.jsp?locid=2404)

Richard Helsper  
Greg Beck, MHA  
Ph: 317-962-2188  
Fax: 317-962-6297  
E-mail: [gbeck@clarian.org](mailto:gbeck@clarian.org)

**Network Partners:**

Bedford Regional Hospital, Bedford, IN; Deaconess Hospital, Evansville, IN Union Hospital & Health System, Terre Haute, IN; Memorial Hospital, South Bend, IN; Lutheran Hospital, Fort Wayne, IN.

**Project Purpose:**

Enable and enhance the provision of specialty healthcare to children throughout Indiana.  
Provide an infrastructure to promote continuing medical education among providers across Indiana.  
Maximize outreach providers' clinical time and reduce patient wait times for specialty services.  
Support the advancement of telemedicine policy and reimbursement in Indiana.

**Outcomes Expected:**

Reduce the wait time for Indiana children to see a specialist. Decrease travel expenses for families and providers and Indiana Medicaid.

**Service Area:**

Spoke telemedicine clinics are located in the following counties: Lawrence County, IN; Vanderburgh County, IN; Vigo County, IN; St. Joseph County, IN; Allen County, IN. We have provided services to patients from 15 additional counties across Indiana.

**Services Provided:**

Riley Connections has operated since September 2003. Consultations are provided in adolescent psychiatry, pediatric urology, pediatric endocrinology, pediatric dermatology, oncology, cystic fibrosis related diabetes, and diabetes disease management. File transfer services are performed for pediatric EEGs and pulmonary sleep studies. 9 Continuing Medical Education events are broadcast weekly.

**Equipment:**

5 Tandberg 2500 video codec conferencing carts, 4 Tandberg 550 video conferencing carts, 4 digital stethoscopes (AMD 3550), 3 general exam cameras (AMD 2550), 4 Compaq notebook computers, 2 Fuji FinePix E550 Digital Cameras.

**Transmission:**

Dedicated T-1 Lines between Clarian Health Partners and Deaconess Hospital, Bedford Regional Hospital, and Union Hospital. Internet IP video to Memorial Hospital and Lutheran Hospital.

Health & Hospital Corporation of Marion County  
Grants Department  
3838 N. Rural St.  
Indianapolis, IN 46205

Thomas Kuster, CNMT  
Catherine Parker, RD, MPA  
Ph: 317-221-2468  
Fax: 317-221-2020  
E-mail: [cparker@hhcorp.org](mailto:cparker@hhcorp.org)

**Network Partners:**

N/A.

**Project Purpose:**

To enhance Wishard Health Services (WHS) physician, staff and patient access to and satisfaction with radiology images and reports through the use of the Picture Archive Communications System (PACS). This project is an upgrade to an existing system in effort to become a “filmless” radiology department.

**Outcomes Expected:**

Increased physician usage and satisfaction of/with PACS. Increased staff satisfaction with PACS. Have one year’s worth of images stored in cache (immediate retrieval). This will be monitored via system user surveys.

**Service Area:**

Marion County (Indianapolis), Indiana.  
Approximately twelve HPSAs served by grant project.

**Services Provided:**

The WHC PACS system has been in place since 1998 and supports all modalities of Radiology including Computed Tomography (CT), Magnetic Resonance Imaging (MRI), Nuclear Medicine, Ultrasound and Diagnostic X-ray.

**Equipment:**

1 Oracle server; 2 network gateways; 2 tape archives; 2 archive servers; 1 Web server; 25 radiology review stations; administrative workstation.

**Transmission:**

Broadband LAN throughout hospital with Internet access for radiologists and referring physicians outside of hospital.

Des Moines University  
3200 Grand Avenue  
Des Moines, Iowa 50312  
[www.dmu.edu](http://www.dmu.edu)

William Appelgate, PhD  
Ph: 515-271-1516  
Fax: 515-271-7062  
Email : [william.appelgate@dmu.edu](mailto:william.appelgate@dmu.edu)

**Network Partners:**

Iowa Health Systems  
Mercy Health Network  
Onawa Clinic  
Des Moines University

**Project Purpose:**

Test the success of telephonic methods for case management of CHF and diabetes patients in the home.

**Outcomes Expected:**

Patient Functionality: Will monitor activities of daily living using home telehealth technologies.

Clinical Improvement: Increase the percentage of patients receiving critical elements of self management education while using the telehealth monitors; critical elements include daily weights, activity level, low sodium diet, medication management, follow-up appointments, deteriorating symptoms.

Patient Satisfaction: Telephone surveys will be used with all patients in the programs. Physician surveys will be conducted by phone and/or mail to measure physician satisfaction.

Cost-effectiveness: Cost containment related to medical utilization (visits per episode of care, delay onset of readmission to a hospital) pre and post-monitor usage.

**Service Area:**

Current rural and urban sites served by the providers of Mercy Health Network and Iowa Health System.

**Services Provided:**

Intervention: Telemonitoring. Placement of monitors in the home of selected CHF and diabetic patients that have been identified as high risk.

**Equipment:**

Patient monitoring using telephones, scales, BP cuffs, and monitors done through verbal reporting and using the Internet.

**Transmission:**

Plain Old Telephone Service (POTS).

Des Moines University  
3200 Grand Avenue  
Des Moines, Iowa 50312  
[www.iowacc.com](http://www.iowacc.com)

William Appelgate, PhD  
Ph: 515-271-1516  
Fax: 515-271-7062  
Email : [william.appelgate@dmu.edu](mailto:william.appelgate@dmu.edu)

**Network Partners:**

Iowa Medicaid Enterprise  
Des Moines University  
Iowa Health System  
Mercy Health Network

**Project Purpose:**

To implement a comprehensive population-based statewide chronic care program, targeting all Iowa Medicaid beneficiaries with a primary or secondary diagnosis of Congestive Heart Failure (CHF) and to deploy a system-wide health risk assessment for all beneficiaries. Care management coordination will be coordinated in collaboration with Iowa Medicaid caseworkers, and a telephonic patient care strategy.

**Outcomes Expected:**

Clinical Improvement: Clinical parameters, (measure)—Telehealth data management technology.

Patient Satisfaction: Telephone surveys will be completed with all patients in the program. Providers will be surveyed as well.

Patient Functionality: Will monitor ADL activities-telehealth data management technologies. Also, will utilize Minnesota Living with Heart Failure Assessment.

Health Care Utilization: Will evaluate all health claims data on participants.

**Service Area:**

It is anticipated that this project will serve Medicaid beneficiaries within all 99 counties within the state of Iowa.

**Services Provided:**

Intervention: Internet-based Health Risk Assessment. Telehealth monitoring of CHF patients through telephonic nursing intervention and/or IVR system. Self-management education.

**Equipment:**

Computers: On-line Health risk assessments.

Telephones: Patient monitoring through telephonic nursing interventions.

**Transmission:**

Internet and Plain Old Telephone Service (POTS).

Midwest Rural Telemedicine Consortium  
1111 6<sup>th</sup> Avenue  
Des Moines, IA 50314-2611  
[www.mrtc.iowa.org](http://www.mrtc.iowa.org)

Dale Andres, DO  
Fred Eastman, MS  
Ph: 515-643-8750  
Fax: 515-643-5350  
Email: [feastman@mercydesmoines.org](mailto:feastman@mercydesmoines.org)

**Network Partners:**

Mercy Medical Center – Des Moines, Mercy Medical Center – North Iowa, and 23 affiliate facilities in Albia, Algona, Ames, Audubon, Belmont, Bloomfield, Britt, Centerville, Charles City, Clarinda, Corydon, Cresco, Emmetsburg, Greenfield, Hampton, Iowa Falls, Leon, Manning, Marshalltown, Mount Ayr, Nevada, New Hampton and Osage, Iowa.

**Project Purpose:**

Enhance the quality and accessibility of health care services through updated equipment deployment, targeted EMS training, health care career promotion, develop a support mechanism for limited English proficient (LEP) patients, and increase access for delivery of clinical services.

**Outcomes Expected:**

Outcomes expected include a 10% increase in current network utilization (clinical, educational and administrative); additional staff resources for affiliated entities; improved ability for facilities to address the language needs for LEP patient populations; improved availability of EMS training in rural communities; increased awareness of healthcare career needs and options for high school students (including EMS); and an increased awareness of telemedicine capabilities and opportunities for rural physicians and urban specialists. Monitor outcomes using the OAT GPRA Performance Measures.

**Service Area:**

The service area consists of 24 communities in North-Central, Central and South-Central Iowa, including Adair, Audubon, Wright, Polk, Floyd, Davis, Decatur, Hardin, Franklin, Hancock, Kossuth, Carroll, Marshall, Story, Cerro Gordo, Appanoose, Chickasaw, Mitchell, Page, Palo Alto, Howard, Ringgold, and Wayne counties.

**Services Provided:**

Since 1995 - Clinical (Echocardiography, Dermatology, Burn Management, Nephrology); Educational (CEU/CME, health care management, community support groups, public health); Administrative. Tele-Interpretation for LEP patients.

**Equipment:**

8 Polycom Viewstation FX, 24 Polycom Viewstation EX, 7 PictureTel VTC units, POTS videoconferencing systems.

**Transmission:**

Dialable ISDN-PRI over statewide network. Point-to-point and multi-point conferences via dial-up service and state owned videoconference bridge. ISDN-BRI used in Des Moines local area.



KU Center for Telemedicine and Telehealth (KUCTT)  
3901 Rainbow Blvd.  
Kansas City, KS 66160  
[www.kumc.edu](http://www.kumc.edu)  
[www2.kumc.edu/telemedicine/](http://www2.kumc.edu/telemedicine/)

Ryan Spaulding, PhD  
Ph: 913-588-2226  
Fax: 913-588-2227  
Email: [rspaulding@kumc.edu](mailto:rspaulding@kumc.edu)

***Network Partners:***

Cedar Vale Hospital, Hays Medical Center, Northeast Kansas Center for Health & Wellness, Parsons State Hospital, Windsor Place Nursing Home.

***Project Purpose:***

The purpose of the project extension is to analyze project data and summarize findings from the original 1999 grant, Expansion of the Kansas Telehealth Network. The University of Kansas Medical Center (KUMC) and the five partner sites in rural Kansas worked to expand access to clinical specialties and sub-specialties through telemedicine connections. Various data were obtained, including patient and providers perceptions and cost.

***Outcomes Expected:***

Outcomes of the project as originally proposed include improved access to healthcare providers for individuals across the lifespan for partner communities and the expansion into new communities; reduced isolation of practitioners; and, stabilized and strengthened local healthcare delivery systems for the local retention of rural patients.

***Service Area:***

The service area is comprised of five counties in Northeast, Northwest, South Central, and Southeast Kansas. All five of the counties are Health Professional Shortage Areas (HPSAs) or partial HPSAs, all five are mental health HPSAs, and three are dental HPSAs.

***Services Provided:***

The Kansas Telehealth Network has been operational since 1991 for clinical and educational videoconferencing. This grant project helped expand the range of sites and services offered in Kansas. Major services provided by KUCTT through the grant project were: Mental Health including, Adult Psychiatry, Child Psychiatry, Psychology, and other Counseling Services; Cardiology; Diet and Nutrition, including Diabetes Care and Management; Oncology; Rehabilitation; Physical Therapy; Rheumatology; and Speech Language Pathology. In addition to these services, the KUCTT continues to provide a wide range of pediatric urgent and behavioral care services through its TeleKidcare™ program. It also offers Wound Care, Weight Management, and a variety of ad hoc specialty consults. Patient education and continuing education services are provided as well.

***Equipment:***

All sites are equipped with PolyCom F/X Viewstations and ATI TelePhonic Stethoscopes.

***Transmission:***

Consults are conducted at 384 kbps or higher over dedicated ISDN PRI lines and through H.323 Internet Protocol (IP) networks.

KU Center for Telemedicine and Telehealth (KUCTT)  
3901 Rainbow Blvd., Mailstop 1048  
Kansas City, KS 66160  
[www.kumc.edu](http://www.kumc.edu)  
[www2.kumc.edu/telemedicine/](http://www2.kumc.edu/telemedicine/)

Gary Doolittle, MD  
Norbert Belz, RHIA  
Ph: 913-588-2226  
Fax: 913-588-2227  
Email: [nbelz@kumc.edu](mailto:nbelz@kumc.edu)

***Network Partners:***

Cedar Vale Hospital, Crawford County Mental Health Center, Hays Area Health Education Center, Hays Medical Center, Moline Rural Health Clinic, Northeast Kansas Center for Health & Wellness, Parsons State Hospital, Sedan City Hospital, Smoky Hills Family Practice Residency Program, Southeast AHEC, Southwest AHEC, Windsor Place Nursing Home.

***Project Purpose:***

The Project will expand the Kansas Telehealth Network, linking the University of Kansas Medical Center (KUMC) to 12 partner sites in rural Kansas to improve access to clinical specialties and sub-specialties through telemedicine connections. A comprehensive cost-benefit evaluation of clinical telemedicine across multiple partner sites and medical specialties will be conducted.

***Outcomes Expected:***

Standard cost-accounting methods will be utilized to compare the cost of providing a telemedicine consult to the cost of providing both traditional and outreach consults. Cost data will be paired with quality-of-life instrument data.

***Service Area:***

The service area is comprised of nine counties in Northeast, Northwest, South Central, and Southeast Kansas. Seven of the nine counties are Health Professional Shortage Areas (HPSAs) or partial HPSAs, all nine are mental health HPSAs, and seven are dental HPSAs.

***Services Provided:***

The Kansas Telehealth Network has been operational since 2000 for clinical and educational videoconferencing. Major services provided by KUCTT are: Mental Health including, Adult Psychiatry, Child Psychiatry, Psychology and other Counseling Services; Cardiology, Diet and Nutrition, including Diabetes Care and Management; Oncology; Rehabilitation; Physical Therapy and Speech Language Pathology; and a wide range of Pediatric Services. Wound care services have also started to see recent increase in volume. Patient education and continuing education services are provided as well.

***Equipment:***

All sites are equipped with PolyCom F/X Viewstations and ATI TelePhonic Stethoscopes.

***Transmission:***

Consults are conducted at 384 kbps or higher over dedicated ISDN PRI lines and through H.323 Internet Protocol (IP).

KENTUCKY, Mercer County  
PACS (Picture Archiving and Communication System)  
The James B. Haggin Memorial Hospital

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CMP FY 05

The James B. Haggin Memorial Hospital  
464 Linden Avenue  
Harrodsburg, KY 40330

Earl J. Motzer, PhD  
Ph: 859-733-4801  
Fax: 859-734-5563  
Contact Person: [emotzer@aol.com](mailto:emotzer@aol.com)

**Network Partners:**

Dairyland Healthcare Solutions for demographic interchange.

**Project Purpose:**

To improve quality of service to our patients. To reduce necessary storage area for film and expedite location of previous studies.

**Outcomes Expected:**

Improved turn around times in diagnosis of Imaging studies, Improvements will be measured in time from start of procedure to physician diagnosis.

**Service Area:**

Mercer County.

**Services Provided:**

X-Ray, Mammography, Fluoroscopy, CT Scan, MRI, Ultrasound, Bone Density Studies.

**Equipment:**

GE and Shimadzu X-Ray equipment (static and portable), Siemens CT and MRI equipment, GE Mammography, Philips Ultrasound, Agfa Film Printers, QCT 3D Plus Bone Density Analyzer, Agfa CR Readers, PACS software/servers will be purchased from Agfa.

**Transmission:**

DSL with future upgrade to Fractional T-1

Marcum & Wallace Memorial Hospital  
60 Mercy Court  
Irvine, KY 40336

Sharon Whitaker  
Ph: 606-726-2106  
Fax: 606-723-2951

Contact Person: [slwhitaker@Health-Partners.org](mailto:slwhitaker@Health-Partners.org)

**Network Partners:**

Lourdes Hospital  
1530 Lone Oak Road  
Paducah, KY 42003

**Project Purpose:**

To continue to provide local access to radiology and echocardiology services to our rural community by utilizing telemedicine/teleradiology. All physicians who provide healthcare services to our hospital through private practice, specialty clinics, and emergency services will be linked to the project, which will expedite diagnosis and treatment.

**Outcomes Expected:**

Annual physician and patient satisfaction surveys—evaluating improvement of quality of radiology services. Quality review of turnaround time for radiology reports—decrease turnaround times. Radiologist peer review for quality interpretative services.

**Service Area:**

The hospital serves rural areas of Appalachia and eastern Kentucky, which incorporates six rural counties with a cumulative population of over 62,000 serving a total of seven MUA and six HPSA status communities. (Five of these counties are dependent on our hospital to provide their healthcare needs.)

**Services Provided:**

In 1959 Marcum & Wallace Memorial Hospital began operations as a healthcare facility. In 2000 the hospital received Critical Access Designation. The hospital provides radiology and echocardiography services to rural Appalachia and eastern Kentucky.

**Equipment:**

Software upgrade for Sonos 5500 echocardiography unit, Easylink license for attachment of additional imaging modalities such as an MRI, Web Browser for Internet access, three PACS viewing stations, and a radiologist reading station.

**Transmission:**

Full T-1 lines between facilities (Marcum & Wallace Memorial Hospital and Lourdes Hospital). Internet access for physician utilization to view procedures and reports.

New Horizons Health Systems, Inc.  
330 Roland Avenue  
Owenton, KY 40359

Bernard T. Poe, RPh  
Ph: 502-484-3663  
Fax: 502-484-2702

Contact Person: [berniepoe@hotmail.com](mailto:berniepoe@hotmail.com)

**Network Partners:**

N/A.

**Project Purpose:**

New Horizons Health Systems, Inc proposes to develop and implement an infrastructure of immediate medical technological information to assist in the delivery of emergency and primary healthcare services. The implementation of an electronic information system that is accessible by all patient providers will safeguard individual patient characteristics to ensure the highest quality of care for each patient.

**Outcomes Expected:**

The development and implementation of an electronic information system will allow physicians, nurses pharmacists, and other healthcare professionals access to a patient's electronic health record (HER) and will allow these professional caregivers to exchange and analyze information easily, throughout the hospital and rural health clinics. Monthly surveys will substantiate the effectiveness of the electronic information system.

**Service Area:**

Six counties in Northern KY: Owen—MUA/HPSA, Gallatin—HPSA, Carroll—MUA/HPSA, Grant, Henry—Low Income HPSA, and Trimble—MUA. All areas are medically underserved in the mental health area of service.

**Services Provided:**

Since 2001 New Horizons Health Systems, Inc. has provided primary and emergency care to the citizens of Owen County and the surrounding areas. In addition, New Horizons Health System, Inc. offers acute medical surgical inpatient, outpatient, emergency and long term care, health education, health screening, wellness, rehabilitation, and appropriate research.

**Equipment:**

Server: IBM RS6000; Model: 7044; Type: 44P; Running IBM-AIX (equivalent to UNIX).

**Transmission:**

Current information systems are run on a UNIX based server. It is run with PACS utilizing HL7. HL7 is the highest level of the International Standards Organizations communications model for an Open Systems Interconnection. It also uses Logical Observation Identifiers Names and Codes.

Kentucky TeleCare  
K128 KY Clinic  
740 S. Limestone  
Lexington, KY 40536-0284  
[www.mc.uky.edu/kytelecare](http://www.mc.uky.edu/kytelecare)

James Norton, PhD/Rob Sprang, MBA  
Rob Sprang, MBA  
Ph: 859-257-6404  
Fax: 859-257-2881  
Contact Person: [rsprang@email.uky.edu](mailto:rsprang@email.uky.edu)

**Network Partners:**

St. Claire Regional Medical Center is the rural hub for six public schools and four primary care clinics. Lewis County Primary Care Center is the hub for five public school clinics, Fleming County Hospital, and Tollesboro Family Health Clinic. The two hubs connect to the University of Kentucky/Kentucky TeleCare.

**Project Purpose:**

Utilize telehealth technology to bring needed healthcare resources into public school clinics by connecting the University of Kentucky, St. Claire Regional Medical Center, Fleming County Hospital, Lewis County Primary Care and 13 public school clinics to provide education to combat our high rates of cardiovascular disease, lung disease, obesity, cancer, and smoking. Telehealth will bring clinical and educational support to children to improve early diagnosis and treatment and help students make better choices and improve chronic disease management.

**Outcomes Expected:**

Combat chronic problems of juvenile diabetes, obesity, hypertension, smoking, mental/behavioral health and other risk factors which produce negative health outcomes by improving access to preventative health information and chronic disease support, as well as improving access to primary care and specialty clinicians. Satisfaction measurement with Likert surveys and outcome data collected with OAT GPRA Performance Measures using quasi-experimental studies.

**Service Area:**

The participating network in this study includes 7 counties, 2,243.8 square miles with a population of 101,256 (not including Fayette County 284.5 square miles, population of 260,512). Except UKMC, all sites are rural and include six HPSAs, seven MUAs, thirteen Mental Health HPSAs, six Dental HPSAs, four FQHCs, and two licensed Rural Health Clinics within public schools.

**Services Provided:**

Interactive videoconference technology provides dermatology, pediatric cardiology, and child psych specialty consults. Lewis County utilizes electronic medical records. Both hubs deliver supporting education and clinical activity for children with chronic diseases such as diabetes, asthma, hypertension and other health risks such as obesity, smoking, as well as other health care services.

**Equipment:**

The network utilizes Polycom video systems with Accord video bridges. A Radvision bridge provides rural connectivity within the Lewis county sub-network.

**Transmission:**

The network operates at 768K through dedicated T-1s and includes both H.323 and H.320 connectivity. Direct, point-to-point services are provided in the network.

Lake Charles Memorial Hospital  
1701 Oak Park Blvd.  
Lake Charles, LA 70601  
[www.lcmh.com/telemedicine.htm](http://www.lcmh.com/telemedicine.htm)

Mary Morris, MA, Telemedicine Director  
Ph: 337-494-2861  
Fax: 337-494-6742  
Email : [mmorris@lcmh.com](mailto:mmorris@lcmh.com)

**Network Partners:**

Lake Charles Memorial Hospital, Lake Charles, LA (11 spoke sites)  
Our Lady of Lourdes Regional Medical Center, Lafayette, LA (5 spoke sites)  
Our Lady of the Lake Regional Medical Center, Baton Rouge, LA (2 spoke sites)  
Slidell Memorial Hospital, Slidell, LA (1 spoke site)  
North Mississippi Health Services, Tupelo, MS (3 spoke sites)

**Project Purpose:**

Develop a telemedicine network to improve quality of and access to healthcare. Provide access to quality health information, and distance-learning opportunities to hub and spoke sites by the means of videoconferencing technology.

**Outcomes Expected:**

- Provide home health care, including wound care, with real time assessments and the use of store and forward technologies.
- Provide telemedicine clinics in the rural school setting and in the correctional setting.
- Various specialty telemedicine clinics (Cardiology, Psychiatry, Ocular Plastics, Family Practice).
- Distance learning opportunities will be provided to health care providers, lowering travel-associated costs.
- Provide community health information to the public. (CHTC Evaluation Forms for all data collection).

**Service Area:**

11 parishes in southern Louisiana, 20 HPSAs/MUAs.  
4 Counties in northern Mississippi, 8 HPSAs/MUAs

**Services Provided:**

Network initiated in 1999, with Lake Charles Memorial Hospital (Telemedicine project started 1994), as the lead agency. Providing diabetes education and management, ophthalmology, psychiatry, ocular plastics, home health, family practice, continuing and community education.

**Equipment:**

V-Tel TC2000 videoconferencing unit, Polycom and Tandberg set top units, Tandberg Interns, Tandberg Educators, Ezenia MCU, American TeleCare home health equipment, ophthalmoscopes, stethoscopes, ECG's, general exam cameras, document cameras, ENT scopes.

**Transmission:**

POTS, T1, ISDN, IP.

**Expansion of Physician Internet Portal, Woman's POL  
Woman's Hospital**

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Woman's Hospital  
9050 Airline Highway  
Baton Rouge, LA 70815  
[www.womans.org](http://www.womans.org)

Jamie L. Haeuser, MHA  
Ph: 225-924-8101  
Fax: 225-924-8777  
Email : [jamie.haeuser@womans.org](mailto:jamie.haeuser@womans.org)

**Network Partners:**

None

**Project Purpose:**

The expansion of Woman's Hospital's Physician Internet Portal expands physician access to time-critical patient information from any Internet-connected computer, provides a secure physician-to-physician messaging environment, allows physicians to enter orders online, and allows physicians to view images from the hospital's PACS systems. The expansion will particularly enhance patient care between OB/GYN physicians and specialties including maternal/fetal medicine and neonatology.

**Outcomes Expected:**

The outcomes include expansion of the number of active users of the system; linking patient information to physician messaging, and increasing physician efficiency, measured by the number of physician users of the messaging system; reducing medical errors by providing for online physician order entry through single-system physician access, measured by the number of physician users; and enhancing physician information available for diagnosis through direct access to imaging studies, measured through the number of physicians accessing the AGFA PACs system.

**Service Area:**

The hospital serves an eight-parish (county) area, including East Baton Rouge, Livingston and Ascension parishes (primary) and West Baton Rouge, Pointe Coupee, East Feliciana and West Feliciana parishes (secondary). The hospital provides maternal/fetal medicine services in Monroe, Lake Charles and Hammond.

**Services Provided:**

Specialty services for women and infants, including obstetrics, gynecology, general surgery, neonatology, oncology, outpatient diagnostic services, and home health.

**Equipment:**

For this project, Woman's Hospital uses Two Dell 2524 1-gigabyte dual-processor servers (one live and one as the test and backup server), with AGFA software residing on one Dell 2600 server and one Dell 2650 server.

**Transmission:**

Two Internet gateways: one from Cox Communications, 10MB half-duplex, and the other from NTG Communications, a 100MB full-duplex link between Woman's and NTG. Of that connection, Woman's Hospital uses 10MB full-duplex burstable for Internet services.



Regional Medical Center at Lubec  
43 S. Lubec Rd.  
Lubec, ME 04652  
[www.rmcl.org/](http://www.rmcl.org/)

Ron Emerson, RN, BSN  
Ph: 207-287-4060  
Fax: 207-287-3020  
Email: [remerson@rmcl.org](mailto:remerson@rmcl.org)

**Network Partners:**

Nursing homes, physicians' offices, pain management specialist, wound care specialist, allergist, dermatologist, primary care providers, occupational specialist, immunology, hospitals, State bureau of health, and mental health counseling.

**Project Purpose:**

To develop an open architecture telemedicine network that increases accessibility to services in six nursing homes in rural Maine. This project will increase connectivity between nursing homes and their primary care providers and bring specialty services previously not available to this population. It will also increase communication between family members and patients by use of POTS-based videophones.

**Outcomes Expected:**

This project will work to develop a telemedicine system that develops the following outcomes: approximate the care received through in-person visits; result in a substantially greater number of rural patients getting appropriate diagnosis and treatment; contribute to successful treatment in a timely and cost effective manner; and provide more effective teamwork between primary care providers, specialist and patients. Nursing homes GPRC documentation and evaluation forms from patients/providers will be collected.

**Service Area:**

Nursing homes and providers are geographically spread from the Southern town of Biddeford, Maine, to the Northern-most town in Maine, Frenchville. Under this project, the following are MUAs and HPSAs: Washington: 6 PC HPSAs, 5 DCPSAs, 3 MHPSAs, 9 MUAs; Aroostook: 10 PC HPSAs, 7DCPSAs, 4 MHPSAs, 6 MUAs; Androscoggin: 1 PC HPSA, 2 DCPSAs, 1 MHPSA, 3 MUAs.

**Services Provided:**

Planned services include primary care, wound care, pain management, psychiatry, occupational health, pulmonology, asthma/allergy and immunology.

**Equipment:**

PolyCom (H.323) and MP Viewstations with AMD 2500 hand held cameras and AMD Care Companion Videophones.

**Transmission:**

ISDN at 128K to 384K over leased lines for video. POTS lines for videophones.

Massachusetts College of Pharmacy & Health Sciences  
179 Longwood Avenue  
Boston, MA 02115  
[www.mcphs.edu](http://www.mcphs.edu)

George Humphrey, PhD  
Ph: 617-732-2909  
Fax: 617-732-2193  
Email: [george.humphrey@bos.mcphs.edu](mailto:george.humphrey@bos.mcphs.edu)

**Network Partners:** N/A

**Project Purpose:**

The purpose of the Worcester Campus Distance Learning Initiative is to strengthen the ability of Massachusetts College of Pharmacy and Health Sciences (MCPHS) to deliver its professional programs through distance education and enhanced instructional technology. The project will help address regional and national needs for additional pharmacy and nursing graduates by creating an enhanced, electronically mediated learning environment and instructional delivery system to support the expansion of the College's Doctor of Pharmacy program and the introduction of a B.S. in Nursing Degree.

**Outcomes Expected:**

The project's principle outcomes will be 1) to link the three campuses via two-way interactive video; 2) to upgrade internet connectivity to high performance network capability via the Internet; 3) to enhance instructional technologies through the expansion of "smart" classrooms and computer laboratories; and 4) to train faculty and students in the use of electronic instructional delivery systems.

**Service Area:**

All counties in Massachusetts and New Hampshire.

**Services Provided:**

MCPHS has been providing distance education originating from its Worcester, MA and Manchester, NH campuses since May 2001. The College offers the following degrees at the two campuses: Doctor of Pharmacy, Masters in Physician Assistant Studies and Bachelor of Science in Nursing.

**Equipment:**

(8) Cisco Catalyst 3560 Switch; (2) Juniper Netscreen 50 Firewall; (100) Dell Optiplex GX620 Computers; (14) Cisco Wireless Access Points; (4) NEC Plasma Displays; (4) Media Director Lecterns; (8) Color Cameras with PAN; (4) NEC Projection Systems; (4) analog recording systems; (2) Tandberg 6000; (3) Toshiba projection systems; (1) Creston video package; (4) Linux kiosks systems; (4) Codec 6000 MXP Base unit; (4) Creston dual-power control mainframe.

**Transmission:**

TCP/IP on Private network with 8 ISDN lines as backup, Internet VPN Tunnel as backup.

UMass Memorial Medical Center  
Radiology Department  
55 Lake Avenue North  
Worcester, MA 01605  
[www.umassmemorial.org](http://www.umassmemorial.org)

Janet Greene  
Ph: 508-334-7817  
Fax: 508-856-4669  
e-mail: [greenej@ummhc.org](mailto:greenej@ummhc.org)

**Network Partners:**

UMass Memorial Medical Center—academic medical center in Worcester (Worcester County); two community hospitals: Clinton Hospital in Clinton (Worcester County), and Marlborough Hospital in Marlborough (Middlesex County).

**Project Purpose:**

Support initial phases of a digital radiology picture archive and storage system (PACS) at UMass Memorial Medical Center and between area community hospitals—Clinton Hospital, and Marlborough Hospital and numerous satellite radiology locations. Once the system is fully realized, the hospital will provide teleradiology access to expert consultation in sub-specialty radiology to support patient care in regional community hospitals, health centers, and physician offices.

**Outcomes Expected:**

Improved patient accessibility to sub-specialty consultations, improved access to results and images, reductions in operating costs, improved turn-around times, improved staff and radiologist efficiency, improved physician and patient satisfaction.

**Service Area:**

Primarily Worcester County in Central Massachusetts, which includes low-income primary care, mental health and dental HPSAs, multiple city census tracts MUAs and whole town MUA (26 total). Also, portions of Middlesex County.

**Services Provided:**

Digital radiology services including MRI, CT, ultrasound, nuclear medicine, mammography, diagnostic radiology, fluoroscopy, and interventional radiology, and services to operating rooms, emergency departments; in 2007, consultations between community-based providers and hospitals and academic medical center physicians.

**Equipment:**

PACS system, speech recognition system.

**Transmission:**

TCP/IP Ethernet, OC 192 Sonet Ring.

Cyber Michigan  
3520 Green Court, Suite 300  
Ann Arbor, MI 48105-1566  
[altarum.org](http://altarum.org)  
[cybermichigan.org](http://cybermichigan.org)

Janice M. Whitehouse, MBA  
Ph: 734-302-4798  
Fax: 734-302-4996  
Email: [Jan.Whitehouse@cybermichigan.org](mailto:Jan.Whitehouse@cybermichigan.org)

**Network Partners:**

Michigan Department of Community Health (MDCH), Lansing, MI; Michigan Department of Information Technology (MDIT), Lansing, MI; Blue Cross Blue Shield of Michigan (BCBS), Detroit, MI.

**Project Purpose:**

Define the infrastructure elements for a Michigan Health Information Network (MHIN) by providing the conceptual and operational concepts critical to MHIN implementation in future efforts following this planning process. The goal is to define the overall framework for the MHIN and its stakeholders, set priorities, and create workable plans. These initial, process-oriented steps will create the necessary foundation for the realization of results and measurable outcomes.

**Outcomes Expected:**

Convene statewide kickoff stakeholder meeting and engage stakeholders in formulation of initial MHIN concepts; work with stakeholders to create, convene, and support workgroups to develop policy frameworks and implementation plans; perform a business case analysis to identify potential participant benefits, develop framework for understanding costs, and analyze potential returns on investment; and achieve stakeholder agreement on key areas of MHIN governance.

**Service Area:**

State of Michigan.

**Services Provided:**

During the planning phase, services provided will be associated with convening stakeholders and supporting workgroups throughout development of the conceptual and operational framework for future MHIN implementation. Specific services to be provided once MHIN is operational will be determined over the course of the planning process.

**Equipment:**

Not Applicable.

**Transmission:**

Not Applicable.

PACS System  
168 S. Howell Street  
Hillsdale, MI 49242  
[www.HCHC.com](http://www.HCHC.com)

Valerie Feters, CFO  
Ph: 517-437-5216  
Fax: 517-437-0246  
[vfeters@hchc.com](mailto:vfeters@hchc.com)

**Network Partners:**

None

**Project Purpose:**

Develop a PACS System to allow for adequate Radiology Services for Hillsdale County. It will allow radiology films to be read at a remote facility if our Radiologist is unavailable.

**Outcomes Expected:**

Allow transmission of films to physician's office, and keep residents at Hillsdale Community Health Center if Radiologist is not available. It will also allow for digital storage of films, thus reducing the film expense.

**Service Area:**

Hillsdale County, Michigan, population 46,527.

**Services Provided:**

Digital Radiology to be implemented by June, 2005

**Equipment:**

Picture Archiving and Communication System (PACS)

**Transmission:**

Hurley Medical Center  
One Hurley Plaza  
Flint, Michigan 48503  
[www.hurleymc.com](http://www.hurleymc.com)

Gary Townsend, Information Technology  
Ph: 810-257-9642  
Fax: 810-257-9003  
Email: [gtownse1@hurleymc.com](mailto:gtownse1@hurleymc.com)

***Network Partners:***

Hurley Medical Center and Hurley Health Services.

***Project Purpose:***

The purpose of the project is to select a clinical information system to replace our existing system. System requirements will be developed based on input from key stakeholders (physicians, nursing, pharmacy, health information management, and other ancillary areas). System selection will be based on evaluation of vendor responses to the system requirements, extensive reference calls and on-site system demonstrations (involving end users).

***Outcomes Expected:***

The system will provide: 1) clinical decision support that will give rules and/or alerts to clinicians, 2) improved CPOE to increase physician use, 3) comprehensive clinical documentation—electronic medical record, 4) pharmacy information system functionality, including electronic MAR and barcode based bedside administration, 5) easy remote access to the system.

***Service Area:***

Primary service area is Genesee County, Michigan.

***Services Provided:***

Hurley Medical Center is a 463-bed teaching hospital providing acute and tertiary care. Services provided include: Level 1 Trauma Center, Level III Neonatal Intensive Care Unit, Pediatric Intensive Care Unit, and Burn Unit. Specialty pediatric services also include the Regional Pediatric Rehabilitation Unit and Pediatric Emergency Department.

***Equipment:***

CISCO PIX 515 firewall, CISCO 7200 router, CISCO VPN 3000 concentrator.

***Transmission:***

A wide area network of T1s on a SONET, with redundant fiber, interconnects Hurley Medical Center and 16 off-site facilities. Remote users access the clinical systems with secure VPN sessions.

Michigan State University  
Health & Risk Communication Center  
409 Communication Arts & Sciences  
East Lansing, MI 48824-1212

Pamela Whitten, PhD  
Ph: 517-432-1329  
Fax: 517-355-1292  
Email: [pwhitten@msu.edu](mailto:pwhitten@msu.edu)

**Network Partners:**

Sparrow Hospice Services, Lansing, MI and Michigan State University, East Lansing, MI (provider).

**Project Purpose:**

The purpose of this project is to deploy telehospice services for Mid-Michigan hospice patients and their families, positively impacting six groups: couples where one person is a hospice patient and one is caregiver; patients living 25 miles plus from hospice facilities; patients suffering from lung disease; grieving families during the bereavement period after a hospice patient dies; on-call nurses working challenging schedules; providers applying telehospice technologies.

**Outcomes Expected:**

The expected results are improved patient satisfaction and reduced burdens on family members, nurses, and providers. To measure these outcomes, researchers will use the McGill Quality of Life survey, patient health questionnaire, burden scale, the Mueller/McCloskey Job Satisfaction Scale, staff work records and notes, willingness to accept technology.

**Service Area:**

Sparrow Hospice Services provides hospice care to people throughout Michigan, including Ingham, Eaton, Clinton, Gratiot, Montcalm Counties, Shiawassee, Ionia, and Jackson counties. Patients included in this study will come from these areas.

**Services Provided:**

Currently, Sparrow Hospice Services provides medical care for patients, social care for affected family members, and on-call staffing for emergencies. Future services through this project will include nurse visits and data collection through videophones.

**Equipment:**

22 POTS (Plain Old Telephone System) units: interactive video systems that combine with standard telephones to operate through analog phone lines, ensuring patient access and ease of use.

**Transmission:**

Transmission will be through standard phone lines based on H.324 standards. This allows for a low-cost, "plug-and-play" option easily used by all patients and staff.

Western Michigan University  
1903 West Michigan Ave.  
Kalamazoo, MI 49008  
[www.wmich.edu/hhs](http://www.wmich.edu/hhs)

James A. Leja, PhD  
Ph: 269-387-2645  
Fax: 269-387-3567  
[james.leja@wmich.edu](mailto:james.leja@wmich.edu)

**Network Partners:**

Borgess Health Alliance and members of the Southwest Michigan Telehealth Network, which includes rural hospitals, public health departments, and health clinics.

**Project Purpose:**

The purpose of the Western Michigan University Telehealth Project is to add the resources and expertise of a research university to the Southwest Michigan Telehealth Network, expand available services to rural residents and practitioners, and promote the development of a regional telehealth research agenda. This project is new with a primary focus in the area of allied health.

**Outcomes Expected:**

To provide specialized geriatric assessment to the rural population, develop CME/CEU telehealth opportunities to allied health professionals, and to promote regional research in telehealth.

**Service Area:**

Thirteen rural counties in Southwest Lower Michigan.

**Services Provided:**

Services include continuing education for allied health professionals, geriatric assessment to rural patients and healthcare providers, and the facilitation of a regional telehealth research agenda.

**Equipment:**

Tandberg Intern II, Tandberg 6000 Flat Panel Monitor, AMD 3100 Ausculette II Electronic Stethoscope, AMD 9940 Video Phone (2), AMD 2500 General Exam Camera NTSC, AMD ENT scope.

**Transmission:**

IP, VTC Bridge, Internet, T1



Fairview Health Services  
323 Stinson Blvd NE  
Minneapolis, MN 55413-2611  
[www.fairview.org](http://www.fairview.org)

William Showalter  
Tom Ormand  
Ph: 612-672-6900  
Fax: 612-672-5955  
E-mail: [wshowall1@fairview.org](mailto:wshowall1@fairview.org)

**Network Partners:**

Fairview Health Services including University of Minnesota Medical Center at Fairview–Riverside and University Campuses, and freestanding clinics (6); Fairview Southdale Hospital and freestanding clinics (4); and Fairview Ridges Hospital and freestanding clinics (5).

**Project Purpose:**

Acquire and install an ambulatory electronic medical record application in Fairview’s hospitals and clinics. Re-design and automate core care delivery processes and provide physicians with decision support tools at the point of care in the clinics setting. Provide electronic access to the ambulatory record to physicians at the time of ED and hospital care and from any Internet access point. Provide patient information across the continuum of care throughout Fairview’s regional care systems supporting same day, on demand appointments.

**Outcomes Expected:**

- 100% computerized physician order entry
- 100% results available on-line.
- Improved availability of information for clinical care decision making.
- Clinical quality measurement reporting to enable improvement efforts.
- 80% reduction in ambulatory dictation/transcription costs resulting from point-of-care documentation.
- HIPAA compliance

**Service Area:**

Hennepin and Ramsey Counties in Minnesota including eleven 11 HPSAs/MUAs and serving 2.7 million.

**Services Provided:**

The ambulatory electronic medical record system supports 15 primary care clinics delivering over 500,000 patient visits each year and 4 hospital campuses providing a complete range of clinical services from prevention of illness and injury to care for the most complex medical conditions.

**Equipment:**

The ambulatory electronic medical record system is a three-tier computer architecture using PCs running Windows 2000, HP Servers running Windows Server 2003 and Citrix, and IBM AIX Servers running Intersystems Cache DBMS, storing data on a Hitachi Storage Area Network. PCs are located at every Fairview site and networked via WAN/LAN technologies. Epic Systems Inc. software is used—multiple modules.

**Transmission:**

Secure Internet connections and private wide-area and local-area networks consisting of T1 and OS3 transmission services.

MINNESOTA, Hennepin County RTGP FY 94-96, RTGP FY 00-02, TNGP FY 03-05  
Fairview-University of Minnesota Telemedicine Network  
University of Minnesota

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University of Minnesota  
420 Delaware Street, Box 293 Mayo  
Minneapolis, MN 55455  
[www.fairview.org/telemedicine](http://www.fairview.org/telemedicine)

Stuart M. Speedie, PhD  
Zoi Hills  
Ph: (612) 624-4657  
Fax: (612) 626-0489  
Email: [speed002@umn.edu](mailto:speed002@umn.edu)

**Network Partners:**

Fairview Health Svcs, (Mpls.), UMN Physicians, (Mpls.), Prairie St. Johns (Moorhead), Human Development Center (Duluth), UMN Duluth Medical School (Duluth), Surgical Consultations (Edina), Sports and Ortho Specialists (Edina). Originating Sites: Wadena, Aitkin, Crosby, Red Wing, Hibbing, Cook, Moose Lake, Big Fork, Onamia, Ne-Ia-Shing Clinic, Mora, Littlefork, Cass Lake.

**Project Purpose:**

Meet the needs of rural Minnesotans for a greater range of specialty medicine consultations with an emphasis on mental health, geriatric issues; improve treatment of chronic conditions including heart disease, diabetes, and chronic pain; and health professional education. Facilitate the continued growth of FUMTN into an open network of multiple telemedicine providers and users to reach a larger percent of the state's rural underserved populations in multiple settings. Patients will be served by telemedicine not just in hospitals, but in rural clinics, homes, and long term care facilities.

**Outcomes Expected:**

Increase the number of network members where patients can seek telemedicine consultations and assist those sites to extend telemedicine into the community through home care agencies, long-term care facilities and rural health clinics. It is anticipated that the outcomes will be larger numbers of available services, providers and network sites; greater number of consults; larger number of educational programs and more home care visits.

**Service Area:**

Portions of 14 Minnesota counties. Covers 13 HPSAs and pHPSAs; 15 full and partial mental health HPSAs; 12 MUAs and pMUAs; one partial MUP. Counties served: Aitkin, Carlton, Cass, Crow Wing, Goodhue, Itasca, Mille Lacs, Otter Tail, Pine, St. Louis, Todd, Kanabec, Koochiching, and Wadena.

**Services Provided:**

Dermatology, orthopedics, neurology, gastroenterology, asthma/allergy, adult psychiatry, child psychiatry, wound care, NICU visits, chronic illnesses such as diabetes, pain management, cardiology and pulmonology.

**Equipment:**

Currently using 18 Polycom video conferencing units (5 FXs, 2 VSX 7000s, 1 VSX 3000 and 10 Viewstations), 2 Tandberg 880 videoconferencing units, 6 handheld exam cameras, 10 digital cameras, 4 digital stethoscopes, 1 otoscope, 5 document cameras, and 6 video phones for home care.

**Transmission:**

2 network members utilize ISDN connections. The remainder network members are using secure IP connections. Home telehealth will be either h.324 over POTS lines or h.323 for IP communications.

Missouri Telehealth Network  
2401 Lemone Industrial Blvd, DC 345.00  
Columbia, MO 65212  
[www.telehealth.muhealth.org](http://www.telehealth.muhealth.org)

Weldon Webb, MA  
Ph: 573-884-7958  
Fax: 573-882-5666  
Email: [webb@health.missouri.edu](mailto:webb@health.missouri.edu)

**Network Partners:**

University of Missouri Health Care (21 sites)  
MU Behavioral Health Services (7 sites)  
Capital Region Medical Center (3 Sites)

**Project Purpose:**

To enhance access to care in underserved areas of Missouri through interactive videoconferencing technologies, electronic medical instruments and a teleradiology system; to provide educational programs for healthcare providers; to further homeland security efforts related to disaster preparedness; to be available in the event of a disaster; and to provide research opportunities for clinicians wanting to study telehealth.

**Outcomes Expected:**

Basic patient demographic and billing information is collected. One patient satisfaction question is asked on a Likert type scale and information regarding the distance between the telehealth site and MU Health Care is recorded.

**Service Area:**

The service area covered by the network includes 27 Missouri counties. Three counties are considered urban. Thirteen counties are designated as geographic HPSAs for either primary care, mental health or dental. The rural counties account for approximately 11% of Missouri's population.

**Services Provided:**

The network started providing educational and clinical services in 1995. In addition to CME programming, core clinical services include mental health, dermatology, cardiology, child health, neurology, radiology, surgical follow-up, pre-operative workups, burn care, autism, and children with special health care needs.

**Equipment:**

Polycom videoconferencing systems, Polycom multipoint control unit, JedMed video scopes, Elmo and Cannon video cameras for dermatology, Kodak teleradiology scanners, Elmo document cameras, Cardionics Simulscope system.

**Transmission:**

T1 Frame Relay to all sites.

NMHA  
1101 26<sup>th</sup> St. South  
Great Falls, MT 59405

Jack W. King  
Ph: 406-455-4285  
Fax: 406-455-4141  
Email: [kingjacw@benefis.org](mailto:kingjacw@benefis.org)

**Network Partners:**

The Northcentral Montana Healthcare Alliance (NMHA) and Realizing Education And Community Health Telehealth Network (REACH) consists of Benefis Healthcare (hub) and sites in Havre, White Sulphur Springs, Chester, Chinook, Chouteau, Ft. Benton, Big Sandy, Conrad, Cut Bank, Shelby, and Box Elder. Benefis Healthcare Foundation is an additional partner.

**Project Purpose:**

To expand and enhance the connectivity and clinical capabilities of the existing REACH network. To improve access and reduce costs overall of providing medical specialty and mental health services to rural residents. To positively impact the financial, psychological, emotional, and spiritual well-being of rural communities by improving retention of healthcare services and revenues.

**Outcomes Expected:**

Attain financial, strategic, and operational synergies (measure)—financial data, retention and turnover rates, budget comparisons (tool). Expand clinical and education capabilities of Network (measure)—participant evaluations (tool). Reduce costs of providing specialty and mental health services (measure) – archival data comparison (tool). Positively impact well-being of communities (measure)—comparative data for financial, participant satisfaction surveys for psychological, emotional, and spiritual (tool).

**Service Area:**

Fourteen sites in ten counties, three rural and eleven frontier, including six MUAs and serving eight full or partial HPSAs, 12 Mental Health and eight Dental Health HPSAs. Population in ten counties of 133,646, less than 6 people per square mile.

**Services Provided:**

The REACH Network currently provides services including CME for credit, professional development (non-credit), mental health consults, pre-surgery education, genetic counseling, educational programming, and the clinical service of teleradiology (limited). Intend to expand teleradiology and include telepharmacy and other clinical services such as oncology, cardiology, dermatology, and pediatrics.

**Equipment:**

All fourteen REACH sites use Polycom equipment, either FX view stations or VSX-series units. Most sites use Sony video monitors, with a few sites using Sharp Aquos monitors.

**Transmission:**

The REACH network uses a private (full, dedicated) T-1 based network to provide IP (Internet protocol) connectivity to the 14 REACH sites. The network uses a Polycom Accord MGC100 bridge, which allows video conferencing at a speed of 384KB/s.

Effect of an Integrated CIS on Inpatient and Post-Discharge Medication  
Administration Errors and Chronic Disease Management  
Billings Clinic Foundation

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Billings Clinic Center for Healthcare Research  
PO Box 37000  
Billings, MT 59107  
[www.billingsclinic.com](http://www.billingsclinic.com)

Patricia J. Coon, MD  
Connie L. Koch, CMPE  
Ph: 406-238-2489  
Fax: 406-238-5193  
Email: [ckoch@billingsclinic.org](mailto:ckoch@billingsclinic.org)

**Network Partners:**

Not applicable.

**Project Purpose:**

Consists of two separate research studies. 1) Medication Errors Study, to determine: a.) systems irregularities that lead to increased medication errors during hospitalization and upon discharge home; b.) the effect of computerized inpatient pharmacy system on these errors; c.) use of inpatient nurse case managers to reconcile medications during acute hospital stay; and 2) Quality Measures Pilot Study: to determine: a.) effect of computerized Disease-specific Registries on providers' adherence to best practice guidelines in managing congestive heart failure, acute myocardial infarction, and bacterial pneumonia; b.) effect these Registries have on the health care system's ability to monitor quality and improve operational efficiencies.

**Outcomes Expected:**

1.) Medication Errors: a.) demonstrate a significant number of medication errors and discrepancies during care transition, i.e. hospital discharge; b.) identify inconsistencies in medications patients take at home compared to discharge medications; c.) implement CIS to reduce errors during discharge process; d.) improve patient compliance; e.) improve provider knowledge of patient's altered regimen; f.) RN case manager-led reconciliation program will reduce provider/RN related errors at discharge. *Measurement tools:* USP Med MARx program, medical record reviews and patient, family/caregiver interviews. 2.) Quality Measures: demonstrate that CIS will abstract and integrate patient clinical information to generate robust chronic disease registries. *Measurement tools:* Review of medical records and electronic Disease Registries.

**Service Area:**

Serves 31 central and eastern Montana counties and 9 northern Wyoming counties. Of the 40 counties: 17 are HPSA designated for Dental; 38 for Mental Health and 22 for Primary Care.

**Services Provided:**

DBC includes Billings Clinic, Deaconess Hospital, Psychiatric Center, Welch Heart Center, Cancer Center, Wellness Center, Orthopedics & Sports Medicine and the DBC Foundation. The DBC Heights, DBC West, The Wellness Center and Aspen Meadows Retirement Community and Nursing Home. DBC has ten regional clinics and affiliate relationships with eight regional hospitals.

**Equipment:**

Utilizes Eastern Montana Telemedicine Network's videoconferencing using V-Tel TC 1000 and Polycom View Station. Cerner Integrated Clinical Information System (CIS).

**Transmission:**

Dedicated T1 running at 384KB/s for videoconferencing, PRI ISDN for off-network videoconferencing, DSL for desktop videoconferencing.

Eastern Montana Telemedicine Network  
2800 Tenth Ave North  
Billings, MT 59101  
[www.emtn.org](http://www.emtn.org)

Thelma McClosky Armstrong  
Ph: 406 657 4057  
Fax: 406 657 4875  
Email: [tmcclosky@emtn.org](mailto:tmcclosky@emtn.org)

**Network Partners:**

The Eastern Montana Telemedicine Network (EMTN) is a consortium of 22 medical and mental health facilities located in eastern and central Montana and northern Wyoming in the communities of Livingston, Big Timber, Columbus, Forsyth, Colstrip, Miles City, Baker, Glendive, Sidney, Culbertson, Glasgow, Plentywood, Scooby, Malta, and Poplar MT and Cody and Lovell, WY.

**Project Purpose:**

To improve access to specialty medical and mental health services in rural and frontier communities of Montana and Wyoming. To decrease the overall cost of accessing specialty healthcare services by rural residents of Montana and Wyoming.

**Outcomes Expected:**

Increased numbers and variety of telemedicine services provided to partner sites. Significant out-of-pocket savings for patient receiving services via telehealth. Improved access to specialty care. Data will be collect using EMTN-developed database.

**Service Area:**

16 counties in eastern and central Montana and northern Wyoming serving 8 HPSAs/MUAs. Area served covers over 27,000 square miles and on an average has population density of 5 people per square mile.

**Services Provided:**

Operational since 1994, EMTN provides the following services: Mental Health, Cardiology, CV surgery follow up, Shriners orthopedics, ENT, Diabetes, Nephrology Case Management, Emergency Medicine, and consultation upon request. Teleoncology is planned to be implemented.

**Equipment:**

12 VTEL and 10 PolyCom videoconferencing units, one VTEL MCU videoconferencing Bridge and Adtran CSU.

**Transmission:**

Dedicated T1s running video at 384 KB/s.

Revolutionizing Diabetes Care at Billings Clinic: A Model for Chronic Disease Care  
Deaconess Billings Clinic Foundation

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Billings Clinic  
2800 Tenth Ave North  
Billings, MT 59101  
[www.billingsclinic.org](http://www.billingsclinic.org)

Fred E. Gunville, MD  
Ph: 406-238-2307  
Fax: 406-238-2299  
Email: [fgunville@billingsclinic.org](mailto:fgunville@billingsclinic.org)

**Network Partners:**

Billings Clinic, Billings Clinic Heights, Billings Clinic West in Billings, Montana; Cody Clinic in Cody, Wyoming; Columbus Clinic in Columbus, Montana; Forsyth Clinic in Forsyth, Montana; Miles City Clinic in Miles City, Montana; Red Lodge Clinic in Red Lodge, Montana.

**Project Purpose:**

Improve the care for diabetes patients of all ages in our service area. We will focus to two specific projects: (1) consolidating the pediatric diabetes services into one identified area; and (2) improving the quality of diabetes care by modifying office practices and continuing the development of a diabetes registry to provide quantitative data for diabetic patients of all ages.

**Outcomes Expected:**

Improve the percentage of DM patients who receive HbA1c, cholesterol, nephropathy, foot and eye exams; improve the percentage of DM patients who are as well controlled for HbA1c, blood pressure, and cholesterol; improve the percentage of DM patients using aspirin for anticoagulation; improve the percentage of DM patient receiving influenza and pneumonia vaccinations when indicated.

**Service Area:**

Central and Eastern Montana; northern Wyoming.

**Services Provided:**

Clinical data repository/electronic medical record, MicroMedics, MedMARx.

**Equipment:**

Mobile Intel Celeron 800 MHz processor, electronic Medical Administration Record (MAR).

**Transmission:**

100 Base T backbone, Citrix Terminal Servers, Ethernet 10 Base T.

St. Patrick Hospital & Health Sciences Center  
PO Box 4587  
500 W. Broadway  
Missoula, MT 59806  
[www.saintpatrick.org](http://www.saintpatrick.org)

Joel Lankford  
Ph: 406-329-5706  
Fax: 406-329-5639  
Email: [lankford@saintpatrick.org](mailto:lankford@saintpatrick.org)

**Network Partners:**

Not Applicable.

**Project Purpose:**

- (1) To implement a regional cardiac Electronic Patient Medical Record (EMR).
- (2) To provide digital patient test transference capability at all targeted rural sites (Echocardiograms, CT Scans, Echo, and Holter tests).
- (3) To conduct a Patient Tele-consultation Demonstration as “proof of concept”.
- (4) To thoroughly evaluate, report, and disseminate results of the MCTN project.

**Outcomes Expected:**

- Quality of Patient Care (mortality, Guideline Care)
- More Efficient Care (less time to access information by doctor or staff)
- Successful Patient Teleconsultation Demonstration
- Decreased Cost of Care
- Provider/End-User/Beneficiary Satisfaction will also be measured

**Service Area:**

Define 10 counties in Montana and 1 county in Idaho, serving 7 HPSAs/MUAs.

**Services Provided:**

The MCTN was established in June 2005 serving 11 counties with a networked ECG network. Future enhancement is distribution and enhancement of echocardiographic equipment and an echo repository and network integrated with the current ECG network.

**Equipment:**

HeartLab ECG data repository and network tool.  
40+ ECGs distributed throughout western Montana and eastern Idaho.  
Phillips EnConcert Echocardiology data repository and archiving system.  
General Electric Vivid Echocardiology equipment.

**Transmission:**

T1 Lines or multiples or fractions of T1 lines depending on development of transmission infrastructure.



St. Vincent Healthcare Foundation  
1106 North 30<sup>th</sup> Street  
Billings, MT 59101  
[www.svfoundation.org](http://www.svfoundation.org)

Doris T. Barta, MHA  
Ph: 406-237-3602  
Fax: 406-237-3619  
Email: [doris.barta@svh-mt.org](mailto:doris.barta@svh-mt.org)

**Network Partners:**

The Mansfield Health Education Center (MHEC) is a state-of-the-art, high-tech conference center available for educational, training, or telehealth telecommunications use statewide, nationally and internationally. MHEC provides telehealth activities such as grand rounds for pathology and radiology physicians.

**Project Purpose:**

To provide the cornerstone for health education and conferencing programs regionally, expanding to national and international health education programs; to provide a venue for healthcare forums addressing current local, national and international issues regarding the state of healthcare. MHEC deploys video telecommunications to extended community areas, providing access to high speed internet services, store and forward technology, satellite education and two way videoconferencing.

**Outcomes Expected:**

Outcomes include increased educational programs improving public information about health topics and increased educational opportunities. Health Library consumers have access to a library that is centrally located in the medical corridor. Increased space in the Library provides better services to consumers with a private area for family consultation, and access to HIPAA compliant computer terminals and training materials. Evaluation consists of Customer Service Surveys.

**Service Area:**

The Mansfield Center provides health education and training services to the whole state of Montana, but the primary service area served by St. Vincent Healthcare, a regional tertiary care center. That area consists of 28 counties in south-central Montana; and 2 counties in Wyoming. All or part of the 28 counties served by St. Vincent are designated as HPSAs/MUAs, Mental Health shortage areas and Dental Shortage Areas, with the exception of Fergus County (Lewiston).

**Services Provided:**

The Mansfield Center was completed in November of 2003. Telehealth services have been provided for grand rounds by the Pathologists and Radiologists. The Partners in Health Telemedicine Network uses the center for ongoing education and training for network sites and physicians as they develop telehealth services which include orthopedics, mental health, dermatology, radiology, pediatrics, Perinatology, congestive heart failure, administrative and education. PHTN has been in existence since 1998.

**Equipment:**

PolyCom Video Codecs from IP based Via Video to FX and Custom VS4000 room systems, VCONN Executive IP systems, Accord Polycom MGC 100 MCU that performs audio, ISDN, and IP video bridging and data collaboration services, Panasonic 3 CCD Cameras, and AMD General Exam cameras.

**Transmission:**

Standardized delivery at 12 channels, at 64 KB/s over leased T1 lines, microwave wireless, cellular and IP based transmission services.

Skaggs School of Pharmacy  
College of Health Professions & Biomedical Sciences  
The University of Montana  
Missoula, MT 59812

Donna Beall, PharmD  
Ph: 406-243-6710  
Fax: 406-243-6955  
Email: [donna.beall@umontana.edu](mailto:donna.beall@umontana.edu)

**Network Partners:**

Not Applicable.

**Project Purpose:**

The goals of the IPHARM project are to deliver health screening services to rural and frontier Montanans, serve as a model rural ambulatory care practice site for pharmacy students, and educate health care providers in Montana in geriatric wellness testing. The project offers bone density, blood lipids, blood sugar, thyroid, spirometry, and blood pressure testing. These tests were chosen because they can be performed outside of clinical labs, they meet the goals of the Federal “Healthy People 2010” program, and they address diseases and conditions that are often silent and can be moderated or treated.

**Outcomes Expected:**

IPHARM has traveled 27,647 miles and performed 5785 tests on 3731 Montanans with an average of 1.57 tests per patient. Of the tests provided, 36.5% were categorized as abnormal. The breakdown of tests performed and percent abnormal are: bone density 2971 (43%), lipids 1625 (40.74%), HbA1c 948 (14.5%), spirometry 305 (21.64%), thyroid 24 (4.17%). Student satisfaction survey (measure)—Likert survey. Since the beginning of the project, 86 pharmacy students have participated in an IPHARM event. Results of the students’ assessment/satisfaction survey reveal positive results.

**Service Area:**

The service area for IPHARM is all rural counties in the state of Montana. In 2005, we served 43 HPSAs/MUAs.

**Services Provided:**

Developed an outcomes tool to be used by patients after an event to ascertain what occurred after results were given to them at an IPHARM event. The following screening services are offered to rural/frontier Montanans: bone density, blood lipids, lung function, blood sugar control, blood pressure.

**Equipment:**

Disease screening uses an ultrasound heel bone densitometer, database, Cholestech LDX for lipids, GDx for HbA1C, and an EasyONE spirometer. Wireless Internet uses a MotoSAT DataStorm.

**Transmission:**

Not Applicable.

NEBRASKA, Buffalo County RTGP 94-96, 97-99, 00-02, CMP FY 04, 05  
Mid-Nebraska Telemedicine Network (MNTN)  
Good Samaritan Hospital Foundation

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Good Samaritan Hospital Foundation  
PO Box 1810  
Kearney, NE 68848-1810  
[www.gshs.org](http://www.gshs.org)

Wanda Kjar, RN, BS  
Ph: 308-865-7742  
Fax: 308-865-2986  
Email: [wandakjar@catholichealth.net](mailto:wandakjar@catholichealth.net)

**Network Partners:**

NE: Good Samaritan Hospital, Richard Young Hospital, Jennie M. Melham Memorial Medical Ctr., Callaway District Hospital, Tri-Valley Health Systems, Cozad Community Hospital, Gothenburg Memorial Hospital, Valley County Hospital, Dundy County Hospital, Rock County Hospital, Franklin County Hospital, Chase County Hospital, Brown County Hospital, Webster County Hospital, St. Anthony's Hospital, Kearney County Health Services. KS: Norton County Hospital, Phillips County Hospital, Jewell County Hospital, Smith County Memorial Hospital.

**Project Purpose:**

The Good Samaritan Hospital Mid-Nebraska Telemedicine Network (MNTN) provides improved access to health care services for rural underserved populations in Nebraska and Kansas. The network provides both clinical consults and educational offerings to 18 rural hospitals. In 2003, the MNTN received the "Integrated Rural Healthcare Award" by the Nebraska Rural Health Association.

**Outcomes Expected:**

Program data collection is built around the key concepts of clinical effectiveness, use of the system and cost-effectiveness. Nebraska Public Service Commission/Nebraska Hospital Telehealth Network Patient/Provider Satisfaction (measure) –surveys (tool), Quantify Patient Usage of Services Provided (measure) – OAT GPRA Performance Measure (tool).

**Service Area:**

The target population for this project includes 187,471 individuals residing in a 28-county area in Central, Northern and Southwest Nebraska and North-central Kansas. Of the 28 rural counties to be served through the Mid-Nebraska Telemedicine Network, 20 are either full or partial Medically Underserved Areas (MUAs). Twelve of the counties are either full or partial Health Professional Shortage Areas, with seven listed under HPSA Primary Care, nine listed under HPSA Mental Health and under HPSA Dental.

**Services Provided:**

The Mid-Nebraska Telemedicine Network became operational in 1995. Mental health, emergency mental health, deaf & genetics counseling, cardiology, teletrauma, infectious disease, geriatric assessment, neurology, oncology, orthopedics, occupational therapy, hospice, diabetic education, nutrition, speech pathology, wound ostomy care, teleradiology, domestic/child abuse interviewing, professional and community education.

**Equipment:**

Remote sites: 24 Polycom videoconferencing systems; 6 Starviews within the system, at the GSH sites, 15 Polycoms, Video Server Bridge, Accord Network Bridge, AMD Otoscopes, AMD Stethoscopes, 5 Wellathome units.

**Transmission:**

T1 lines to all MNTN network hospitals and ISDN capabilities. Internet access provided via other Nebraska networks—i.e., UNMC, CN-AHEC.

College of Nursing  
985330 Nebraska Medical Center  
Omaha, NE 68198-5330  
[www.unmc.edu](http://www.unmc.edu)

Catherine M. Todero, PhD, RN  
Ph: 402-559-4270  
Fax: 402-559-6379  
Email: [ctodero@unmc.edu](mailto:ctodero@unmc.edu)

**Network Partners:** N/A

**Project Purpose:**

Pilot test a model program that uses a distance education strategy for delivery of a traditional Baccalaureate nursing curriculum to increase enrollment and access to nursing education. Develop and implement the didactic portion of a traditional BSN nursing curriculum for distance delivery. Evaluate the model of distance education for learner and faculty satisfaction and learner outcome attainment, with a goal to provide nursing education to those unable to relocate for educational purposes and who need opportunities provided in or near their own communities.

**Outcomes Expected:**

- 1) 17 courses redesigned and presented in Blackboard.
- 2) 10 new students admitted and retained through graduation.
- 3) Learner/faculty satisfaction with the model – Focus groups & students complete the survey- “Student Evaluation of Courses Delivered using Technology”.
- 4) Course grades, clinical learning outcomes and NCLEX pass rates for distance students are similar to students in the classroom.

**Service Area:**

Students are currently located in the Lincoln, Nebraska area.

**Services Provided:**

We provide a distance learning option for a Bachelor of Science in Nursing degree. Students take classes from their homes and occasionally come to campus/health care agencies for lab/clinical activities.

**Equipment:**

Personal computers and the usual and customary clinical equipment for assessment and provision of nursing care.

**Transmission:**

Internet and Interactive satellite television.

Nevada Rural Hospital Partners Foundation  
4600 Kietzke Lane, Suite I-209  
Reno, NV 89502  
[www.nrhp.org](http://www.nrhp.org)

Robin Keith  
Ph: 775-827-4770  
Fax: 775-827-0939  
Email: [robin@nrhp.org](mailto:robin@nrhp.org)

**Network Partners:**

Compressus  
101 Constitution Avenue, NW, Suite 800  
Washington, DC 20001

**Project Purpose:**

The program enables rural and frontier hospitals to capture digital radiographic images, implement Picture Archive Computer Systems, integrate patient information with those diagnostic images, and transmit them over an existing, secure wide area network to a new shared, centralized image archive. While initially focused on radiology, the system will support any type of digital diagnostic image. The program enhances access by rural physicians to virtually instant diagnostic support across great geographic distance, and is a dynamic example of how small, autonomous hospitals can share technology to reduce cost, improve quality, and increase workforce productivity.

**Outcomes Expected:**

Key outcomes include: 1) Reduction in the cost of x-ray film by 30 percent as measured by actual “before and after” hospital film expenditures; 2) Increases in staff productivity as measured by “before and after” time and cost studies for film retrieval and film scanning; 3) Standards-based interoperability between existing and new equipment as measured by system testing and monitoring; and 4) Local and distant physician satisfaction as measured by written survey.

**Service Area:**

Phase One includes four rural hospitals serving 33,000 people, all in HPSAs. When fully implemented, the program will include 11 rural hospitals serving 310,000 rural residents in 14 counties covering about 91,000 square miles. Ten of the hospitals serve areas with HPSA, MUA, and/or partial or full dental and mental health HPSA designations.

**Services Provided:**

Digital image capture, transmission, archiving and retrieval. Formed in 1987, Nevada Rural Hospital Partners supports fifteen autonomous rural hospitals with a wide variety of services. Examples include advocacy, shared expertise, a revolving capital loan pool, various insurance products, group contracts, a teleradiology network, critical access designation support, and shared information technology.

**Equipment:**

The program will use Konica Express Computed Radiography units, and Compressus RadSight PACS gateways and central archive.

**Transmission:**

The program will use multi-application full T1 transmission.

University of Nevada School of Medicine  
Office of Medical Research/338  
1664 N. Virginia Street  
Reno, NV 89557-0161  
[www.unr.edu/med/](http://www.unr.edu/med/)

David M. Lupan, PhD  
Senior Associate Dean  
Ph: 775-784-4908  
Fax: 775-327-2008  
Email: [dmlupan@med.unr.edu](mailto:dmlupan@med.unr.edu)

**Network Partners**

Not Applicable.

**Project Purpose**

To develop of a premier Center for Biomedical Imaging on the School of Medicine campus at the University of Nevada, Reno (UNR). This Center will support biomedical research within the School and the community of scientists at the University who have a need for high-end confocal microscopy. Resources will be used for purchasing several scanning confocal microscopes, and for hiring professional personnel who will operate the instrument and be responsible for training of this technology to graduate students, post-doctoral fellows, and the School of Medicine's scientists.

**Outcomes Expected**

New multi-photon confocal microscopy instrumentation in a Center for Biomedical Imaging will directly benefit School scientists by providing access to technology that does not presently exist in the region. The Center will facilitate the development of collegiality and interdisciplinary interaction of scientists. A secondary benefit will be the nurturing of excitement for scientific exploration in the next generation of undergraduate and graduate students, and postdoctoral fellows who come to School of Medicine scientists for mentoring.

**Service Area**

The service area will be the campus of the University of Nevada, Reno, which is located in Washoe County of northern Nevada. This is the area of focused services. Extension of services beyond the UNR boundary will be promoted, but is predicted to be infrequent.

**Services provided**

The goal of this award is to improve access to the latest technology for biomedical imaging, i.e., visualization and recording of the dynamic interactions among and/or within cells, including molecular-cellular interactions. This technology does not exist at our institution.

**Equipment**

Three Scanning Confocal Microscopes including: two-Olympus FV-300 and one Olympus FV-1000 microscopes. One Spectra-Physics sapphire: titanium laser.

**Transmission**

Not Applicable.

Hackensack University Medical Center Foundation  
360 Essex Street Suite 301  
Hackensack, NJ 07601  
[www.humed.com](http://www.humed.com)

Sandra Rohrbacher  
Helen Cuning  
Ph: 201-996-3717  
Fax: 201-996-3468  
E-Mail: [hcunning@humed.com](mailto:hcunning@humed.com)

**Network Partners:**

Not Applicable.

**Project Purpose:**

Implement an electronic oncology patient management system to consolidate the patient's disease, treatment, and demographic/insurance information in one database to improve and streamline vital cancer care and research for the New Jersey community.

**Outcomes Expected:**

Capacity to monitor patient response to treatment through successful Protocol specific data capture; improved quality standards of care for oncology patients through embedded continuous monitoring and measurement of key patient care processes; improved capacity to monitor patients undergoing clinical trials through integration of disparate information.

**Service Area:**

Bergen County, NJ and the entire metropolitan New York Area.

**Services Provided:**

In 1998 the information technology infrastructure began by automating the pharmacy, and rolling out electronic medical records. The Soarian Implementation has begun with Patient Accounts, and there are plans to add ICU, Oncology, Emergency/Trauma, Pediatrics, Cardiology, and Radiology.

**Equipment:**

Wireless workstations, handheld devices including pocket sized PCs and Lifebooks.

**Transmission:**

Data are available through the interconnectivity of the data/voice/video network infrastructure, clinical and financial systems, the HUMC intranet, the physician extranet (ISP), and a patient portal. Data links between Soarian Oncology module and current systems will be built using HL7 interfaces.

Medical Technology Center for Infants and Children  
Saint Peter's University Hospital  
Department of Pediatrics  
254 Easton Avenue  
New Brunswick, NJ 08901  
[www.saintpetersuh.com](http://www.saintpetersuh.com)

Harel Rosen, MD  
Ph: 732-745-8523  
Fax: 732-249-6306  
E-mail: [rosenha1701@yahoo.com](mailto:rosenha1701@yahoo.com)

**Network Partners:**

Not Applicable.

**Project Purpose:**

The Medical Technology Center for Infants and Children is a multi-disciplinary entity, which will conduct basic and clinical research in pediatric biomedical engineering and technology. By partnering with Drexel University, and NJIT, as well as collaborating with other academic and corporate sources, the Center will allow for the successful, and expedient integration of pediatric medicine and engineering. Technology developed by the Center will ultimately be of international benefit in both the pediatric and adult medical fields. Initial foci for research will include Light Emitting Diode Near-Infrared Spectroscopy, Blue Light Emitting Diode Phototherapy, and the Heart Rate variability Analysis.

**Outcomes Expected:**

- 1) Light Emitting Diode Near-Infrared Spectroscopy will be studied in order to develop new tissue oxygen measurement systems that will allow for accurate fetal, neonatal, and pediatric brain oxymetry. In the pilot study, a prototype device will be used to assess the accuracy and effectiveness of an LED based NIRS system for data collection in newborns receiving Surfactant therapy.
- 2) A Blue Light Emitting Diode Phototherapy system will be developed and tested for efficacy in the treatment of Neonatal Jaundice and will be planned for the management of Crigler-Najjar Syndrome.
- 3) Heart rate variability Analysis (Spectral Analysis and Cepstral Analysis) will be studied as a predictor of neonatal sepsis, and as a tool to help predict neonatal outcomes.

**Service Area:**

Not Applicable.

**Services Provided:**

Not Applicable.

**Equipment:**

Not Applicable.

**Transmission:**

Not Applicable.



**NEW MEXICO, Santa Fe County**  
**New Mexico Tele-Behavioral Health Improvement Project**  
**New Mexico Human Services Department**

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**CMP FY 05**

New Mexico Human Services Department  
PO Box 2348  
Santa Fe, NM 87504-2348

Leslie Tremaine, EdD  
Barbara E. Footer, MS, RD  
Ph: 505-827-6237  
Fax: 505-827-3185  
E-mail: [barbara.footer@state.nm.us](mailto:barbara.footer@state.nm.us)

**Network Partners:**

University of New Mexico department of Psychiatry and Center for Telehealth, New Mexico  
Department of Health Office of School Health.

**Project Purpose:**

Improve access to Behavioral Health (BH) services for children/youth in rural NM through up to 5 SBHCs and collaboration with other state/telehealth partners. Expand training in the BH workforce through specialized distance education provided by a consortium of higher educational institutions. Improve local BH planning through the use of telehealth technology. Develop an inter-agency data-sharing infrastructure for collaborative policy, planning, and contract management.

**Outcomes Expected:**

Increase the number of adolescents being identified and treated for depression (Columbia TeenScreen and NM Depression Identification and Treatment Protocol). Increase the number of trained BH professionals in rural/frontier areas of NM. Improve local BH planning and services to address local disparities in access, quality, and outcomes. Improve the integration and efficiency of inter-agency BH information.

**Service Area:**

Statewide.

**Services Provided:**

Direct: mental health services, to include depression screening and treatment for adolescents, will be implemented over the next year. Indirect: distance learning curricula will be developed/delivered; rural Local Collaboratives (LCs) will receive technology support; data integration will occur to better support BH Collaborative operations.

**Equipment:**

For 3 sites: Polycom Video Systems, Sony TV monitors, and Cisco Routers (T1 w/VPM-Firewall). Equipment and technology assistance will be provided to LCs, per individual RFPs, based on each LCs identified technology needs.

**Transmission:**

For 3 sites: T1/DS1 lines; for 2 sites: Checs Backbone 1MB.

Telehealth Program  
MSC09 5220, 1 University of New Mexico  
Albuquerque, NM 87131-0001  
[hsc.unm.edu/touch/](http://hsc.unm.edu/touch/)

Dale Alverson, MD  
Bob Coulter  
Ph: 505-272-8633  
Fax: 505-272-0800  
E-mail: [dalverson@salud.unm.edu](mailto:dalverson@salud.unm.edu)

**Network Partners:**

The University of New Mexico School of Medicine, University of Hawaii John A. Burns School of Medicine, Maui High Performance Computing Center, The UNM Health Sciences Library and Informatics Center, The UNM Center for High Performance Computing, Northern Navajo Medical Center, Maui Community College.

**Project Purpose:**

A research project that attempts to determine whether an integrated, collaborative, interactive immersive virtual environment can enhance human comprehension, learning, training, and performance as compared to more traditional methods. It is designed to demonstrate the feasibility of employing advanced computing methods, such as virtual reality, multipoint simultaneous telecommunications, computer generated volumetric imaging and graphics allowing manipulation and computer generated and governed patient simulation, to enhance educational outcomes.

**Outcomes Expected:**

- Enhance the problem-based experiential learning approach within a medical education curriculum - Comparative evaluation using standardized evaluation tools
- Increase consistency in medical student education independent of location - Comparative evaluation using standardized evaluation tools
- Assess impact of using integrated technologies and environments on learning and performance outcomes - Comparative evaluation using standardized evaluation tools

**Service Area:**

The states of New Mexico and Hawaii are involved in this research project. Since this is a research project, the traditional service area definition does not apply. Hawaii and New Mexico face similar challenges in providing and delivering services and training to remote and rural areas. Both states must deal with common challenges such as barriers to healthcare access (water in Hawaii, land in New Mexico), unique indigenous populations, large multicultural and minority populations, and isolation of healthcare professionals and students/trainees in remote settings

**Services Provided:**

Not Applicable. This is a research project; the traditional service provided definition does not apply. This project was a four-year research project.

**Equipment:**

Not Applicable. This is a research project; the traditional Telehealth equipment definition does not apply. Graphic design tools, high performance computers, 3-dimensional visual equipment, haptics devices, and other computational equipment for Distributed Virtual Reality.

**Transmission:**

Not Applicable. This is a research project; the traditional method of transmission does not apply. Internet2 is the primary network involved in the research.

School of Medicine/Pediatrics/Center for Development and Disability  
2300 Menaul Blvd., NE  
Albuquerque, NM 87107-1851  
[cdd.unm.edu/ec/REACH](http://cdd.unm.edu/ec/REACH)

Cate McClain, MD  
Sandy Heimerl, MS, PT  
Ph: 505-272-0096  
Fax : 505-272-0396  
E-mail : [sheimerl@salud.unm.edu](mailto:sheimerl@salud.unm.edu)

**Network Partners:**

UNM Center for Telehealth (Albuquerque), Hidalgo Medical Services (Lordsburg), Tresco (Las Cruces), Zia Therapy (Alamogordo), CARC (Carlsbad), LifeQuest (Silver City & Deming), Tobosa Developmental Services/Los Pasitos (Roswell), New Vistas (Las Vegas), Growing in Beauty (Farmington), PMS Roundtree (Farmington), DSI/ELS (Gallup).

**Project Purpose:**

Improve healthcare outcomes for young children who demonstrate developmental issues, as well as their families and the providers who serve them by improving accessibility, providing needed ongoing consultation and training, and by cutting cost for families and providers who do not have to travel to distant tertiary centers of expertise.

**Outcomes Expected:**

1) Provide accessible and on-going developmental specialty care to young children, their families and providers; 2) Expand and improve the quality of information and training to providers and families; and 3) Link providers and families statewide to share information/resources. Tools include client/provider, trainee/trainer pre- and post-satisfaction surveys (Likert Scales); videotext technology evaluations that quantify usage of services provided; cost comparison of telehealth vs. traditional service provision; and documenting travel cost savings.

**Service Area:**

Fifteen counties in rural New Mexico. Nine of the counties are full HPSAs, three are partial HPSA, 11 are MUA, three are partial MUA, and 11 are mental health HPSA.

**Services Provided:**

Developmental clinical services including assessment, consultation and technical assistance, and distance learning to health care providers, educational providers and families of young children with developmental disabilities.

**Equipment:**

Polycom Viewstation FX videoconferencing units, 5 Leadtek TeleEye and 8 StarView videophones.

**Transmission:**

ISDN H.320, IP H.323 for videoconferencing, POTS H.324 for videophones.

**Introducing Home Telehealth in New York's 20<sup>th</sup> Congressional District  
Community Health Care Services Foundation, Inc.**

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Community Health Care Services Foundation, Inc. (CHC)  
99 Troy Road, Suite 200  
East Greenbush, NY 12061  
[www.chcforum.org/](http://www.chcforum.org/)

Charissa Ashman, RN, BSN, MBA  
Ph: 518-463-1118 Ext. 816  
Fax: 518-463-1606  
Email: [Ashman@nyshcp.org](mailto:Ashman@nyshcp.org)

**Network Partners:**

Essex County Public Health Department, North Country Home Services, Inc., and the Visiting Nurse Association of Albany, Saratoga, Rennelaer, Inc.

**Project Purpose:**

Demonstrate whether the use of home telehealth: leads to better utilization of scarce home care personnel (nurses and home health aides); has an impact on job satisfaction among home care personnel; improves access to care for patients in rural areas; enhances overall patient satisfaction and quality of life; and presents an economic benefit to the health care system by reducing the frequency of home care, physician, and emergency room visits as well as hospitalizations. The secondary purpose of this project is to study the effects of telehealth for Congestive Heart Failure (CHF) patients during an 8-month pilot.

**Outcomes Expected:**

(1) Patient acceptance and satisfaction with telehealth technologies pre- and post-Likert survey instrument; (2) Staff acceptance and satisfaction with telehealth technologies pre- and post-Likert survey instrument; and (3) Reduction in the number of "physical" home care visits, unplanned physician visits; Emergency Department visits and hospitalizations-a utilization tracking tool will compare historical visit rates for CHF patients. At the conclusion of the pilot, CHC and its partners will raise awareness of telehealth and its potential benefits to patients; caregivers; payers; and policymakers across New York State.

**Service Area:**

Essex County, 5 dental HPSAs, 1 mental health HPSA, 8 primary care HPSAs and 3 MUAs; portions of Rennselaer County: 3 MUAs; and portions of Saratoga County, 6 dental HPSAs.

**Services Provided:**

Community Health Care Services Foundation, Inc. (CHC) is partnering with three home care agencies for a home telehealth project that began November 1, 2005. Home telehealth units will be placed in the homes of 14 Congestive Heart Failure (CHF) patients to monitor blood pressure, heart rate, weight, and oxygen saturation on a daily basis as well as obtain answers to health-related questions that ask patients about their illness, diet, symptoms and activity levels. It is expected that patients will receive remote patient monitoring in their homes for a 60-day period (a typical episode of care for a certified home care agency) or discharge, whichever comes first.

**Equipment:**

Fourteen Viterion 100 home monitoring units with heart rate, blood pressure, weight scale, and oxygen saturation peripherals. Viterion server and network for ongoing data transmission and collection for home care personnel.

**Transmission:**

POTS lines in patients home to transmit daily monitoring data. Home care agencies retrieve patient data using the Internet.

Genesee Gateway Local Development Corporation, Inc.  
One Mill Street  
Batavia, NY 14020  
[www.gcedc.com](http://www.gcedc.com)

Kenneth L. Oakley PhD, FACHE  
Mark Shilling MA, MPA  
Ph: 585-344-1022  
Fax: 585-345-7452  
Email: [mshilling@r-ahec.org](mailto:mshilling@r-ahec.org)

**Network Partners:**

Lake Plains Community Care Network, Medina Memorial Health Care System, Noyes Memorial Hospital, Oak Orchard Community Health System, State University of New York at Buffalo, United Memorial Medical Center, Western New York Rural Area Health Education Center, Wyoming County Community Health System, Erie County Medical Center.

**Project Purpose:**

To develop a rural collaborative telehealth network connecting seven rural health care and education facilities with major urban hospital, that will increase clinical collaborative efforts in providing the rural communities affordable access across the spectrum of health services, as well as improving the quality of rural health education and training. Each rural telehealth end-point will develop the clinical and technical competence and capability to evolve into a telehealth hub that can reach further into the rural communities with access to quality health services and education. The rural collaborative telehealth network will also provide the framework to enhance the ability of the regional health infrastructure to respond to bioterrorism and other public health threats in a timely and effective manner.

**Outcomes Expected:**

Enhancing the ability of rural health service providers to increase access to quality health care and improve patient safety in rural communities by collaborating with urban hospitals and other partners through telehealth treatment applications. Measure success in adoption of telehealth services and systems by tracking 1) numbers of clinical encounters and visits; 2) patient acceptance and satisfaction; 3) adoption by providers for consultative and educational activity; 4) recruitment and retention of professionals in rural communities; and 5) adoption of health information systems. Measurement tools: self-report of patient acceptance and satisfaction, OAT GPRA Performance measures, periodic self-report of utilization data, key informants, focus groups, and public health data, and Likert surveys.

**Service Area:**

Counties of Genesee, Livingston, Orleans, Wyoming (NY) serving 2 PC-HPSAs, 4 MH-HPSAs, 5 MUAs.

**Services Provided:**

All pertinent clinical and healthcare education/training services will be offered (to be further updated upon completion of needs assessment with partner healthcare facilities).

**Equipment:**

Telemedicine carts with dual screens for video and data collaboration, Consultation systems, Secure IP Network connectivity, Routers.

**Transmission:**

Full T1 connections with IP transmission MPLS network protocol.

Integrated Community Alternatives Network, Inc.  
1500 Genesee Street  
Utica, NY 13502  
[www.kidsoneida.org](http://www.kidsoneida.org)

J. Michael Daly, LCSW  
Ph: 315-792-9039, Ext. #211  
Fax: 315-792-9578  
Email: [mdaly@kidsoneida.org](mailto:mdaly@kidsoneida.org)

**Network Partners:**

Integrated Community Alternatives Network, Inc., Oneida County Department of Social Services,  
Capraro Technologies, Inc. .

**Project Purpose:**

ICAN works under contract with Oneida County Department of Social Services (OCDSS), part of our mission is to assist OCDSS in returning children from out of home foster care placements. Our software automates case records, including critical case information, diagnosis information, allowing for timely and accurate assessment of a child and their family's ability to be reunited. In addition to ICAN benefiting, OCDSS will also benefit from this technology as it will assist Oneida County in streamlining information on children who are living in the foster care system enabling to prepare for appropriate service provisions and timely discharges.

**Outcomes Expected:**

Provide increased assessment capabilities by tracking key demographic data, diagnosis information, placement histories, educational histories, and a child and family readiness assessment. To address needs more timely, remove barriers to successful discharges, understand the unique characteristics of the foster care population more effectively, and plan to utilize resources more effectively in the future. This project will save time as well as valuable human resources.

**Service Area:**

The geographic location for this project is Oneida County. Approximately 335 of the 400 children tracked by this software project are currently living in foster care situations. There are 65 children residing in foster care levels of care throughout Upstate New York that will be tracked with a handful of children residing in other states via contract with OCDSS.

**Services Provided:**

Currently, ICAN is a Not For Profit Corporation whose mission is to serve children with serious emotional, psychiatric, and behavioral disorders. Future services would utilize effective technology software to have key information at our fingertips and utilize this information in the best interest of our children and their families that we serve.

**Equipment:**

Integrated Community Alternatives Network, Inc. is currently using the existing network. ICAN has purchased a new File Server to store data associated with the project.

**Transmission:**

Integrated Community Alternatives Network, Inc. is currently using a Fractional T1.

An Electronic Clinical Trial System to Reduce Drug Development Costs

Long Island Association for Millenium Center for Convergent Technologies

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Millennium Center for Convergent Technologies  
300 Broadhollow Road  
Melville, NY 11747  
[www.longislandassociation.org](http://www.longislandassociation.org)

Robert Kelly, PhD  
Mitchell H. Pally  
Ph: 631-493-3002  
Fax: 631-499-2194

Email: [mpally@longislandassociation.org](mailto:mpally@longislandassociation.org)

**Network Partners:**

Stony Brook University, Stony Brook University Hospital, LifeTree Technology, North Shore-Long Island Jewish Health System, New York Institute of Technology.

**Project Purpose:**

The overarching purpose of this project is to develop and test the application of new technologies for the healthcare industry to help reduce its spiraling costs. The first goal is to add an enhancement to an already-developed clinical trial system to reduce the time to capture and process clinical trial data, while improving the accuracy of data collected. The second goal seeks to address the inability to recruit patients that is the single biggest cause of clinical trial delays, which thereby increases clinical period development costs, by developing a prototype patient eligibility system to identify potential clinical trial subjects when they arrive for Emergency Room treatment.

**Outcomes Expected:**

The project will measure the time savings and the improvement in data quality, achieved by use of the software enhancement, which will permit electronic data exchange between the clinical site and the trial manager, in a realistic clinical environment, expecting at least 30% time savings and over 99% accuracy. The prototype eligibility system will investigate the use of portable XML documents and a rule-based system to identify candidates for a clinical trial from among patients in a typical ER setting, seeking to identify at least 10 eligible patients.

**Service Area:**

Not Applicable.

**Services Provided:**

Not Applicable.

**Equipment:**

Computers and related equipment as follows: HP Desktop PC, IBM Thinkpad Notebook, Elo Intuitive Touchscreen Monitor (2), HP Deskjet printer, SIIG Fiber Optic Switch, and Com SS3 Baseline Hub. Substitutions may be made if appropriate as the project moves forward.

**Transmission:**

Internet and T-3 highspeed broadband.

Comprehensive Health Care Center (FQHC)  
Montefiore Medical Center  
111 East 210<sup>th</sup> Street  
Bronx, NY 10467  
[www.montefiore.org](http://www.montefiore.org)

Jack Wolf, VP, CIO  
Rocco Mitaratonda, CFO  
Ph: 914-457-6311  
Fax: 914-457-6064  
[jwolf@montefiore.org](mailto:jwolf@montefiore.org)

**Network Partners:**

Community Health Centers in The Bronx, CFCC (FQHC), Montefiore Medical Center.

**Project Purpose:**

Implement an Ambulatory Electronic Medical Record which is fully integrated with the Hospitals Electronic Medical Record with remote access to all aspects of the Patients Care, including but not limited to lab results, radiology reports, medication history, electronic orders, Rx pad, PACs Radiology Images, etc. with a unique identifier for each patient. The EMR will be available at any time from any location in Montefiore's delivery network for all authorized clinicians.

**Outcomes Expected:**

Improved patient care resulting from immediate access to all episodes of care for the patient from any care location throughout Montefiore's delivery network. Access to a longitudinal view of lab and radiology results, problem list, medication history, allergies, all demographic information including insurance information to improve patient throughput and inpatient care. Insure continuity of care when patients travel between clinics and other delivery settings within the Montefiore Network.

**Service Area:**

All parts of The Bronx New York, Lower Westchester County and Northern Manhattan.

**Services Provided:**

Patient Registration, Laboratory and Radiology Results, Electronic Rx Pad, Radiology PACs images access, Online Order Entry, Patient Insurance and demographic information, Problem List, and Internet access.

**Equipment:**

The equipment needed for this project is Okidata and Rx Pad printers, PC Workstations, wireless devices, cables, Nortel equipment and IDX Software.

**Transmission:**

The Comprehensive Health Care Center CHCC site is connected to the Main Montefiore Communication Network via a T1 connection provided by Verizon Services. The T1 connects into a communication hub consisting of Nortel switches and routers which in turn links via category 5 cabling to workstations located throughout the facility.



**NEW YORK, New York County** **CMP FY 03, 05**  
**Systems Technology Interfacing Teaching and Community Hospitals (STITCH)**  
**New York Presbyterian Hospital**

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New York - Presbyterian Hospital  
161 Fort Washington Avenue, HIP-14  
New York, NY 10032  
<http://www.nyp.org>

David Liss  
Ahema Asare, MBA  
Ph: 212-305-3990  
Fax: 212-927-8447  
E-mail: [aha9009@nyp.org](mailto:aha9009@nyp.org)

**Network Partners:**

New York-Presbyterian/Allen Pavilion, Brooklyn Hospital, Queens Hospital, Lawrence Hospital, New York-Presbyterian Ambulatory Care Network.

**Project Purpose:**

- Link four hospitals in the New York area allowing patients to review their data and physicians to review data from institutions other than their own.
- Create a Regional Health Information Infrastructure to empower doctors, nurses, and patients with information so that patients can receive quality care wherever they are.
- Create a proof-of-concept to demonstrate that exchange of clinical data between academic medical centers and a community hospital can improve point-of-service care at all hospitals.

**Outcomes Expected:**

Improve patient care across the continuum of healthcare settings, including academic medical settings, community hospitals, physician offices and clinics.

**Service Area:**

NYC (Upper Manhattan), Brooklyn, Queens, and Westchester.

**Services Provided:**

Primary health care, health education, social services, mental health, and care to special populations. In the near future, patients will be able to share data with providers outside of the participating institutions.

**Equipment:**

4 Dell PowerEdge Servers, 2 DELL/EMC CX700 Fiber Channel Storage Area Network (SAN).

**Transmission:**

Internet, T1.

State University of New York (SUNY) at Buffalo  
C/o David Ellis, MD  
ECMC, Dept. Emergency Medicine  
462 Grider Street  
Buffalo, NY 14215  
[www.telehealth.buffalo.edu](http://www.telehealth.buffalo.edu)

David Ellis, MD, FACEP  
Ph: 716-898-4957  
Fax: 716-898-4432  
Email: [dellis@ecmc.edu](mailto:dellis@ecmc.edu)

**Network Partners:**

Erie County Medical Center, Comprehensive Psychiatric Evaluation Program; The TLC Healthcare Network, 100 Memorial Dr., Gowanda, NY 14070 (Chautauqua and Cattaraugus counties); Wyoming County Community Health System, 400 N. Main St., Warsaw, NY 14569; Erie County Medical Center, Regional Resource Center & Healthcare Preparedness.

**Project Purpose:**

This project builds on a successful, statewide correctional emergency telemedicine network (Y2003, >3000 patients, with 41% ER trip avoidance) to develop clinical services, distance learning (Grand Rounds) & informatics through rural and tertiary care hospital ER linkages. The project will improve health outcomes for victims of rural trauma (teletrauma) through rural EMS telehealth coordination and a virtual-onsite trauma care partnership using wireless roll-about IP-based multi-protocol label switched (MPLS) network protocol videoconferencing units. This will provide a flexible, scalable model for rural access and 24/7 mental health, serving children & adolescents, as well as adults.

**Outcomes Expected:**

Rural Trauma Care: Resuscitation times (arrival – transfer), mode of transfer, patients intubated – GCS  $\leq$  12, blood administration when hypotensive, FAST ultrasound performed, length of admission/stay (LOS) ED trauma center, LOS in trauma center, time to OR, physiologic outcomes for trauma based on injury severity scores specific locations head/spinal injury, chest, abdominal, extremity injury. General indicators: patient/provider satisfaction—Likert surveys, quantifying patient usage of services provided through OAT GPRA, performance measures.

**Service Area:**

Chautauqua Co. (HPSA) 3 full, full mental, 27/30 cities full dental; MUAs #2401, #5034.  
Cattaraugus Co. (HPSA) 5 full, full mental, full dental; MUAs #2409, #2410.  
Wyoming Co. (HPSA) 3 full, full dental, MUAs #2396, #2408.

**Services Provided:**

Emergency / Trauma (Tele-trauma), Mental Health, Emergency Mental Health, Child /Adolescent Psychiatry, Hand, Maxillo-Facial, Infectious Disease / HIV, Gastroenterology. Planned Services (2005-6): Pediatric Emergency / Trauma, Pediatric Cardiology, Pediatric Specialties, Dental.

**Equipment:**

Three (3) Wireless IP roll-about videoconferencing units, Polycom codecs, Dual-screen consultation systems, networking hubs, Cisco routers.

**Transmission:**

Full T1 connections with IP transmission MPLS network protocols.

Demonstration of Implementation of Electronic Medical Record in Skilled Nursing Facility

The Rosalind and Joseph Gurwin Jewish Geriatric Center of Long Island

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The Rosalind and Joseph Gurwin  
Jewish Geriatric Center of Long Island  
Department of Medicine  
68 Hauppauge Road  
Commack, NY 11725  
[www.gurwin.org](http://www.gurwin.org)

Suzanne Fields, MD/Jean-Marie Kineiko  
Sunni Herman  
Ph: 631-715-2600  
Fax: 631-715-2908  
Email: [dellis@ecmc.edu](mailto:dellis@ecmc.edu)

**Network Partners:**

St. Catherine of Siena Medical Center (Smithtown, NY), Huntington Hospital (Huntington, NY), University Hospital at SUNY Stony Brook (Stony Brook, NY).

**Project Purpose:**

Engage in a pilot demonstration project for an interoperable electronic medical record program including computerized physician-order entry suitable for post-acute care and long-term care. This program will be designed with the potential to exchange critical health information with other clinical settings, particularly acute care hospitals, off-site physicians' home or office and emergency rooms and ultimately with federal, state, regional and local health information infrastructures and systems.

**Outcomes Expected:**

Provider satisfaction, enhanced communication, improved compliance with required documentation, decreased time to document history and physical examination (measures)-Survey of medical staff (tool); Reduction of medial errors that occur during transitional care, decreased rate of illegible or incomplete orders, better reconciliation of medications (measure)-Review of medical records of medication errors (tool).

**Service Area:**

Suffolk County, including 3 acute care hospitals.

**Services Provided:**

Opened in November 1988. Provides long term care services, assisted living, home care, ventilator dependent care, subacute care, adult day care, hospice services. Dialysis services will begin in summer of 2006.

**Equipment:**

Laptops, printers.

**Transmission:**

Internet, T1 lines.

Division of Clinical Informatics, Duke University  
DUMC 2914  
Durham, NC 27710  
[dmi-www.mc.duke.edu/](http://dmi-www.mc.duke.edu/)

David Lobach, MD, PhD/Jennifer Macri, MS  
Jan M. Willis MS, MBA  
Ph: 919-684-6421  
Fax: 919-684-8675  
E-mail: [clinicalinformatics@duke.edu](mailto:clinicalinformatics@duke.edu)

***Network Partners:***

Duke (Hospital, Family Medicine Center, Pediatrics, OB/GYN, Outpatient Clinic, Urgent Care North and South), Lincoln Community Health Center (Center, Urgent Care), Durham County (Health Department, Dept. of Social Services), Durham Regional Hospital, Durham Community Health Network, Durham Pediatrics, Regional Pediatrics, Central Family Medicine.

***Purpose:***

Support proactive care management; facilitate communication among clinicians, social workers, care managers, health educators and patients; provide access to personal health information and education materials to patients. Clinical information is collected directly from patients through a computer interface that adapts to fit the native language, reading literacy and computer skills of the user. Thus, care management services will be customized to each patient and will include disease-specific education, health risk reduction programs, and assistance accessing appropriate clinical services and complying with medications.

***Outcomes Expected:***

Expected improvement in HEDIS indicators for cancer screening, immunizations, diabetes care, asthma care, Chlamydia screening, well-child visits and post-partum care will be measured from site encounter data. Decreased emergency department utilization and admissions for ambulatory care-sensitive conditions will be measured from site encounter data. Tested instruments to assess condition-specific health literacy and surveys of patients' self-efficacy for managing their illnesses will be measured by patient surveys.

***Service Area:***

Durham County, North Carolina. Nine MUAs and one HPSA.

***Services Provided:***

The provider network has been in existence since July of 1998. Members of the network will provide telemedicine services, receive telemedicine services, provide distance education services and receive distance education services.

***Equipment:***

This project is Internet based. The equipment used includes a specially designed touch-screen patient data entry kiosk. The kiosk includes an output printer and a video camera to provide real time contact to a care manager. Partner sites access the data via the Internet on their office personal computers.

***Transmission:***

T1 lines at the partner sites, over the Internet.

Education and Research Consortium of Western Carolinas  
22 South Pack Square, Suite 500  
Asheville, NC 28801  
[www.ercwc.org](http://www.ercwc.org)

Gary Bowers, JD  
Amy LeClare  
Ph: 828-281-1954  
Fax: 828-281-1988  
Email: [amyleclare@ercwc.org](mailto:amyleclare@ercwc.org)

**Network Partners:**

The 16 hospitals serving western North Carolina: Angel Medical Center, Cherokee Indian Hospital, Harris Regional Hospital, Haywood Regional Medical Center, Highlands-Cashiers Hospital, McDowell Hospital, Mission Hospitals, Murphy Medical Center, Pardee Hospital, Park Ridge Hospital, Rutherford Hospital, Spruce Pine Community Hospital, St. Luke's Hospital, Swain County Hospital, Thoms Rehab Hospital, Transylvania Community Hospital.

**Project Purpose:**

Develop and implement a system to electronically access and transfer patient data from the 16 independent, community-based hospitals serving western North Carolina. There is currently no means to electronically transmit or access patient information from one hospital to another within the region. The long-term goal is to create a longitudinal electronic medical record that can be accessed and updated by any authorized health care provider in the region.

**Outcomes Expected:**

The project will improve the delivery of patient care in western North Carolina by speeding access to critical patient medical information, eliminating the potential for transcription errors, speeding the timeframe for treatment of patients, eliminating the need for patients or family members to repeat information at other providers, and reducing the cost of care by creating efficiencies within the hospitals.

**Service Area:**

The 16 counties in western North Carolina: Buncombe, Cherokee, Clay, Haywood, Henderson, Jackson, Graham, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Swain, Transylvania, Yancey.

**Services Provided:**

Electronic transmission of patient medical information between western NC hospitals and between local hospitals and their admitting physicians.

**Equipment:**

At remote sites: VPN boxes. At hosting site: 4 servers.

**Transmission:**

Remote sites will transmit to hosting site via VPN lines. Clinical data users will utilize IP via the Web.

**NORTH DAKOTA, Cass County**  
**North Dakota Telepharmacy Project**  
**North Dakota State University College of Pharmacy**

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**CMP FY 02, 03, 04, 05**

College of Pharmacy  
123 Sudro Hall  
Fargo, ND 58105  
[telepharmacy.ndsu.nodak.edu/](http://telepharmacy.ndsu.nodak.edu/)

Charles D. Peterson, PharmD  
Ph: 701-231-7609  
Fax: 701-231-7606  
Email: [Charles.Peterson@ndsu.edu](mailto:Charles.Peterson@ndsu.edu)

**Network Partners:**

Licensed rural community and hospital pharmacists and pharmacies, rural communities, North Dakota State Board of Pharmacy, and North Dakota State Pharmaceutical Association.

**Project Purpose:**

To establish, restore, or retain pharmacy services in medically underserved rural communities in North Dakota through the use of telepharmacy technology. To allow a licensed pharmacist at a central pharmacy site to supervise a registered pharmacy technician at a remote telepharmacy site in processing prescriptions for patients. Activities are in full compliance with all rules and regulations for the practice of pharmacy in the State as established by the North Dakota State Board of Pharmacy.

**Outcomes Expected:**

To provide rural citizens with access to a pharmacist health professional and pharmacy services in their own community; to improve economic development in remote rural communities by building new businesses and adding new jobs; by building new businesses and adding new jobs; to improve recruitment and retention of pharmacists in rural areas; to make rural pharmacies more attractive as a business; to provide relief help for sick-time, vacations, and professional leave for pharmacists practicing in rural areas; to provide educational opportunities for pharmacy students at the University.

**Service Area:**

Since September 2002, 57 pharmacies in 29 MUA counties in North Dakota and two in Minnesota are participating in delivering telepharmacy services including 21 central sites serving 36 remote telepharmacy sites with 44 being retail pharmacies and 13 being hospital pharmacies serving a population of more than 40,000 rural citizens.

**Equipment:**

Pharmacy operations software on a standard PC computer; digital imaging camera; Polycom-FX or VSX video conferencing equipment; VPN/firewall, and 20" television monitor, located at both remote telepharmacy spoke site and central pharmacy hub site.

**Transmission:**

Transmitted over the Internet using DSL lines at 512K bandwidth or dedicated fractional T1 and secured through a VPN/firewall.

St. Alexius Medical Center  
900 East Broadway  
PO Box 5510  
Bismarck, ND 58506-5510  
[www.st.alexius.org](http://www.st.alexius.org)

Nancy R. Willis/Tim Cox, FACHE  
Nancy R. Willis, Director  
Ph: 701-530-7615  
Fax: 701-530-7099  
Email: [nwillis@primecare.org](mailto:nwillis@primecare.org)

**Network Partners:**

Northland Healthcare Alliance, North Dakota: Ashley Medical Center, Missouri Slope Clinic (Beulah), Carrington Hospital (Carrington), St. Joseph's Hospital and Health Center and Great Plains Clinic (Dickinson), Garrison Memorial Hospital (Garrison), St. Aloisius Hospital (Harvey), Sakakawea Medical Center (Hazen), West River Regional Health Center (Hettinger), Linton Medical Center (Linton), Presentation Medical Center (Rolla), Strasburg Nursing Home (Strasburg), Community Memorial Hospital (Turtle Lake), Mercy Medical Center (Williston), Wishek Community Hospital and Clinics (Wishek). South Dakota: Isabel Clinic, McLaughlin Clinic (McLaughlin), Mobridge Regional Hospital and Clinics (Mobridge).

**Project Purpose:**

Provide health-related services at provider, patient and community request including clinical visits, clinical consults, professional and community education, disaster preparedness training and administrative functions.

**Outcomes Expected:**

Clinical outcomes for all services would be equal to outcomes expected for outpatient care within the Medical Center and in compliance with all JCAHO standards and Medicare quality expectations. Speech therapy outcomes are those used by therapist to determine quality of life improvement in and return as much as possible to normalcy. Speech therapists use a specific rehabilitation assessment tool to gauge these. For educational outcomes we use standard educational outcomes required by accrediting bodies for students graduating from our paramedic programs, and for other educational activities the appropriate educational objectives are expected to be met. Outcomes for all activities is 100% customer satisfaction that is measured on evaluation tools used specifically for each audience (providers, patients, customers).

**Service Area:**

Central and Western ND, Eastern Montana and North Central South Dakota.

**Services Provided:**

Specialty consults to rural physicians; specialty visits to rural patients; speech therapy, medication and wound management to nursing homes; professional education to physicians and other staff at clinics, nursing homes and hospitals, including leadership training; videoconferencing services for administrative meetings throughout the network so that members can avoid needless travel. A number of support groups also meet system-wide (e.g. Alzheimer's) and care conferences among professionals are conducted at various facilities. In addition more specialized care can be accessed through ISDN to areas outside of our service area (e.g. burn services—Regions Medical Center, Minneapolis, MN).

**Equipment:**

NEC TeleDocs with Canon exam cameras, and Kodak digitizers for teleradiology purposes. Polycoms for connecting to the state interactive video network; PACS system for radiology; television monitors of various brands; Codian bridge.

**Transmission:**

Currently we use point-to-point full T-1 lines to all sites. Some sites are piggy-backed on these lines (e.g. more than one site to a line). We will be moving to an ATM network using video over IP. This network will allow for full T-1 lines to all sites with no piggybacking and will have the capability of voice over IP. We stream data to some of our sites using these same T-1 lines.

Case Western Reserve University  
10900 Euclid Ave.  
Cleveland, Ohio 44106-4956  
[www.netwellness.org](http://www.netwellness.org)  
[www.cwru.edu](http://www.cwru.edu)

Susan Wentz, MD, MS  
Ph: 216-368-5493  
Fax: 216-368-0263  
Email: [sww2@case.edu](mailto:sww2@case.edu)

**Network Partners:**

The Ohio State University, Columbus, Ohio  
University of Cincinnati, Cincinnati, Ohio

**Project Purpose:**

Develop a website that incorporates easy to understand information on hundreds of health topics, current health news, and an Ask an Expert feature where users can get individual responses on hundreds of health topics from volunteer faculty experts at the three universities. Over 380 academic medical and research professionals donate their time by writing articles on many of the health topics and through the site's Ask an Expert feature.

**Outcomes Expected:**

The intended outcomes are increased knowledge of the healthcare consumer, improved physician/patient communication and ultimately reduced healthcare costs. User surveys, continuous feedback from a form available on every NetWellness page, continuous analysis of use and other site data are used to evaluate its effectiveness. Additionally, through collaboration with the Ohio Public and School Library networks and other academic, professional, community and government partners, virtual focus groups are occasionally formed to advise NetWellness on specific issues.

**Service Area:**

Nationwide

**Services Provided:**

This year marks the tenth year of NetWellness, which has been in operation since 1994. With the introduction of a completely redesigned site, Netwellness continues to provide health information via the Web. This includes access to a portfolio of health resources such as an encyclopedia, directories, manuals, reviewed Weblinks, and original content on health topics written by university health sciences faculty. A key component is our Ask an Expert feature through which users can get individual responses on hundreds of diseases, conditions, and wellness topics from over 380 volunteer faculty experts at the three universities.

**Equipment:**

Standard Web and database servers.

**Transmission:**

Internet.



Cincinnati Children’s Hospital Medical Center  
3333 Burnet Avenue  
Cincinnati, OH 45229  
[www.cincinnatichildrens.org](http://www.cincinnatichildrens.org)

Uma R. Kotagal, MBBS, MSc  
Charles W. Swanson, MPA, RRT  
Ph: 513-636-3176  
Fax: 513-636-0171  
Email: [chuck.swanson@cchmc.org](mailto:chuck.swanson@cchmc.org)

**Network Partners:**

Not Applicable.

**Project Purpose:**

The aims and goals of Pursuing Perfection have been to make fundamental, transformational changes in the way health care is delivered through supporting efforts of grantee organizations in provision of care that is knowledge based, systems-minded and patient centered. This project will allow us to spread the learning and improvements outside the Medical Center, and allow patients and families to access information and have a more active role in their care.

**Outcomes Expected:**

Our outcomes/goals for the project include:

1) Improving care for individual patients or population of patients both in clinical, (patient centric measures), such as mortality, morbidity complication rates, or improving care processes such as reducing delays, and reducing adverse events; 2) Goal 2 is aimed at spreading the learning to transform care. The outcome for goal 2 will be measured (a) by number of site visits made to CCHMC, (b) number of national presentations by experts in improvement from CCHMC, and (c) number of personnel from CCHMC who play a leadership role on national quality organizations.

**Service Area:**

CCHMC’s immediate service area includes 29 counties from southwest Ohio, southeast Indiana, and northern Kentucky. We also serve as a regional, national and international referral center for the specialties provided in pediatric care at the Medical Center.

**Services Provided:**

Current services provided at CCHMC include primary through quaternary pediatric services. This project will allow us to implement additional patient portals for the chronically ill.

**Equipment:**

Equipment used at this point for patient portals include our Web-based servers for patients and families to access through home-based, high-speed connections. The equipment to be installed through the MIND center is still being researched at this time.

**Transmission:**

Transmission at this time is limited to our web-based servers. Additional options will be explored to increase availability, access, and speed.

Medical Education Network Teaching Ohio Region III (MENTOR)  
Northeastern Ohio Universities College of Medicine (NEOUCOM)

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Northeastern Ohio Universities College of Medicine  
4209 State Route 44  
Rootstown, Ohio 44272  
[www.neoucom.edu/index.php](http://www.neoucom.edu/index.php)

Thomas C. Atwood, MS, MA  
Ph: 330-325-6611  
Fax: 330-325-0522  
Email: [tcatwood@neoucom.edu](mailto:tcatwood@neoucom.edu)

**Network Partners:**

The University of Akron, Kent State University, Youngstown State University, Cleveland State University, 8 Major Teaching Hospitals located in Akron, Canton and Youngstown, 3 Area Health Education Centers (AHEC), 12 Clinics for Underserved Populations, 3 Veterans Administration Clinics.

**Project Purpose:**

Provide medical education to patients, physicians, residents, undergraduate medical education students and other health professionals in northeastern Ohio through a variety of methods. Improve the quality of education by using technology to develop and deliver materials over the Internet. Provide access to NEOUCOM's Read Distance Education Center and associated training materials. Improve the quality and availability of undergraduate and continuing medical education in the region.

**Outcomes Expected:**

Enhanced communications throughout the region for live (synchronous) presentations and archived (asynchronous) materials. New content is being developed for a regional audience of the underserved populace, veterans, migrant workers, and healthcare professionals and an ever-expanding circle of participants including students, physicians, psychologists, nurses, counselors, social workers, clergy, nursing home administrators, and safety officers.

**Service Area:**

22 counties in northeastern Ohio.

**Services Provided:**

H.323 (IP-Sept 2003) and H.320 (ISDN-Jan 2004) video conferencing. Instructional materials delivered via the Internet using WebCT course management system, custom applications, CDROM, DVD and streaming video.

**Equipment:**

Two academic servers provide online access to educational materials and applications. Tandberg 6000 and Tandberg 2500 systems provide video conferencing capabilities. DVD recorders, cameras, scanners, printers, etc. used to develop content.

**Transmission:**

Web-based, T1 (H.323) and ISDN (H.320) to Consortium Universities and Major Teaching Hospitals. Future plans include Internet 2 capability.

Ohio Board of Regents  
36<sup>th</sup> Fl., 30 E. Broad St.  
Columbus, OH 43215  
[www.regents.state.oh.us](http://www.regents.state.oh.us)

David Barber  
Ph: 614-752-9530  
Fax: 614-466-5866  
Email: [dbarber@regents.state.oh.us](mailto:dbarber@regents.state.oh.us)

**Network Partners:**

Columbus Children's Hospital, Ohio Supercomputer Center, University of Cincinnati Genome Research Institute, Ohio State University (Medical Center and Department of Family Medicine), Owens Community College, Northeast Ohio Universities College of Medicine, University of Findlay, and Mt. Union College.

**Project Purpose:**

The Medical Collaboration Network will interconnect Ohio's colleges and medical schools with Ohio's hospitals through the Third Frontier Network and remove barriers to the collaboration among the researchers, educators, students, and physicians at these sites by the implementation of gigabit networks and high-quality video conferencing.

**Outcomes Expected:**

Experience will be gained with the improved ability to collaborate created by high-quality video conferencing. Shared access will be created to facilities for drug discovery research to support related research and education programs. A study on the impact of telemedicine on Medicaid costs will be conducted. A multi-institutional continuing medical education program will be created, and educational programming will be shared between homeland security training sites. Telemedicine equipment capable of supporting neonatology will be identified.

**Service Area:**

Project will serve the entire State of Ohio through the Third Frontier Network.

**Services Provided:**

Neonatology, administrative conferencing, distance education, research support, and technology evaluation.

**Equipment:**

H.323 videoconferencing equipment with H.264 Codec; Experimental HD and DV video capture cards; telemedicine peripherals for neonatology.

**Transmission:**

Gigabit Ethernet.

Ohio Supercomputer Center  
1224 Kinnear Road  
Columbus, OH 43212  
[www.osc.edu](http://www.osc.edu)

Eric A. Stahlberg, PhD  
Ph: 614-292-2696  
Fax: 614-292-7168  
Email: [eas@osc.edu](mailto:eas@osc.edu)

**Network Partners:**

Cincinnati Children's Hospital Medical Center  
The Medical College of Ohio

**Project Purpose:**

Develop software to support network system for pediatric cancer research. System will securely transfer and transform protected pediatric patient information for correlative studies involving related genetic and proteomic data. The effort will employ advanced computing technologies for information transformation, correlation and meta-analysis. Ultimately, the project provides a set of proven technologies for future safe, secure and compliant participation for community and service hospitals in efforts requiring transport of protected health information.

**Outcomes Expected:**

System for Clinical Information Transfer (SCIT) and Clinical Bioinformatics Integrated Visualization (CBIV) system for transforming and normalizing pediatric patient information for cancer research (measure). Software product validation tests (tool).

**Service Area:**

Primary areas are Franklin, Hamilton, and Lucas counties in Ohio serving pediatric patients nationally. Areas will extend incrementally to additional sites in Ohio and nationwide.

**Services Provided:**

Collaboration clinical information transfer capabilities and tools (2005).

**Equipment:**

(3 each) Virtual Private Network (VPN) appliances connected to Linux server systems. Aggregated database will be housed at OSC.

**Transmission:**

OC3 from Columbus to Cincinnati (future gigabit connectivity via TFN fiber-optic).  
DS3 from Columbus to Toledo (future gigabit connectivity via TFN fiber-optic).

Southern Consortium for Children  
20 Circle Drive, Unit 37206  
PO Box 956  
Athens, Ohio 45701  
[www.scchildren.com](http://www.scchildren.com)

John Borchard, BSN  
Steven C. Trout, MA  
Ph: 740-593-8293  
Fax: 740-592-4170  
Email: [strout@frognet.net](mailto:strout@frognet.net)

**Network Partners:**

Ohio University's College of Osteopathic Medicine (one site); Shawnee Mental Health Center, Inc. (four sites); Tri-County Mental Health and Counseling Services, Inc. (four sites); Washington County Community Mental Health Services (one site); Woodland Centers, Inc. (three sites).

**Project Purpose:**

To create a telepsychiatric and distance learning network by linking eight new sites to an existing four-site network. A telepsychiatric program for children will be created in year one and expanded to serve adults in years two and three. Distance learning programs will be expanded and more readily accessed throughout the 10-county region.

**Outcomes Expected:**

Project outcomes include: connecting eight new satellite sites to an existing 4-site videoconferencing network, Internet accessibility for all sites will be achieved using one ISP, children and adults will use videoconferencing technology for routine med/somatic visits, the adult psychiatric caseload will be doubled by grant's end, greater efficiency in scheduling clients will reduce "no show" rates by 15 percent by grant's end, and greater access to distance learning. A satisfaction questionnaire and the Ohio Scales will be used to measure telepsychiatry outcomes.

**Service Area:**

Athens, Hocking, Vinton, Gallia, Jackson, Meigs, Adams, Lawrence, Scioto, and Washington Counties. Three counties are designated primary health HPSAs, six counties p-HPSA, and Gallia County is not designated. Eight counties are designated mental health HPSAs (Lawrence and Washington are excluded), six of the counties are designated MUAs, with three counties designated partial MUAs.

**Services Provided:**

The major focus is telepsychiatry for children in year one and then move onto the adult population in years two and three. The second service priority is expanded distance learning capacity for regional behavioral health care providers and allied health professionals. Construction of the network began in 1998; expanded in 2003.

**Equipment:**

At each site: Polycom VSX 7000, Router - Cisco 1760, Switch - Cisco 2950, PC  
At OU-COM (Athens): Main Router - Cisco 3745.

**Transmission:**

T1 lines to all sites except Tri-County Mental Health and Counseling Services, Inc. in Athens, which utilizes line-of-sight microwave transmission.

INTEGRIS Health, Inc.  
3366 NW Expressway, Suite 800  
Oklahoma City, OK 73112-4458  
[integris-telehealth.com](http://integris-telehealth.com)

Pamela G. Forducey, PhD, ABPP  
Micah Post  
Ph: 405-644-5343  
Fax: 405-951-8851  
Email: [pam.forducey@integris.health.com](mailto:pam.forducey@integris.health.com)

**Network Partners:**

INTEGRIS Southwest Medical Center, Stroke Center of Oklahoma.  
INTEGRIS Heart Hospital, LLC.  
INTEGRIS Clinton Regional Hospital with Dr. Swami.  
Cybernet Medical.

**Project Purpose:**

Expand a Blue Cross Blue Shield (BCBS) stroke research project already in progress that gathers information on the efficacy of standardized protocol for telehealth treatment. To study the benefits of education and intervention to CHF and Diabetes patients through the use of Telehealth as a management tool. The studies will incorporate a combination of broadband, analog, and web-based applications to serve patients in a variety of settings including clinics, homes, and long-term care facilities.

**Outcomes Expected:**

1) Increase access to quality health services and disease management for rural residents with chronic conditions; 2) Establish a post-acute stroke management network; and 3) Collect and disseminate clinical outcome data for chronic disease, stroke management and rehabilitation, as well as related costs/cost savings.

**Service Area:**

Kay County, HPSA, MUA; Canadian County, HPSA, MUA; Oklahoma, HPSA, Partial MUA; Grady County, HPSA; Custer County, HPSA and Jackson County.

**Services Provided:**

INTEGRIS Telehealth Network has been in operation since 1993 when a network between rural and metro hospitals and clinics was built. INTEGRIS Telehealth Network is providing services in chronic disease management, (diabetes, CHF & COPD) wound care, mental health, home care, rehabilitation, speech pathology, and Continuing Education for Physicians and Nurses.

**Equipment:**

INTEGRIS Telehealth Network has 10 Polycom or Tandberg Videoconferencing systems in the Oklahoma City metro area between 3 facilities: 8 Polycom Videoconferencing systems at 8 rural facilities, approximately 140 POTS Video Phones in Clinics and Homes w/peripheral equipment, approximately 70 home monitoring systems for Diabetes, CHF, & COPD.

**Transmission:**

Full ATM between INTEGRIS metro facilities and remote rural hospitals and clinics, POTS to homes, clinics and long term care facilities and internet for home monitoring and medical staff and patient education.

Oklahoma Office of Rural Health, Oklahoma State University  
117 W. 17<sup>th</sup> Street  
Tulsa, Oklahoma, 74107  
[osu.com.okstate.edu/research/orh/index.html](http://osu.com.okstate.edu/research/orh/index.html)

Kaleb Bennett  
Ph: 918-584-4323  
Fax: 918-584-4391  
Email: [bkaleb@chs.okstate.edu](mailto:bkaleb@chs.okstate.edu)

**Network Partners:**

Oklahoma State University Telemedicine, Education and Training Center (Tulsa, OK)  
Oklahoma State University Rural Health Policy and Research Center (Tulsa, OK)  
Oklahoma Critical Access Hospitals (CAH), potential CAHs and other rural health providers.

**Project Purpose:**

The Rural Health Telemedicine Program will help CAHs, potential CAHs and other rural health providers purchase telemedicine equipment, services, and training. We will provide the equipment each participant believes is necessary to improve the quality of healthcare for their patients. Training will also be provided. Each participant must agree to maintain its network and provide documentation of usage. Additionally, each participant must secure its specialists. Participants will have access to OSU's Telemedicine expertise to help with equipment, training and specialists' decisions.

**Outcomes Expected:**

Increase access to specialty care—GPRA tool.  
For medical staff, increase access to continuing education—provider satisfaction survey tool.  
Decrease amount of time traveled for patients—GPRA tool.  
Decrease number of miles traveled for patients—GPRA tool.

**Service Area:**

Statewide, *potentially* representing 72 counties, including 5 HPSAs, 16 MUAs, and 18 counties that are both HPSA and MUA classified. Final number *will* be much smaller as there are only enough funds for so many sites. 8 MUAs, 2 HPSAs are currently being serviced by the 26 sites.

**Services Provided:**

Beginning Sep. 2001 we have grown to provide: Cardiology, Radiology, Orthopedics, Mental Health, Wound Care, General Health Care, Physical Therapy, Emergency Room monitoring and Continuing Medical Education.

**Equipment:**

Polycom video conferencing, AMD otoscope, SmartSteth devices, Vidar Digitizer, and e-Film software.

**Transmission:**

Full T1, Internet.

OKLAHOMA, Tulsa County  
Rural Oklahoma Telemedicine Service Expansion  
OSU Center for Rural Health

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CMP FY 05

Oklahoma Center for Rural Health, Oklahoma State University  
117 W. 17<sup>th</sup> Street  
Tulsa, Oklahoma, 74107  
[healthsciences.okstate.edu/research/orhprc/index.htm](http://healthsciences.okstate.edu/research/orhprc/index.htm)

Jeff Hackler, JD, MBA  
Ph: 918-584-4611  
Fax: 918-584-4391  
Email: [jbhackler@chs.okstate.edu](mailto:jbhackler@chs.okstate.edu)

**Network Partners:**

Oklahoma State University Telemedicine, Education and Training Center (Tulsa, OK)  
Oklahoma Office of Rural Health (Oklahoma City, OK)  
Oklahoma Critical Access Hospitals (CAH), potential CAHs and other rural health providers.

**Project Purpose:**

The OSU Rural Health Center, the Oklahoma Office of Rural Health (the “OORH”, and the OSU Telemedicine Center hope to make subspecialty services more accessible to rural citizens by providing such services to them via telemedicine technology. Specifically, we hope to expand access to healthcare services available through rural hospitals in cardiology, radiology, and ear, nose, and throat. The OSU Rural Health Center is also requesting funding to support telemedicine staff who will help locate sites that maximize telemedicine utilization, install technology, and provide technical support for telemedicine visits.

**Outcomes Expected:**

- Primary care physicians will be able to acquire specialty consultation.
- Radiologists and cardiologists will be able to provide diagnosis for patients.
- Orthopedic consultations will be possible from remote sites.
- Dermatology consultation and treatment plans will be provided to rural patients.
- Medical records can be transported quickly and securely via the network.
- Rural community hospitals will share expensive diagnostic equipment.
- Mental health diagnostic and treatment services will be available via the network.

**Service Area:**

Statewide, *potentially* representing 72 counties, including 5 HPSAs, 16 MUAs, and 18 counties that are both HPSA and MUA classified. Final number *will* be much smaller as there are only enough funds for so many sites. 8 MUAs, 2 HPSAs are currently being serviced by the 26 sites.

**Services Provided:**

Since September, 2001, the OSU Center for Rural Health has helped coordinate the following services: Cardiology, Radiology, Orthopedics, Mental Health, Wound Care, General Health Care, Physical Therapy, Emergency Room monitoring and Continuing Medical Education.

**Equipment:**

Polycom video conferencing, AMD otoscope, SmartSteth devices, Vidar Digitizer, and e-Film software.

**Transmission:**

Full T1, Internet.



Rogue Valley Medical Center Foundation  
2600 Siskiyou Blvd., Suite 100  
Medford, OR 97504  
[www.asante.org](http://www.asante.org)

Sandra Olson  
Ph: 541-789-5298  
Fax: 541-789-5856

[solson@asante.org](mailto:solson@asante.org)

**Network Partners:**

Rogue Valley Medical Center, Three Rivers Community Hospital, Ashland Community Hospital, Merle West Medical Center, Providence Medford Medical Center, Oregon Health Sciences University, over 300 physicians.

**Project Purpose:**

The Asante Clinical Systems Initiative has been designed to provide real time inpatient and outpatient information and decision support across a network of health providers, including six hospitals and over 300 private practice physicians to improve quality healthcare in s. Oregon and n. California.

**Outcomes Expected:**

- a) Improved safety, effectiveness and timeliness of care for patients in s. Oregon and n. California (Multiple measures including tabulations from electronic records)
- b) Improved patient-centered care for s. Oregon and n. California patients (Patient Satisfaction Surveys)
- c) Improved organizational effectiveness in managing patients across a continuum of care, including physician's offices, rural and regional hospitals, homecare and hospice (Stakeholder Satisfaction Surveys)

**Service Area:**

Primary service area is Jackson and Josephine Counties in Oregon. Secondary service area includes: Curry, Douglas, Klamath and Lake Counties in Oregon and Del Norte, Siskiyou, and Modoc Counties in California.

**Services Provided:**

Central repository of inpatient data accessible over a secure medical network, image transfers, remote consultation, lab and other reports available for review and on-line encrypted signature.

**Equipment:**

Integrated Soarian clinical system including: Pharmacy, Medication Administration Check, Clinical Access, Common Clinicals, EHR, CPOE, RIS, CIS, and PACS; as well as the network infrastructure to support it across a Virtual Private Network.

**Transmission:**

A combination of: Fiber Optic, ISDN, T1, wireless and Internet.

Tillamook Lightwave IGA.  
4000 Blimp Blvd.  
Tillamook, Oregon 97141  
[www.tillamooklightwave.org](http://www.tillamooklightwave.org)

Jack Crider  
Ph: 503-842-2413 X 0  
Fax: 503-842-3680  
[jcrider@potb.org](mailto:jcrider@potb.org)

**Network Partners:**

Port of Tillamook Bay  
Tillamook People's Utility District  
Tillamook County

**Project Purpose:**

To enable telemedicine between Tillamook County Hospital and County Health Departments, provide distance-learning opportunities for the medical community; and enable a rapid sharing of patient data between the County Hospital and designated trauma hospitals in Portland.

**Outcomes Expected:**

To bring telemedicine, informatics and medically oriented distance learning opportunities to the Tillamook County medical community by providing fiber optic connectivity to Portland trauma centers. The measurable outcome is the fiber connection between the medical communities to enable telemedicine capabilities.

**Service Area:**

Tillamook County was established in 1853 and is still a rural community of 24,600 people. The median household income is \$34,270. The county is 1,125 square miles that include 9 rivers, 4 bays and 75 miles of coastline.

**Services Provided:**

Tillamook Lightwave was organized November 1, 2000 between the partners to bring fiber connectivity between the County Hospital, Health Clinics, and Portland trauma centers. Vital diagnostic data will be transmitted quickly for consultation/collaboration and clinical decision making. The fiber connection will allow distance learning and educational activities. Phase I to the north is complete, and Phase II to the south is still needed at a cost of approximately \$600,000.

**Equipment:**

Control and GigEthernet Modules, including 2 Riverstone RS8000 and 2 Riverstone RS16,000 switches, 2 Argus 48V DC power systems with batteries, 1 CISCO 3550 switch and miscellaneous fiber panels and splice enclosures.

**Transmission:**

Gigabit Ethernet between all points on the network. Internet access provided as needed.

Clarion University of Pennsylvania  
330 Main Street  
Clarion, PA 16214  
[www.clarion.edu/hsec](http://www.clarion.edu/hsec)

Nancyann C. Falvo, PhD  
Ph: 814-227-1901  
Fax: 814-227-2036  
Email: [nfalvo1@clarion.edu](mailto:nfalvo1@clarion.edu)

**Network Partners:**

Clarion University of PA, Slippery Rock University of PA, Edinboro University of PA  
Warren-Forest County Higher Education Council and Warren General Hospital.

**Project Purpose:**

The purpose of this project is to address the health care needs of northwestern Pennsylvanians by ensuring increased access to high-quality primary care for both rural and under-served populations of this region. The goal of this project is to expand the delivery area of the current Clarion / Edinboro / Slippery Rock Universities' MSN-FNP program to provide educational access for registered nurses of northwestern Pennsylvania.

**Outcomes Expected:**

Develop a Community Health Care Improvement Advisory Committee including residents of rural communities serviced by the Warren-Forest Higher Ed. Council. Establish a scholarship incentive program for students enrolling in the MSN-FNP program. Extend the delivery area of the program to the northwest area of the state, using distance education modalities, beginning in August of 2002.

**Service Area:**

Students enrolled in this program at the Warren-Forest site are from various northwestern Pennsylvania counties and from New York State. It is anticipated that all 6 students in the program will practice in the Warren-Forest area after graduation.

**Services Provided:**

Educational – students enrolled in the MSN-FNP program been enrolled in 2 course (6 credits) per semester since August of 2002. A clinical instructor is present with the students during the clinical courses.

**Equipment:**

Polycom and Pictur-tel Venue videoconferencing equipment primary sites, PCs for Blackboard instruction.

**Transmission:**

ISDN 128 – 384KB/s.

Community Nurses, Inc.  
757 Johnsonburg Road, Suite 200  
Saint Marys, Pennsylvania 15857  
[www.communitynurses.org](http://www.communitynurses.org)

Brenda Porter, RN  
Assistant Vice President of Business Development  
Ph: (814) 781-1415  
Fax: (814) 781-6987  
[bporter@communitynurses.org](mailto:bporter@communitynurses.org)

**Network Partners:**

Not Applicable

**Project Purpose:**

The telehealth project is utilizing state-of-the-art home equipment to monitor patients in between personal nursing visits in the rural region of North Central Pennsylvania. The video monitor allows for interaction between the nurse and the patient while the nurse is compiling the patient's vital statistics (i.e. blood pressure, blood sugars, weights, heart and lung sounds, pulse ox etc.). The non-video monitor allows the nurse to monitor these same statistics on a daily basis and identify trends that can be identified and corrected before an emergency room visit is needed. This project will provide quality service to the patients while addressing the nursing shortage.

**Outcomes Expected:**

The project is expected to improve patient care and outcomes. By monitoring patients on a regular basis health conditions can be stabilized quickly resulting in fewer hospital ER visits and admissions. Patients with congestive heart failure, chronic pulmonary disease, diabetes and wound care have been targeted to date. However, the medical uses of the equipment are endless.

**Service Area:**

The Community Nurses service Elk, Cameron, and McKean counties in North Central Pennsylvania. The total population of the area is 87,000.

**Services Provided:**

Services provided include the monitoring of home health patients suffering from chronic diseases as mentioned above via video and non-video monitors.

**Equipment:**

The Community Nurses are presently utilizing American TeleCare home health equipment.

**Transmission:**

The home telehealth program runs on an analog phone line.

Geisinger Clinic  
100 N Academy Avenue  
Danville, PA 17822-1335  
[www.geisinger.org](http://www.geisinger.org)

Linda Famiglio, MD/Mary Ann Blosky, MSRN, MHA  
Mary Ann Blosky, MSRN, MHA  
Ph: 570-214-9391  
Fax: 570-214-9451  
Email: [MBLOSKY@geisinger.edu](mailto:MBLOSKY@geisinger.edu)

**Network Partners:**

Geisinger Medical Centers, Soldiers and Sailors Memorial Hospital (Wellsboro, PA), Moses Taylor Hospital (Scranton, PA), Sunbury Community Hospital (Sunbury, PA), Dubois Regional Medical Center (Dubois, PA), Geisinger Clinic (Danville and Wilkes Barre, PA), Shamokin Community Hospital (Shamokin, PA), VA Medical Center (Wilkes Barre, PA), Susquehanna Health System (Williamsport, PA), Evangelical Hospital (Lewisburg, PA), Geisinger Health South (Danville, PA), Robert Packer Hospital (Sayre, PA), Center City Medical Complex (Hazelton, PA), Family Practice Center (Mifflinburg, PA), Geisinger Community Practice (Danville, PA), and Guthrie Clinic (Sayre, PA).

**Project Purpose:**

Create a regional partnership where, by targeted distance education of consumers and providers and by use of other telehealth methods, information is shared and used by all stakeholders to motivate and monitor change in stroke outcomes in rural Pennsylvania. This is needed to ultimately decrease response time from the onset of stroke, address gaps in training to manage stroke victims, and develop regional based triage protocols to optimize appropriate use of local hospitals, regional centers of care and clinical expertise.

**Outcomes Expected:**

Assess needs to educate consumers and providers, to initiate work relevant to developing a rational rural network of care, and to initiate work for long-term evaluation of these efforts. This will be done through knowledge surveys, educational program development (including using distance education), creation of a blueprint for a stroke registry, and hospital partnerships. These partners will assist in developing a model plan for stroke care in this region.

**Service Area:**

Care is provided to patients who reside in predominantly rural areas of Pennsylvania. 24 of Geisinger's 31 county areas are officially designated as Medically Underserved Areas; the Office of Rural Health officially designated 15 of these as rural.

**Services Provided:**

Needs assessments, resource analysis, model plan for rural stroke care, and educational programs.

**Equipment:**

Five computer workstations, Software (MapInfo, MS Project, Reference Manager), one network printer, 2 PDAs.

**Transmission:**

Phone, fax, computers (including Internet).

Schuylkill Alliance for Health Care Access  
1 South Second Street  
Pottsville, Pennsylvania 17901  
[www.schuylkillhca.org](http://www.schuylkillhca.org)

Judith A. Schweich  
Ph: 570-628-5515  
Fax: 570-628-3887  
Email: [jschweich@schuylkillhca.org](mailto:jschweich@schuylkillhca.org)

**Network Partners:**

Good Samaritan Regional Medical Center  
Pottsville Hospital Center, Pottsville, PA  
Ashland Regional Medical Center, Ashland, PA  
St. Luke's Memorial Hospital, Coaldale, PA

**Project Purpose:**

To identify and address unmet health needs of the uninsured population of Schuylkill County, PA and to provide access to primary medical and dental services. Major goals and objectives of the project will impact the quality of life of the uninsured and the community by integrating the rural health safety net through an Information Technology infrastructure.

**Outcomes expected:**

A target population of 3,000 to be enrolled and having access to healthcare services by end of the fourth quarter. Increase in efficiency, effectiveness, coordination and quality of care to enrolled population—this will be determined by the IReach program that will enroll and track clients and the traffic of the system.

**Service Area:**

Schuylkill County, Pennsylvania.

**Services Provided:**

There will be a linkage established between clients in need of medical and health care assistance and health care providers in Schuylkill County. Linkages to public assistance programs will be made for those who qualify. Affordable health care will be provided for those who do not qualify for public assistance. Completion of the linkage process will be by the end of the 4<sup>th</sup> quarter of the grant.

**Equipment:**

Personal computers, server, back-up server and specific software developed for the project.

**Transmission:**

Services will be available through telephone and via the Internet. A network will be available for authorized participants and providers of the project to access information on clients. All information and technology will be HIPAA compliant and served by a safety net.

Hospice of Metropolitan Erie  
202 East Tenth Street  
Erie, PA 17901  
[www.hospiceerie.org](http://www.hospiceerie.org)

Karen Moski  
Ph: 814-456-6689  
Fax: 814-456-8219  
Email: [kmoski@hospiceerie.org](mailto:kmoski@hospiceerie.org)

**Network Partners:**

None.

**Project Purpose:**

Improve delivery of hospice service through applications of telecommunications technology, especially for the frail elderly population.

**Outcomes expected:**

1. Improve service delivery through Telehealth, five patients/families each month; observation and assessment.
2. Improve participation and satisfaction of frail elderly, increase opportunity for POG and family real time updates; quality review and evaluation by participation.
3. Increase patient/family satisfaction and nurse satisfaction, improve response time to changes; feedback survey.

**Service Area:**

Erie City and Erie County, PA.

**Services Provided:**

Hospice organization of 25 years, recently licensed and certified as Medicare provider. Adding Telehealth as demonstration to improve quality and service to underserved and at risk populations.

**Equipment:**

5 laptops and 1 desktop equipped for live, two-way transmission.

**Transmission:**

Primarily Internet hookup from residential (varies) to office; limited office to office for professional consultation.

Reinventing Healthcare: the Application of the Pittsburgh Regional Healthcare Initiative's Perfecting Patient Care (PPC) System to Chronic Medical Conditions  
Jewish Healthcare Foundation

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Jewish Healthcare Foundation  
650 Smithfield Street, Suite 2400  
Pittsburgh, PA 15222  
[www.phri.org](http://www.phri.org)

Margaret Priselac  
Tania Lyon, PhD  
Ph: 412-586-6715  
Fax: 412-586-6701  
Email: [mpriselac@phri.org](mailto:mpriselac@phri.org)

**Network Partners:**

Pittsburgh Regional Healthcare Initiative; Western PA Health Disparities Collaborative (FQHCs)- Primary Care Health Service, Inc., East Liberty Family Health Center, Sto-Rox Family Health Center, UPMC Matilda Theiss, Cornerstone Care Health Center, Primary Health-Net, Centerville Clinics, Community Health Net of Erie.

**Project Purpose:**

The primary purpose of the Collaborative is to improve patient care outcomes beginning with diabetics using the PPC System to implement the Chronic Care Model. The secondary purpose of the Collaborative is to develop cost-effective, dissemination tactics to support the organizational transformation necessary to implement these changes in Western Pennsylvania and beyond. This project will develop a community of learning supported by multiple technologies called the Pittsburgh Regional Learning Network.

**Outcomes expected:**

1) Lower average HbA1c; 2) Patients with 2 HbA1c screenings in last year (at least 3 months apart); 3) Documentation of self-management goal-setting; 4) Cardiac risk reduction; ACE inhibitors or ARB medication; 5) Patients with BP 130/80; 6) Patients with LDL <100; 7) Dilated eye exam in past year; 8) Comprehensive foot exam in past year; 9) Microalbuminuria screening in past year; and 10) Depression screening in past year.

**Service Area:**

The Western PA Health Disparities Collaborative consists of eight FQHCs serving low-income and minority populations. These eight centers manage a total of 50 sites delivering primary health care in 9 counties in Western PA. Four of the health centers serve a predominantly urban population; the others serve predominantly rural patients.

**Services Provided:**

The initial clinical focus of the Western Pennsylvania Health Disparities Collaborative (HDC) is diabetes. Each of the health centers has determined their target population for the project. These subsets of diabetic patients will be the focus of early application of the care model. The population of focus ranges from between 100-200 diabetic patients per health center. Over time, the approach will be applied to broader populations and other chronic medical conditions.

**Equipment:**

Not Applicable.

**Transmission:**

Requisite knowledge of interventions and methodology are communicated through a formal educational curriculum, on-site coaching by trained consultants, Web-based learning networks, formal peer-to-peer networks, PRHI Collaborative Platform including regional forums.



Magee Rehabilitation Hospital  
Spinal Cord Injury Research  
Six Franklin Plaza  
Philadelphia, PA 19102  
[www.mageerehab.org](http://www.mageerehab.org)

Mary Schmidt  
Ronald W. Siggs  
Ph: 215-587-3216  
Fax: 215-568-3736  
Email: [rsiggs@mageerehab.org](mailto:rsiggs@mageerehab.org)

**Network Partners:**

Vtree Corporation (a Philadelphia area health technology company).

**Project Purpose:**

This telehealth program is a unique rehabilitation application that uses simulation and virtual reality technology to improve the quality of life for individuals with spinal cord injuries, brain injuries, strokes, and other illnesses. Magee Rehabilitation Hospital and Vtree will develop a rehabilitation program that permits individuals with severe physical limitations to overcome their mobility challenges without having to leave a safe environment. Software development will allow individuals utilizing wheelchair ambulation to learn and practice mobility skills for an outdoor/community based environment in a simulated manner. This will include streets, vehicular traffic, sidewalks, people, etc., which require wheelchair maneuvering for safe and efficient community access.

**Outcomes expected:**

Individuals with physical disabilities will have improved physical function and independence in the community environment. Following training with the use of the Virtual Reality technology, performance in a “real” environment will be tested and reinforced to enhance the individual’s personal acceptance and comfort with safe outdoor mobility. Assessments, such as the “CHART” (Craig Handicap Assessment and Reporting Technique), or the “SCIM” (Spinal Cord Independence Measure), can be used to document increased level of social participation and community integration, if administered pre and post training with the Virtual Reality “Streetscape” program.

**Service Area:**

Counties primarily served are contiguous in Pennsylvania and New Jersey, although some individuals will participate in this program will reside outside of these counties. Pennsylvania counties include: Philadelphia, Bucks, Delaware, Montgomery, and Chester. New Jersey counties include: Camden, Burlington, and Gloucester.

**Services Provided:**

Magee Rehabilitation Hospital telehealth is providing services in physical rehabilitation and virtual reality training, enabling patients to actively participate in their recovery.

**Equipment:**

1 computer, 1 software simulation system, 1 big screen television, and multiple wheelchairs.

**Transmission:**

Not Applicable.

Mercy Health Partners  
746 Jefferson Avenue  
Scranton, PA 18510-1624  
[www.mercyhealthpartners.com](http://www.mercyhealthpartners.com)

John T. Howells-CIO  
Ph: 570-348-7778  
Fax: 570-348-7639  
Email: [jhowells@health-partners.org](mailto:jhowells@health-partners.org)

**Network Partners:**

All Mercy affiliated physicians and clinics.

**Project Purpose:**

To automate the nursing assessment and documentation process. This information will populate the longitudinal, electronic patient record supplementing all patient results and reports already available. This information is available to all physicians and clinicians electronically in the hospitals, physician offices, and/or homes.

**Outcomes Expected:**

Quantifiable increase (10%-15%) in number of electronic accesses to patient record, reduction in nursing clerical time—30 minutes per day per nurse, reduction in paperwork on chart with critical patient information available electronically in standardized, legible format.

**Service Area:**

Lackawanna and Luzerne counties in Pennsylvania.

**Services Provided:**

Electronic nursing documentation.

**Equipment:**

Cisco Aironet wireless network infrastructure with NAW are mobile, wireless PC carts utilized at bedside.

**Transmission:**

Hospital high-speed network and Internet.

Information Services Division  
1400 Locust Street  
Pittsburgh, PA 15219  
[www.mercylink.org](http://www.mercylink.org)

Linda Hogan, PhD  
Ph: 412-232-7710  
Fax: 412-232-8422  
Email: [Lhogan@pmhs.org](mailto:Lhogan@pmhs.org)

**Network Partners:**

Not Applicable.

**Project Purpose:**

- Improve physician access to patient-level clinical result information in the hospital setting.
- Improve nursing access to patient-level clinical documentation in the hospital setting.
- Improve accuracy of patient care documentation in the hospital setting.
- Improve utilization of existing clinical workstations.

**Outcomes Expected:**

Provide physicians with ready access to patient level clinical results at any time and basically anywhere in the hospital. Enable nurses and other non-physician caregivers to directly record patient care documentation at the point of care, halving the time required for this task while improving accuracy and availability. Expand coverage to all clinical areas and equip a significant portion of clinicians with mobile computing devices, matched to their tasks and provide the requisite knowledge, skills, and abilities to optimize utilization of mobile technology.

**Service Area:**

Greater Pittsburgh area and surrounding counties.

**Services Provided:**

Mercy is an independent, academic medical center offering a broad range of medical, surgical, and home health services, which includes these centers of excellence: Mercy Heart Institute; Mercy Neuroscience Institute; Mercy Trauma and Burn Centers; Mercy Rehabilitation Center; Mercy Women's Health; Mercy Children's Medical Center; Mercy Diabetes Program; Mercy Cancer Institute; and Mercy Orthopedic Services.

**Equipment:**

Specific handheld devices have not been selected because of constant and significant changes in the design and availability of devices introduced into the marketplace. Selection is expected to be made during the second quarter of 2006.

**Transmission:**

All of the above planned hardware devices will be connected to our software information systems using wireless (IEEE 802.11b,g standard), untethered in any fashion, communication protocols as the network connection.

Millcreek Community Hospital  
5515 Peach Street  
Erie, PA 16509  
[www.millcreekcommunityhospital.com](http://www.millcreekcommunityhospital.com)

Tim Zurn, RPh  
Ph: 814-868-8144  
ax: 814-868-8199  
Email: [tzurn@lecom.edu](mailto:tzurn@lecom.edu)

**Network Partners:**

The project is contained within the closed network at Millcreek Community Hospital and will encompass patient and non-patient care areas. The project will subsequently extend to 13 medical practice sites in Erie County.

**Project Purpose:**

Improve quality of health care provided to all patients of the health system, including the hospital and the satellite medical practice sites, via upgrade and expansion of the informatics system.

**Outcomes Expected:**

- Create an infrastructure to support an informatics network between all patient care areas.
- Enhance patient safety by decreasing medication errors and adverse drug events.
- Provide remote access to physicians and other authorized users.
- Assure privacy of patient information.

**Service Area:**

Millcreek Community Hospital is a 135-bed, acute care facility located in Erie County (Erie, PA) and has a population of approximately 281,000. Millcreek Community Hospital has 13 affiliated medical offices/clinics located throughout Erie County.

**Services Provided:**

Millcreek Community Hospital offers a full range of services including emergency care, diagnostic, surgical services, chemical dependency, adult and pediatric behavioral health, obstetric/gynecology, rehabilitative, and intensive care.

**Equipment:**

Seven Dell departmental file servers, 1 EMR server, 4 Internet Gateway servers, 10 background job servers, 1 Forward Advantage Fax Solution, 2 Citrix Meta Frame Servers for remote access, 8 Dell Storage Arrays, 1 Bridgehead Centralized Backup Solution, 1 Modular UPS, and 1 Core Data Center Network Switch.

**Transmission:**

TCP/IP local and Web-based remote access.

The Venango Center for Healthcare Careers (VCHC)  
Oil Region Alliance of Business, Industry, & Tourism

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Oil Region Alliance of Business, Industry, & Tourism  
P.O. Box 128  
Oil City, PA 16301-0128

Randy P. Seitz  
Deb Lutz  
Ph: 814-677-3152 Ext. 115  
Fax: 814-677-5206  
[dlutz@oilregion.org](mailto:dlutz@oilregion.org)

**Network Partners:**

Clarion University of Pennsylvania, Dubois Business College, University of Pittsburgh/Titusville, Venango Technology Center, Clarion/Venango Educational Resources Alliance

**Project Purpose:**

The purpose of this project is to address the educational/training needs of three distinct segments within the healthcare industry; Respiratory Therapy, Clinical Medical Assistant Program and Pre-Nursing Distance Learning Opportunities. This will be accomplished through the development of new comprehensive programs of study in those three distinct areas. These programs will emphasize a distance-learning format to supplement and enhance existing regional programs.

**Outcomes Expected:**

Provide high-quality training programs to meet the needs of the vital health care industry, which will provide careers in health services offering career mobility, flexibility and security. The outcome will be to increase retention rates of those who do enroll by employing learner-centered instructional strategies.

**Service Area:**

Initially, this project is targeted to serve a multi-county region in northwest Pennsylvania, encompassing Venango, Warren, Forest, Clarion and Bradford counties primarily, with the potential of drawing residents from every county in northwest Pennsylvania.

**Services Provided:**

Core services provided within the scope of the project include a focus on education for health care career opportunities. This education will primarily be provided via distance learning opportunities.

**Equipment:**

Laptop computers, video conferencing equipment, 12 ITV classrooms w/Pictur-tel and Polycom equipment, ISDN and IP technology PCs for Blackboard instruction.

**Transmission:**

ISDN 128K, ATM 512K and above IP 712K and above, DSL, Broadband Cable Modem & Wireless.

Pennsylvania College of Optometry  
8360 Old York Road  
Elkins Park, PA 19027  
[www.pco.edu](http://www.pco.edu)

Felix M. Barker, OD, MS  
Ph: 215-780-1427  
Fax: 215-780-1325  
Email: [Felix@PCO.edu](mailto:Felix@PCO.edu)

**Network Partners:**

Not Applicable.

**Project Purpose:**

The Pennsylvania College of Optometry operates a large urban eye care system involving a large central clinic (The Eye Institute) and two outlying clinics (Strawberry Mansion and Mt. Airey) located in underserved areas. We use store and forward technology and a compatible image management and communications software (Image Consultant) to establish and maintain a database and to communicate regarding cases and educational issues between sites.

**Outcomes Expected:**

We track telemedicine interactions between sites.

**Service Area:**

This is an urban telehealth program. We do not serve HPSAs or MUAs currently.

**Services Provided:**

This program started in 2002 and provides primary eye care and specialty eye care via telehealth and other forms of outreach.

**Equipment:**

We use biomicroscope cameras and platform fundus cameras along with an image capture and archival system with internet encrypted transmission between sites.

**Transmission:**

We use Internet protocols that are encrypted. We have a T-1 line between our main clinic and our academic campus.

Researching on the Financial Viability of Telehealth and Telehealth's Impact on Home Health Nurses  
Pennsylvania Homecare Association

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Pennsylvania Homecare Association  
20 Erford Road, Suite 115  
Lemoyne, PA 17043  
[www.pahomecare.org](http://www.pahomecare.org)

Kathryn Dansky, PhD, RN, Penn State University  
Vicki M. Hoak  
Ph: 717-975-9448, Ext. 28  
Fax: 717-975-9456  
Email : [vhoak@pahomecare.org](mailto:vhoak@pahomecare.org)

**Network Partners:**

Pennsylvania State University and 36 homecare agencies located throughout Pennsylvania (29 of which are providing telehomecare services).

**Project Purpose:**

To combine three years of data collection on workforce issues and organizational support for telehealth. In addition, financial information will be collected from the agencies participating in the study to develop a break-even analysis for telehealth. This break-even analysis can be easily replicated for any home health agency to evaluate the financial impact that telehealth can have on its bottom line.

**Outcomes Expected:**

Telehealth is a viable tool for managing an increase in patient census. It is possible to increase efficiencies at an agency by increasing revenues, reducing costs, or a combination of both approaches to cover the costs of telehealth and, at a minimum, break-even.

**Service Area:**

Of the 36 participating agencies, 29 are providing telehomecare services in 50 of Pennsylvania's 67 counties.

**Services Provided:**

Remote patient monitoring and video-home visits.

**Equipment:**

Agencies are using home telemonitors that transmit vital signs over POTS and/or video telephone devices that also transmit over POTS. Equipment varies by agency. There are a total of approximately 800 units statewide in this study.

**Transmission:**

Information transmits from the homes over POTS to a central station at the home health agency.

Penn State Cancer Institute  
500 University Drive H069  
Hershey, PA 17033  
[www.hmc.psu.edu/cancer/](http://www.hmc.psu.edu/cancer/)

Andrea Lazarus, PhD  
Ph: 717-531-5640  
Fax 717-531-5103  
Email: [alazarus@psu.edu](mailto:alazarus@psu.edu)

**Network Partners:**

Hershey Medical Center (HMC), Mount Nittany Medical Center (MTMC), Lehigh Valley Hospital (LVH).

**Project Purpose:**

The goal of this project is to establish a digital informatics and communications system, which will provide a virtual work environment in offering patient services across central and northeastern Pennsylvania. The advantages of such a system include the ability to bring continuing education and training to isolated rural areas and the ability for immediate interpretation of medical information and laboratory and radiology test results. The system will also allow patients to get cancer care from their local physicians while having increased access to clinical trials. Through this system, unnecessary travel to tertiary care facilities can be avoided.

**Outcomes Expected:**

The ultimate indicator of achieving these goals will be submitting a successful application to achieve NCI-designation as a comprehensive cancer center. Since submission of such a proposal is still 3-4 years away, we will rely on achieving unity in conducting clinical trials as a short-term goal. We have already started the process of establishing a common tumor bank with the three clinical partners (HMC, MNMC, and LVHS), and have been conducting cooperative group trials at all sites through our clinical trials network. Within the next year we hope to have a plan in place for a central IRB and a common data safety and monitoring plan for oversight of clinical trials. With the installation of the new videoconferencing equipment, we hope to make more of the educational (both professional and public) offerings available at the HMC more accessible to the MNMC and LVHS as well.

**Service Area:**

The primary service area is a 27-county region in Central Pennsylvania serving a mostly rural population.

**Services Provided:**

Clinical telemedicine, public education and outreach, professional education (including CME), clinical trials access.

**Equipment:**

Tandberg dual monitor Codecs in multiple sites at the three partnering institutions; desktop polycom units; SM fiber transceivers; high-resolution video/data projectors; videoconference cameras.

**Transmission:**

Transmission is achieved using the Internet and videoconferencing areas across T1/T3 links between partnering institutions.



Penn State University College of Medicine  
500 University Drive H175  
Hershey, PA 17033  
[www.hmc.psu.edu](http://www.hmc.psu.edu)

Jay Moskowitz, PhD  
Kathryn J. Kaylor, MPA, CRA  
Ph: 717-531-8495  
Fax 717-531-5352  
Email: [kkaylor@psu.edu](mailto:kkaylor@psu.edu)

**Network Partners:**

10 University Physician Groups across Central Pennsylvania in Centre, Cumberland, Dauphin, Lancaster, Lebanon, and Luzerne counties.

**Project Purpose:**

The accelerating pace of discoveries in basic sciences is outstripping the scientific community's capacity to turn laboratory advances into applications that benefit patients. We intend to recruit physician-scientists who can translate basic science discoveries into new prevention and treatment strategies. In addition to fostering a multidisciplinary approach to care, we will also develop essential animal models of human disease and create new clinical research biostatistical tools, outcome measures, and clinical end points to enhance the quality of clinical trials. Finally, we will establish regional and national resources to offer professional guidance in study design, implementation, and data analysis.

**Outcomes Expected:**

We expect to train and facilitate the research of two physician-scientists each year for the next three years. This will result in an increase in basic science, translational, interdisciplinary publications. We will also create a program to develop animal models of human disease within the Department of Comparative Medicine. The physician-scientist program will facilitate the enhancement of the K-30 program awarding certificates/masters degrees to physician-scientists. Finally, we will establish a primary care clinical trials network to provide opportunities for new treatments and prevention modalities to the citizens of Central Pennsylvania.

**Service Area:**

The project will impact approximately 3,000,000 residents in Central Pennsylvania spanning 10 counties. Much of this region is in Appalachia, which has been designated as a medically underserved area.

**Services Provided:**

The physician-scientist program will provide the special mechanism to assist in improved medical care and research into new treatments. We will establish a primary care clinical trials network to provide opportunities for these research and patient care opportunities along with prevention education for the service area.

**Equipment:**

Videoconferencing between clinical network sites will use Tandberg Coded units, desktop Polycom units, SM fiber transceivers, high-resolution video data projectors, and videoconference cameras..

**Transmission:**

Transmission will be achieved using the Internet and videoconferencing.

Pinnacle Health System  
409 South Second Street  
Harrisburg, PA 17105-8700  
[www.pinnaclehealth.org](http://www.pinnaclehealth.org)

Carol Connor  
Christopher P. Markley, Esq.  
Ph: 717-231-8210  
Fax 717-231-8157  
Email: [cmarkley@pinnaclehealth.org](mailto:cmarkley@pinnaclehealth.org)

**Network Partners:**

Not Applicable.

**Project Purpose:**

To allow physicians to enter orders online; have a Medication Administration Checking system; and to provide online access, including remote access to patient records/charts allowing for focus on patient safety and reduction of medical errors. Automation of these processes is part of the electronic health record and allows for implementation of additional telehealth programs.

**Outcomes Expected:**

This project is expected to increase remote health record access, reduce medical errors and increase patient safety. Tracking will be accomplished through use of reports generated from the Medication Administration Checking system, Risk Management systems, and Data Warehouse.

**Service Area:**

Pinnacle Health System's primary service area covers 5 counties—Cumberland, Dauphin, Lebanon, Perry, and Northern York. Dauphin County includes the City of Harrisburg, which has a significant low-income, underserved population. Also served are a number of rural areas for which Pinnacle Health System is the sole provider of health care.

**Services Provided:**

Pinnacle Health System is comprised of four hospitals; more than a dozen family practice and urgent medical centers; two outpatient surgery centers; home health and hospice agencies; and additional health services.

**Equipment:**

The program will utilize notebook computers; information carts with monitors and PCs; wall mounted units; and bed arm units with servers and software. Additionally, cables and switchports will accommodate wireless expansion.

**Transmission:**

Within facilities, wireless and 1GB fiber backbone with 100MB to the computers will be utilized. Remote providers gain access through secure, encrypted Internet links.

Safe Harbor Behavioral Health  
1330 West 26<sup>th</sup> Street  
Erie, PA 16508  
[www.safeharborbh.org](http://www.safeharborbh.org)

David Rosswog, LPC  
Ph: 814-451-2317  
E-mail: [David.Rosswog@shbh.org](mailto:David.Rosswog@shbh.org)  
Julie Sorrentino Kresge  
Ph: 814-451-2206  
Fax 814-451-2280  
E-mail: [Julie.Kresge@shbh.org](mailto:Julie.Kresge@shbh.org)

**Network Partners:**

Beacon Light Behavioral Health, Bradford, PA (headquarters) and Warren, PA (telemedicine program satellite site).

**Project Purpose:**

Telemedicine services will be provided in Warren County, where access to child psychiatric services is limited. There are two major goals of the project—to increase access to quality children’s mental health services for rural areas and to successfully provide ongoing education, evaluation, and support for telemedicine clinical services. This increased access will allow for more readily accessible and effective protocol development, scheduling, psychiatric evaluation, medication management, case review, specialist referrals, data collection and analysis, and hopefully in the future of the state of Pennsylvania, billing.

**Outcomes Expected:**

The project will serve approximately 2 to 6 children in Warren, PA with mental illness. Through the telemedicine project, we will track participant utilization, types of psychiatric services provided, progress, and outcomes. Patient and staff participants will complete satisfaction surveys for each telemedicine encounter. The telemedicine committee will utilize this data to monitor quality, evaluate the needs for additional support, for ongoing and additional telemedicine program funding.

**Service Area:**

The service area is Warren County-Warren, PA with a population of just over 42,000—full county HPSAs and MUA. Just under 10% of the population lives in poverty. Beacon Light Behavioral Health provides child mental health services for the county and currently has a waiting list for services.

**Services Provided:**

The Safe Harbor Behavioral Health Telemedicine Program initiated discussions with Beacon Light Behavioral Health and a memorandum of understanding was signed in November of 2005. Services to be provided will consist of psychiatric evaluation, medication management, case review, specialist referrals, data collection and analysis.

**Equipment:**

The Safe Harbor Behavioral Health Telemedicine Program has purchased equipment and is in the process of setting up the connection so that the equipment may be installed and utilized with a tentative start date of April 1, 2006. The start date was delayed due to difficulty with the ISDN access and potential state waiver issues with off-site psychiatric care.

**Transmission:**

The Safe Harbor Behavioral Health Telemedicine Program and the spoke sites have determined that an ISDN connection is the most available and the most secure.

SUN Home Health Services (SHHS)  
61 Duke Street, PO Box 232  
Northumberland, PA 17857  
[www.sunhomehealth.com](http://www.sunhomehealth.com)

Steven B. Richard  
Ph: 570-473-7625  
Fax: 570-473-3070  
E-mail: [sbrichard@sunhomehealth.com](mailto:sbrichard@sunhomehealth.com)

**Network Partners:**

Not Applicable.

**Project Purpose:**

The purpose of the grant award has an emphasis in both the Distance Learning/Educational and Informatics/Informational Services areas. SUN Home Health Services will upgrade its aged wide area network to provide for more efficient operation of all programs including the electronic medical record and to meet the Health Insurance Portability & Accountability Act (HIPAA) Security Rule requirements. The network will be expanded/improved to allow for video conferencing and other education to be exchanged between offices and with patients and their family.

**Outcomes Expected:**

By upgrading SHHS' computer and operating systems, SHHS is ensuring the confidentiality of protected health information, meeting federal requirements, and avoiding penalties for non-compliance. Expanding/upgrading SHHS' network will allow the use of video conferencing and community education while improving the performance of the existing network.

**Service Area:**

The primary and at least initial are of coverage for SHHS includes the following counties: Snyder, Union, Northumberland, Mifflin, Juniata, Schuylkill, Perry, Lycoming, Dauphin, Columbia, Montour, Clinton, Centre, and Sullivan.

**Services Provided:**

SUN Home Health Services, Inc., A VNA and Related Enterprises (SHHS) is a voluntary, not-for-profit organization whose mission is to provide high quality community health and social services in cooperation with other community health and social organizations.

**Equipment:**

At offices: Windows XP desktops and laptops, Windows server, routers, switches, firewalls, hubs, telemed units, and video conferencing systems.

**Transmission:**

Full T1 Frame Relay lines/fiber/DSL/cable modem/connections between offices and T1 connection to the Internet.

Susquehanna Health System  
777 Rural Avenue  
Williamsport, PA 17701  
<http://www.shscares.org>

Karen M. Armstrong  
Stuart Hague  
Ph: 570-321-3171  
Fax 570-321-3199  
Email: [karmstrong@shscares.org](mailto:karmstrong@shscares.org)  
[shague@shscares.org](mailto:shague@shscares.org)

**Network Partners:**

The Laurel Health System – Wellsboro, PA  
The Jersey Shore Hospital, Jersey Shore, PA  
The Bucktail Medical Center, Renovo, PA

**Project Purpose:**

To implement an electronic patient record that spans the continuum of care and the life of the patient that can be accessed and utilized by all care providers participating in this project from any location to enable more efficient quality patient care. Access to PACS images included in the record is being extended to surgical suites and imaging intensive physician offices via dedicated viewing stations.

**Outcomes Expected:**

Some of the outcomes have been the use and access of this record by physicians and caregivers, testing and validity of user interfaces, testing of security methods (such as digital certificates, tokens and biometrics) and acceptable use, elimination of paper charts both in physicians' offices and acute care settings, testing and validation of Web portals and online resource usage, mass education of physicians on health care informatics, elimination of printed radiology films, complete transformation to digital radiography films, and remote access of records.

**Service Area:**

North Central Pennsylvania to the New York State border including Lycoming, Clinton, and Tioga counties of Pennsylvania.

**Services Provided:**

Electronic Health Record development including wide area network development, laboratory, radiology, respiratory therapy, and pathology. History and physicals, discharge summaries, operative reports, consults, PACS images, scanned documents like Emergency room records, pharmacy drug histories. This information is accessible to clinicians from any place via secure Web portal.

**Equipment:**

Wide Area Network (WAN) equipment, Hewlett-Packard servers, Cisco routers, and many varieties of laptops and desktop personal computers.

**Transmission:**

Redundant ATM ringed network interconnecting other facilities and organizations via various methods such as regional cable service company provided fiber, Telco T1s, Telcom frame relays, Internet VPNs and cable modem services. Band Width ranges from 56KB to 100 MB.

Thomas Jefferson University Hospital  
Gibbon Building, 111 S. 11<sup>th</sup> St., Suite 6215  
Philadelphia, PA 19107  
[www.jeffersonhospital.org/cim/](http://www.jeffersonhospital.org/cim/)  
[jeffline.jefferson.edu/JMBCIM/](http://jeffline.jefferson.edu/JMBCIM/)

Daniel A. Monti, MD  
Kathy McMearty  
Ph: 215-503-4423  
Fax: 215-503-0414  
EMail: [kathy.mcmearty@jefferson.edu](mailto:kathy.mcmearty@jefferson.edu)

**Network Partners:**

Not applicable.

**Project Purpose:**

Establish an informatics resource supporting the development of Integrative Medicine (IM) practice standards by developing a website accessible to healthcare professionals & institutions supporting work toward the creation of IM practice standards. Activities involve development of: demonstration protocols in the field of clinical oncology for evidence-based integration of complementary therapies into conventional cancer care; demonstration protocols for safe use of nutraceuticals as part of an Integrative Medicine practice; and prototype digital repository for Integrative Medicine documents that supports Integrative Medicine best practices.

**Outcomes Expected:**

External access enabled to web content developed during the course of this project.  
Measurement tools will include an inventory of products developed during the course of this project.

**Service Area:**

Intramural and National.

**Services Provided:**

Web Based Distance Learning-Spring/Summer 2006.  
Digital Repository for Integrative Medicine Documents-Spring/Summer 2006.

**Equipment:**

Computer.  
Software applications which may be used on this project include: Cold Fusion MX, MySQL and Access database systems, and Perl/CGI scripting.

**Transmission:**

Internet.

Tyrone Hospital  
1 Hospital Drive  
Tyrone, PA 16686  
[www.tyronehospital.org](http://www.tyronehospital.org)

Stephen C. Gildea  
Ph: 814-684-6399  
Fax: 814-684-6395  
Email: [sgildea@tyronehospital.org](mailto:sgildea@tyronehospital.org)

**Network Partners:**

Tyrone Hospital; Tyrone Medical Associates.

**Project Purpose:**

Through the use of Health Information Technology in the clinical setting at Tyrone Hospital, patient safety, the quality of care, and the efficiency of providing care will dramatically improve. The Tyrone Hospital Health Information Network project is an 18 month effort to develop and implement remotely accessible healthcare informatics that will provide caregivers with automation, freeing them from inefficient methods of documenting and coordinating patient care.

**Outcomes Expected:**

Improved quality of care and patient safety—All inpatient charts on EMR by 2007. Improved patient safety through elimination of errors due to illegible handwriting—All patient test and medication orders automated by 2007. Enhanced ability to monitor the progress of patients and check test results, improving the quality of patient care—50% of attending physicians with access to EMR by 2007. Improved patient safety and quality of care—All physicians, nurses, and other caregivers have access to EMR by 2007.

**Service Area:**

Counties and communities served are the counties surrounding Blair County: Centre, Huntingdon and Cambria. The communities include all surrounding communities.

**Services Provided:**

The Tyrone Hospital Information Network is newly formed to provide Patient Health Information to providers that are located within the Tyrone area. This information will be in electronic format. Services include Primary Care, Radiology, Lab, Physical Therapy, Respiratory Therapy, Pharmacy, Emergency Medicine and Surgery.

**Equipment:**

Physician Offices and other care providers will access Electronic Patient Records and Electronic Medical Records via a secure VPN connection. Technology includes Cisco Network equipment, Microsoft Windows Operating Systems, and software from Medical Information Technology, Inc.

**Transmission:**

A partial T1 line exists today, with capacity up to a full T1 line. Remote offices will be connecting via either DSL or Cable Broadband where available.

University of Pittsburgh School of Nursing  
Nurse Anesthesia Program  
336 Victoria Building  
3500 Victoria St.  
Pittsburgh, PA 15261

John M. O'Donnell, CRNA, MSN  
Ph: 412-624-4860  
Fax: 412-383-7227  
Email: [jod01@pitt.edu](mailto:jod01@pitt.edu)

**Network Partners:**

Covenant Medical Center, Saginaw, Michigan  
Altoona Hospital, Altoona, PA  
Geisinger Medical Center, Danville, PA

**Project Purpose:**

This project enabled nurse anesthesia students to participate in the classes provided at the parent university while affiliating at rural and distant sites. Increase the number of students accepted into the Nurse Anesthesia Program. Target recruits from rural areas for admission to the anesthesia program so as to increase the number of providers to that population.

**Outcomes Expected:**

Transmission of nurse Anesthesia Program curricular offerings via distance education efforts. Increase enrollment at the University of Pittsburgh School of Nursing Nurse Anesthesia Program. Develop relationships with clinical facilities serving elderly and rural populations.

**Service Areas:**

Not applicable to this project.

**Services Provided:**

Distance learning of key components of the anesthesia curriculum to students recruited from and affiliating in rural/distant clinical sites.

**Equipment:**

Dell Optiplex desktop computer with NetMeeting software, Starboard EM Panel, Kodak VR20 camera, Dell Inspiron desktop computers for distant sites.

**Transmission:**

Network connections equivalent to T1 line, ISP provider.



Wayne Memorial Hospital  
601 Park Street  
Honesdale, PA 18431  
[www.wmh.org](http://www.wmh.org)

Thomas Hoffman/David Hoff  
John Dennis  
Ph: 570-251-6533  
Fax: 570-253-8993

**Network Partners:**

Wayne Memorial Hospital will have no network partners in the OAT-funded initial phase of this multi-phase project.

**Project Purpose:**

Purpose of Project-It is the premise of this proposed project that a significant aspect of patient safety that can be improved is the medication use process. The introduction of information systems automation and standardization of the medication process of ordering, transcribing, dispensing and administering drugs and other pharmaceuticals can be improved substantially. The project will include introducing automation and information systems in the following areas: inpatient units, operating rooms, and emergency services.

**Outcomes Expected:**

The ultimate goal of the project is an improvement in patient safety. This shall be achieved through a reduction in medication errors by 50% over the previous year's events.

**Service Areas:**

The service area for this phase of the project is the county of Wayne in Pennsylvania, which includes 4 MUAs, 7 Geographic HPSAs, 12 Low-Income HPSAs, a countywide Mental Health HPSA and a county-wide Dental HPSA.

**Services Provided:**

The principle activities of the project will be: 1) implementation of a Medical Reconciliation Process through the installation of a new Pharmacy Computer System; 2) implementation of medication surveillance and automated dispensing of medication; and 3) implementation of a bar-coded patient armband program to interface with the Pharmacy System verifying medication, dosage and route.

**Equipment:**

Siemens Pharmacy Application/Database Server (HP Alpha Server DS25); custom interfaces (Third party Lab results one way; PYXIS 2000 Demographics and ADT, charge/credit 2-way). Hospital IS (including financials and MR)-Siemens MS-4—MedSeries 4: Siemens MS4 Advanced Clinicals.

**Transmission:**

10/100 MB switched LAN.

RHODE ISLAND, Providence County  
HIV/AIDS Comprehensive Psychosocial Support Project  
Family Resources Community Action

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CMP FY 04

Family Resources Community Action  
245 Main Street  
Woonsocket, RI 02895  
[www.famresri.org](http://www.famresri.org)

Benedict F. Lessing, Jr., MSW  
Ph: 401-766-0900  
Fax: 401-767-4075  
Contact Person [blissing@famresri.org](mailto:blissing@famresri.org)

**Network Partners:**

Thundermist Health Center  
Physicians from various hospitals in the Providence area.  
AIDS Project Rhode Island

**Project Purpose:**

Develop a holistic approach to overall health maintenance and well being for persons living with HIV/AIDS by engaging clients in healthy lifestyle behaviors. This program uses health education, exercise training, nutritional counseling, and alternative therapies to enhance medical services and maximize gains made through consistent medical care and treatment adherence.

**Outcomes Expected:**

Over 25% of consumers will be engaged in exercise related activities and 50% will use nutrition services. Both groups will report improved physical stamina and overall mental health. 50% will use education, support groups, weekly meals and social activities. Consumers will have a better understanding of the disease and access to safe, drug free environments.

**Service Area:**

Northern Rhode Island.

**Services Provided:**

Personal exercise training, nutritional counseling, food pantry, meals, cooking classes, educational forums, massage therapy, support groups, art classes, mental health and substance abuse counseling.

**Equipment:**

Weight training and exercise equipment.

**Transmission:**

Not Applicable.

VNA of Care New England  
51 Health Lane  
Warwick, RI 02886  
[www.cnehomehealth.org](http://www.cnehomehealth.org)

Karen Beauchesne RN, MN  
Ph: 401-737-6050  
Fax: 401-732-6210  
[kbeauchesne@carene.org](mailto:kbeauchesne@carene.org)

**Network Partners:**

None

**Project Purpose:**

VNA of Care New England Point of Care Technology allows all home health staff involved in a single patient's care to use a notebook computer to carry an electronic copy of a patient's record into their home and then send updated information back to a common database, making it available in real-time to other field staff involved in the patient's care. Additionally, medication orders are automatically checked for potential drug interactions greatly enhancing patient safety.

**Outcomes Expected:**

1. Ensure that the patient, all field staff involved in their care and agency have access to needed clinical information when and where it is needed;
2. Deliver cost-effective care;
3. Ensure that patient needs are met in a timely and accurate manner;
4. Minimize the chance for potential error, and
5. Enhance overall patient safety.

**Service Area:**

Our service area is the entire state of Rhode Island.

**Services Provided:**

VNA of Care New England provides a comprehensive range of home healthcare services.

**Equipment:**

Fujitsu B-series Touch screen Notebook computers

**Transmission:**

Not applicable

VNA of Care New England  
51 Health Lane  
Warwick, RI 02886  
[www.cnehomehealth.org](http://www.cnehomehealth.org)

Karen Beauchesne, RN, MN  
Ph: 401-737-6050  
Fax: 401-732-6210  
[kbeauchesne@carene.org](mailto:kbeauchesne@carene.org)

**Network Partners:**

We do not have any project partners.

**Project Purpose:**

Increasing Access to Home Health Care through Telehealth—Phase II will focus on increasing the diagnoses that are treated with telehealth where benefits similar to those that have been proven in the CHF population may be realized for both the patient and the VNACNE. During the project, a dedicated FTE will be added and additional equipment purchased.

**Outcomes Expected:**

1. Comparison of baseline data prior to telehealth program implementation per patient for use of emergent care, re-hospitalization rates and readmissions to home health care.
2. Improved utilization of nursing resources measured via case review.
3. Outcome Concept Solutions benchmarking project to capture data that includes hospitalizations, emergent care utilization and resource utilization to be measured through key indicators of program efficacy, which include quality, clinical, financial and resource utilization. Analysis will be performed on both risk-adjusted and non-risk adjusted data and will be both comprehensive and condition-specific.

**Service Area:**

VNACNE provides statewide services.

**Services Provided:**

Telehealth services are currently provided to Medicare patients only with cardiac diagnoses. During the grant period, we hope to add additional chronic diagnoses such as diabetes and engage additional payors.

**Equipment:**

McKesson Health Buddy.

**Transmission:**

Transmission of patient data is through the Health Buddy appliance internal modem (33.6 KB/s) via POTS line. Data is transmitted and housed through a Web portal that is hosted by McKesson.

Thundermist Health Center  
450 Clinton Street  
Woonsocket, RI 02895  
[www.thundermisthealth.org](http://www.thundermisthealth.org)

Ernie Balasco  
Ph: 401-767-4100, Ext. 3491  
Fax: 401-235-6899  
[ernieb@thundermisthealth.org](mailto:ernieb@thundermisthealth.org)

**Network Partners:**

8 spokes in the network are part of the applicant organization and RHIO Project: RI Dept. of Health, EHRRI, RIHCA, RI Quality Institute.  
Hospitals: Landmark Medical Center, Kent Hospital, South County Hospital

**Project Purpose:**

To install and implement an electronic health record across all eight medical sites in the Thundermist Health Center system. The EHR will be purchased through EHRRI, a Value Added Reseller owned by four health care organizations, including Thundermist Health Center. EHRRI's mission is to promote statewide physician adoption of electronic health records by offering a single HER product and to subsidize the sale and service of the product to its members. The Thundermist HER will enhance quality of care at Thundermist, provide data to the RI RHIO and connect sites with community hospitals.

**Outcomes Expected:**

Improved Clinical Quality as measured by HEDIS, HRSA and internal data audits.  
Improved Patient Satisfaction as measured by the HRSA PEERS survey.  
Improved Clinical Compliance as measured by JCAHO standards.  
Lower costs as measured by staffing analysis CBR and internal audits of accounts receivable.  
Lower adverse incidents as measured by incident reports.  
Higher productivity as measured by RVU weekly and monthly reports by provider/site.

**Service Area:**

Providence County, Kent County and Washington County, serving 8 HPSAs (medical, dental and mental health).

**Services Provided:**

Thundermist provides primary medical care (pediatrics, internal medicine, obstetrics, gynecology and family practice), HIV specialty care, dental services and behavioral health services, and pharmaceutical services. EHR is to be implemented in 2006 at all sites. A patient portal is planned for 2007.

**Equipment:**

A single network serving all sites with the EHR and Practice Management Software equipment includes 25 tablet PCs, routers, T-1 lines, servers and PCs.

**Transmission:**

Virtual Ethernet Wan, Broadband and T-1 connections.

Advanced Technology Institute (ATI)  
5300 International Blvd.  
N. Charleston, South Carolina 29418  
[www.aticorp.org/hc.htm](http://www.aticorp.org/hc.htm)

Joseph Jones  
Ph: 843-760-3649  
Fax: 843-207-5458  
Email: [jones@aticorp.org](mailto:jones@aticorp.org)

**Network Partners:**

CareSouth Carolina (six locations), Family Health Centers, Inc., St. James-Santee Family Health Center, Healthcare Outreach, Joslin Diabetes Center, and Estenda Solutions, Inc.

**Project Purpose:**

The purpose of the HEART Program (Phase II) is to establish and evaluate telehealth technology to address the need to manage diabetes in rural and underserved areas.

The HEART Program disease management goals are to:

1. Examine and implement Intelligent Care Management (ICM) technologies.
2. Identify extensions to ICM technology to support care management for other related chronic diseases.
3. Identify diabetic retinopathy diagnostic procedures that meet the needs for care delivery in Community Health Centers (CHCs).

**Outcomes Expected:**

The outcome of this program will be an expanded use of telehealth technology to improve the quality of diabetes care, increase wellness initiatives and reduce the adverse impact of diabetes for patients served by Community Health Centers (CHCs).

**Service Area:**

8 rural and underserved counties in South Carolina.

**Services Provided:**

Providing services in identifying CHC requirements, conducting diagnostic procedures and implementing diabetes disease management initiatives.

**Equipment:**

Videoconference equipment from Tandberg and Polycom. Topcon and Canon Non-Mydriatic Fundus Cameras, Comprehensive Diabetes Management Program (CDMP) technology and home telehealth equipment as appropriate.

**Transmission:**

T1, DSL, and cable modem.

**SOUTH CAROLINA, Beaufort County**  
**South Carolina Prostate Cancer/Telehealth Project**  
**Beaufort-Jaspert-Hampton Comprehensive Health Services**

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**CMP FY 00, 02, 03**

Beaufort-Jasper-Hampton Comprehensive Health Services  
721 Okatie Highway 170  
Ridgeland, SC 29936  
<http://www.bjhchs.com>

Roland J. Gardner  
Ph: 843-987-7400  
Fax: 843-987-7484  
Email: [rjgardner1@hargray.com](mailto:rjgardner1@hargray.com)

**Network Partners:**

The Institute for Cancer Prevention, The Urology Group, Wirefree Network Services.

**Project Purpose:**

Bring translational research in prostate cancer from Institute for Cancer Prevention (IFCP) in New York City to rural, underserved men in the Beaufort-Jasper-Hampton Comprehensive Health Services (BJHCHS) service area in South Carolina to enhance the understanding of hormonal, nutritional and lifestyle factors that increase the risk of prostate cancer in aging males.

**Outcomes Expected:**

Increase screening and education of men ages 20-89 to help identify those who may be at risk for prostate cancer. By collecting information from men in this age group, researchers in New York gain knowledge of risk factors for prostate cancer, and using the data collected, can initiate clinic trial interventions that will continue to expand the base of knowledge pertaining to prostate cancer.

**Service Area:**

The South Carolina Prostate Cancer/Telehealth Project will serve men ages 20-89 in Beaufort, Jasper and Hampton counties.

**Services Provided:**

All eligible men receive an annual clinical prostate exam, including a digital rectal exam, Blood analysis (PSA, Lipids, Testosterone), nutritional and lifestyle assessment and ongoing lifestyle educational programs.

**Equipment:**

PolyCom Video conferencing equipment including Polycom Viavideo, Dell servers, Cisco routers (2611, 3600).

**Transmission:**

Full T1, Internet, 128-bit encryption tunnel through Citrix Metaframe XP, VPN.

Greenville Hospital System  
701 Grove Road  
Greenville, SC 29605  
[www.ghs.org/](http://www.ghs.org/)

Greg Rusnak  
Ph: 864-455-6146  
Fax: 864-455-8439  
Email: [grusnak@ghs.org](mailto:grusnak@ghs.org)

**Network Partners:**

Not Applicable

**Project Purpose:**

An electronic ICU network enables clinical management of intensive care patients by physician intensivists and critical care nurses working from a central monitoring station. Physicians and nurses use real-time video and audio, electronic stethoscopes and advanced life-monitoring equipment to assess, treat and monitor ICU patients at four Greenville Hospital System campuses. The network leverages the limited number of intensivists by expanding coverage from Greenville Memorial Hospital to three satellite hospitals. Quality of clinical process will be improved, variation in outcomes reduced, and costs reduced.

**Outcomes Expected:**

Equipment installed and working properly. May evaluate extension of standardized care processes to more patients, decreased ICU mortality, decreased length of stay in ICU and floor, and cost reduction from remaining ICU days.

**Service Area:**

10 counties in the Upstate area of South Carolina, including Anderson, Greenville, Laurens, Oconee, Pickens, Spartanburg counties.

**Services Provided:**

Comprehensive, integrated healthcare delivery.

**Equipment:**

8 eICU eCareManager HIS/PACS workstations. 116 high-resolution video zoom cameras, microphones, speakers, and bedside monitors in patient rooms. Data Center of eVantage Production, Test Server Rack, and hospital HIS, ADT, Lab, and PACS systems.

**Transmission:**

Internet, ASP hosted source and VISICU VPN Access.



Developing a Telehealth Infrastructure to Address Health Disparities Through  
Education and Training  
Voorhees College

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Voorhees College Telehealth Network  
PO Box 678  
Denmark, SC 29042  
[www.voorhees.edu](http://www.voorhees.edu)

Leroy Davis, PhD  
Ph: 803-703-7007  
Fax: 803-703-1084  
Email: [ldavis@voorhees.edu](mailto:ldavis@voorhees.edu)

**Network Partners:**

Arnold School of Public Health of the University of South Carolina, Columbia, SC; Medical University of South Carolina, Charleston; Family Health Centers, Inc., Orangeburg.

**Project Purpose:**

A telehealth infrastructure will be developed to address health disparities in rural South Carolina. Partners will assist in conducting health seminars and workshops for rural residents and students at a distance. Telehealth technology will also be employed by Voorhees College to deliver a Healthy Living Course to two off-campus sites.

**Outcomes Expected:**

A two-credit Healthy Living course to be offered to 50 off-campus adult students and 60 on-campus students (pre- and post- testing); 6 health-related seminars and workshops will be conducted at various sites (evaluation of instructor and student satisfaction survey).

**Service Area:**

South Carolina Counties: Bamberg, Barnwell, Charleston, Lexington, Orangeburg, and Richland.

**Services Provided:**

Will provide education and training programs to help eliminate health disparities.

**Equipment:**

At all 3 sites (main and two remote): 1 WiredRed videoconferencing instruction/collaboration system (WebCall sound management equipment, two video workstations with pan/scan and whole room cameras); and 5 client videoconferencing units for remote participants (webcams and microphone headsets). At the main site: 1 Dell server with WiredRed videoconferencing software.

**Transmission:**

1 Full T1 line at the main site for static VPN with remote sites. Business-grade broadband service at the two remote locations for dedicated VPN with main site. Remote participants utilize existing connectivity for client units (POTS, DSL, Cable).

**SOUTH DAKOTA, Minehaha County RTGP FY 94-96, RTGP FY 97-99, TNGP 03-05**  
**Avera Rural and Frontier Disease Management Telehealth Network**  
**Avera Health**

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Avera Rural Health Institute  
3900 West Avera Drive, Suite 201  
Sioux Falls, SD 57106  
[www.avera.org](http://www.avera.org)

Mary DeVany  
Ph: 605-322-6038  
Fax: 605-322-6006  
Email: [mary.devany@mckennan.org](mailto:mary.devany@mckennan.org)

**Network Partners:**

Avera Queen of Peace Hospital, Mitchell, SD (3 sites—Wessington Springs, Platte, Parkston); Avera St. Luke's Hospital, Aberdeen, SD (4 sites—1 specialty clinic, 3 SD sites in Eureka, Miller, Britton); Avera Sacred Heart Hospital, Yankton, SD (2 sites—1 hospital in O'Neill, NE, 1 local clinic); Avera McKennan Hospital, Sioux Falls, SD (5 receiving sites—Sioux Center, IA, Pipestone, MN, Scotland SD; 2 mental health centers in Luverne, MN and Pierre, SD; various specialty physician providers).

**Project Purpose:**

Develop a telehealth disease management program focusing in the areas of Congestive Heart Failure (CHF), Diabetes, Asthma/Allergy, Mental Health and Dermatology; expand currently available telehealth specialty services to additional regional sites indicating a need, specifically in the area of pediatrics (cardiology, neurology and infectious disease); expand availability of Certified Nurse Assistant (CNA) training; continue the expansion of distance education events to interested regional facilities; establish a network-wide telehealth "standard of practice".

**Outcomes Expected:**

1. Disease Management – a) CHF: compare admission/readmissions, improve patient education, improved quality of life (SF36); b) Diabetes: increase participation in appropriate diabetes management measures, compare hospitalizations, decrease hemoglobin A1C levels; c) Asthma/Allergy: compare emergency room visits, improve quality of life; d) Dermatology: increase access, improve provider efficiency; e) Mental Health: improve access; f) Pediatrics: (cardiology, neurology, infectious disease) – reduce patient travel, increase access and decrease diagnostic turn-around time, and g) Certified Nurses Assistant Training: increase access to state-required CNA training opportunities.

**Service Area:**

Includes 32 counties in: South Dakota (26), Iowa (1), Minnesota (2), and Nebraska (3) of which 21 counties are Primary Care HPSAs and 30 counties are Mental Health HPSAs.

**Services Provided:**

This network has been operational since December of 1993 and has provided a variety of services over the years. This project will focus on Disease Management (CHF, Diabetes, Asthma/Allergy, Dermatology, Mental Health); Pediatrics (Cardiology, Neurology, Infectious Disease), Certified Nurses Assistant training.

**Equipment:**

The interactive video portion utilizes various Polycom videoconferencing models, including iPower 9000, iPower 600, ViaVideos and various Viewstation models. The home telehealth equipment being used is the American Telecare Inc., model 1010.

**Transmission:**

Most sites utilize either a converged or a fractional T1. In addition, some sites will continue to utilize ISDN lines. The video bridge allows for both network options and provides "cross-networks" connectivity. The telehomehealth piece may also incorporate POTS lines.

University of South Dakota  
Department of Nursing  
414 E. Clark Street  
Vermillion, SD 57069  
[www.usd.edu/nursing](http://www.usd.edu/nursing)

June Larson, RN, MS  
Kathy Manning RN, BSN  
Ph: 605-677-6224  
Fax: 605-677-5886  
Email: [kmanning@usd.edu](mailto:kmanning@usd.edu)

**Network Partners:**

Evangelical Lutheran Good Samaritan Society (ELGSS).

**Project Purpose:**

Provide a workforce supply of Registered Nurses for rural Evangelical Lutheran Good Samaritan Society long-term care centers realizing a critical shortage of RNs. This Partnership will create a supportive, connected learning environment to deliver a nursing education program to the student. The student has the opportunity to “attend college” and earn an Associate of Nursing degree in nursing in a part-time format while employed by the partnering provider organization.

**Outcomes Expected:**

- ELGSS employee/students will graduate from the program each year and pass the NCLEX-RN at, or above the national pass rate.
- Program satisfaction will be positive, as evidenced by employer and graduate surveys.

**Service Area:**

6 states in Plains States Region (SD, ND, MN, IA, NE, and KS) in communities with a population of 10,000 or less.

**Services Provided:**

Deliver pre-licensure nursing education to employees of the ELGSS

**Equipment:**

Interactive, satellite-based Distance Learning Network (DLN), and Dakota DigitalNetwork (DDN), VTel LC-5000 videoconferencing system, WebCT software, and Internet.

**Transmission:**

T1, web-based, satellite (DLN) which utilizes Echostar 61.5 Mhz, and DDN that operates at a line speed of 768 bytes per second.

University Health System, Inc.  
1520 Cherokee Trail, Suite 110  
Knoxville, TN 37920  
[www.utmedicalcenter.org](http://www.utmedicalcenter.org)

John J. Sheridan  
Ph: 865-544-6611  
Fax: 865-544-6619  
Email: [jsherida@mc.utmck.edu](mailto:jsherida@mc.utmck.edu)

**Network Partners:**

None listed at this time.

**Project Purpose:**

The University of Tennessee Medical Center provides perinatal care including professional education, consultation, transportation and follow-up with high-risk newborns and provides the highest level of diagnosis and treatment for those life-threatening conditions of mothers and infants. The project will allow for the renovation of existing facilities, expand the opportunities for existing services and purchase state-of-the-art equipment.

**Outcomes Expected:**

The upgrade of equipment and renovation of the perinatal care system at UT Medical Center will provide improved access and availability and the highest level of care for expectant mothers and critically ill newborns. Upon the commencement of services in a facility with improved physical attributes and upgraded equipment, new benchmarks can be established allowing for the continuing measurement of outcomes.

**Service Area:**

A 21-county region in East Tennessee, along with Appalachian areas of Southeast Kentucky, Southwest Virginia and Western North Carolina.

**Services Provided:**

The University of Tennessee Medical Center provides special care services for critically ill and premature infants and those women experiencing high-risk pregnancies.

**Equipment:**

Giraffe Omnibeds (10).

**Transmission:**

Not listed at this time.

University of Tennessee Health Science Center  
920 Madison Avenue, Suite 434  
Memphis, TN 38163  
[www.utmem.edu/telemedicine](http://www.utmem.edu/telemedicine)

Karen C. Fox, PhD  
Toy Strickland  
Ph: 901-448-8844  
Fax: 901-448-4344  
Email: [twstrickland@utmem.edu](mailto:twstrickland@utmem.edu)

**Network Partners:**

University of Mississippi Medical Center

**Project Purpose:**

To demonstrate the value of a health information technology (HIT) intervention that delivers best practices care to an underserved population. This HIT intervention will consist of telehealth coupled with an electronic health record (EHR) system. This project will demonstrate that a telehealth-based diabetes disease management (THDDM) program can lower overall costs of care and access barriers by reducing care delays, and improving patient self-care practices, self-care efficacy and satisfaction with care. This program will improve access to care for rural patients with diabetes and, as a result of this improved access, patients in the program will enjoy higher quality care and better health outcomes.

**Outcomes Expected:**

*Diabetes self-management education; Medical Nutrition Therapy (MNT)*—Modification of diet to attain and maintain normal blood glucose, lipid, and pressure levels; *Glycemic control*—average HgbA1C of ~7%; *Blood pressure control*—lower blood pressure to <140mmHg systolic and <80mmHg diastolic; *Lipid control*—Use of nutritional assessment and intervention, increased physical activity and statins as needed to maintain target lipid levels; *Monitoring*—Patient self-monitoring of blood glucose levels; *Care Teams*—Care from a physician-coordinated, collaborative and integrated team that includes (but is not limited to) physicians, nurses, dietitians, and mental health professionals with expertise in diabetes; *Individual management plans*—Plans should consider patient age, school or work schedule, physical activity, eating patterns, social situation and personality, cultural factors, and the presence of complications or comorbid conditions. Goals and treatment plans must be reasonable. Effective implementation requires that each aspect of the plan be understood and agreed upon by the patient and the care team.

**Service Area:**

Jackson, Mississippi (inner city is a Primary Care HPSA); Greenville, Mississippi (Primary Care HPSA); Clarksdale, Mississippi (Primary Care HPSA); Lexington, Mississippi (Primary Care HPSA).

**Services Provided:**

The UTHSC Telehealth Network has been operational since 2001. Specialty services include: allergy, dermatology, endocrinology, ENT, infectious disease, mental health, nutrition, pediatrics, surgery, and neurology; Bioterrorism/disaster preparedness training for healthcare professionals; Patient and provider-centered education.

**Equipment:**

At remote sites: 5 Polycom videoconferencing systems, which include stethoscopes, otoscopes, dermoscopes, and document cameras. In Memphis: Polycom, ACCORD bridge, satellite, server, and network.

**Transmission:**

Full T1 lines between Mississippi clinics and hub in Jackson, MS; Full T1 to Memphis from Jackson hub with an ISDN option; Internet and Internet 2.

TENNESSEE, Shelby County  
Mid-Appalachia Telehealth Project  
University of Tennessee Health Science Center

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RTGP FY 97-99, RTGP FY 00-02, TNGP 03-05

University of Tennessee Health Science Center  
920 Madison Avenue, Suite 434  
Memphis, TN 38163  
[www.utmem.edu/telemedicine](http://www.utmem.edu/telemedicine)

Karen C. Fox, PhD  
Toy Strickland  
Ph: 901-448-8844  
Fax: 901-448-4344

Email: [twstrickland@utmem.edu](mailto:twstrickland@utmem.edu)

**Network Partners:**

Rural Education and Community Health Services (FQHC), Jacksboro, TN; Morgan County Medical Center (FQHC), Wartburg, TN; Mountain People's Health Councils (FQHC), Huntsville, TN Ridgeview Psychiatric Hospital and Center, Oak Ridge, TN (provider)

**Project Purpose:**

Develop telehealth services in three underserved counties in the traditionally coal mining Appalachian region of Tennessee. Provide disease management services from county clinic nurses to asthmatic and diabetic patients. Asthmatic children in schools in each county will use peak flow meters daily and record data. County clinic nurses will have videoconferences with each student at least weekly. Clinic nurses will receive data transmitted by Type 2 diabetic patients in each county. Counseling will be provided to patients having black lung disease.

**Outcomes Expected:**

Pediatric asthmatic disease management – increase appropriate treatment with anti-inflammatory medication from typical level <70%, to target level of >95%, and reduce lost school days per 6 weeks from typical 2 to <1. Diabetes disease management – reduce average HbA1C readings from typical >9% to <7% and increase patients having dilated eye exams from typical <30% to target of >70%. Black lung clinics – increase access of coal miners to black lung benefits and education.

**Service Area:**

Counties served are contiguous in Tennessee: Campbell (Jacksboro), low income HPSA, dental HPSA and a full county MUA; Morgan (Wartburg), full county HPSA, dental HPSA, and full county MUA; and Scott (Huntsville), low income HPSA, dental HPSA, and low income MUA. Ridgeview provides mental health services for all counties with huge waiting lists for services.

**Services Provided:**

UT Telehealth Network has been operational since September 1995 and is providing services in dermatology, rehabilitation medicine, pre-anesthesia evaluation, emergency mental health, home agency care, disease management in diabetes, congestive heart failure, and pediatric asthma; black lung benefits consultations; practitioner and patient education; and bioterrorism/disaster preparedness training for healthcare professionals. As of 2004, specialty services have expanded to include: allergy, dermatology, endocrinology, ENT, infectious disease, mental health, nutrition, pediatrics, and neurology.

**Equipment:**

At remote sites: 5 Polycom videoconferencing systems; 9 component POTS videoconferencing systems; 90 Roche Accu-Chek glucometers with modems; and 3 PCs. Knoxville campus: Polycom and POTS CODEC, Polycom bridge, and server and network for data collection.

**Transmission:**

Full T1 lines between clinics and UTTN office (distance independent UT contract), POTS to homes and schools, ISDN to mental health provider and hospital, Internet and Internet2 for medical staff and patient education.

University of Tennessee Health Science Center  
920 Madison Ave, Suite 434  
Memphis, TN 38163  
[www.utmem.edu/telemedicine](http://www.utmem.edu/telemedicine)

Karen Fox, PhD  
Toy Strickland  
Ph: 901.448.8844  
Fax: 901.448.4344  
Email: [twstrickland@utmem.edu](mailto:twstrickland@utmem.edu)

**Network Partners:**

University of Tennessee Medical Group, The Regional Medical Center, LeBonheur Children's Medical Center, Dyersburg Regional Medical Center, UTMG Jackson Family Clinic, Alliance HealthCare System, East Arkansas Children's Clinic, University of Tennessee at Martin Health Clinic.

**Project Purpose:**

Bridge the gap between the resource-rich metropolitan center of Shelby County with surrounding medically under-served counties. Through a network of telemedicine connections, rural health care providers will have access to a wide range of specialty services available from UTHSC. In addition to clinical services, patient seminars and continuing medical education programs are made available to all participants to supplement their educational needs.

**Outcomes Expected:**

Improvement in the quality of healthcare through increased access, more timely interventions, coordinated preventative measures, a broader range of medical services, reduction in time and expense for patients, and an increase in medical expertise. Expected outcomes include improved health status for targeted communities, decreased number of unnecessary transports, improved access to patient educational materials, and increased collaboration between rural and urban healthcare professionals.

**Service Area:**

Martin, Tennessee (Primary Care HPSA); Dyersburg, Tennessee; Jackson, Tennessee; Holly Springs, Mississippi (Primary Care HPSA); Forrest City, Arkansas (Primary Care HPSA).

**Services Provided:**

The UTHSC Telehealth Network has been operational since 2001. Specialty services include: allergy, dermatology, endocrinology, ENT, infectious disease, mental health, nutrition, pediatrics, surgery and neurology; Bioterrorism/disaster preparedness training for healthcare professionals; Patient and provider-centered education.

**Equipment:**

At remote sites: 5 Polycoms videoconferencing systems, which include stethoscopes, otoscopes, dermoscopes, and document cameras. In Memphis: Polycom, ACCORD bridge, satellite, server, and network.

**Transmission:**

Full T1 lines between clinics and Memphis (hub) with an ISDN option; Internet and Internet2.

University of Tennessee Health Science Center  
90 Madison Avenue, Suite 434  
Memphis, TN 38163  
[www.utmem.edu/telemedicine](http://www.utmem.edu/telemedicine)

Karen C. Fox, PhD  
Toy Strickland  
Ph: 901-448-8844  
Fax: 901-448-4344  
[twstrickland@utmem.edu](mailto:twstrickland@utmem.edu)

**Network Partners:**

Putnam County Health Department (PCHD), Cookeville, TN, Monroe County Health Department (MCHD), Madisonville, TN.

**Project Purpose:**

Demonstrate the value of using telehealth in providing care for vulnerable populations, specifically rural and Hispanic communities in East Tennessee. Diabetes control management and education, including the fortification of self-management skills for diabetics in two underserved mountainous counties—Putnam and Monroe.

**Outcomes Expected:**

Diabetes disease management: Increase number of patients who control HbA1C readings per year from <25% to national Healthy People target level of >90%, reduce average HbA1C reading from typical level of >9.0% to <7.0%. Diabetes education through audio-conferencing: hold 12 monthly telesupport group meetings, and do pre- and post-tests to determine knowledge gained through attendance at support group meetings.

**Service Area:**

Putnam County (Cookeville), Non-NSA; p-MUA (low income); HPSA (low income), Dental HPSA; Monroe County (Madisonville) Non-NSA; NUA; HPSA (low income); Dental HPSA.

**Services Provided:**

This Telehealth Network has been operational since September 1995. It provides specialty clinical consultation; psychiatric crisis services; home telehealth care; disease management for adult diabetics and child asthmatics; bioterrorism/disaster preparedness training for healthcare professionals. As of 2004, specialty services have expanded to include: allergy, dermatology, endocrinology, ENT, infectious disease, mental health, nutrition, pediatrics and neurology.

**Equipment:**

At remote sites: 2 Polycom videoconferencing systems, 2 component POTS videoconferencing systems, 15 Roche Accu-Chek glucometers with modems, 5 conference phones, and a PC. At UT office: Polycom and POTS CODECs, Polycom bridge, data server and network.

**Transmission:**

Full T-1 lines between clinics and the Knoxville campus, POTS to homes, Internet and Internet 2 for medical staff and patient education.



Telemonitoring Program  
CHRISTUS Visiting Nurse Association of Houston  
2905 Sackett Street  
Houston, TX 77007

Sandy McNeely, RN, MSN  
Ph: 713-630-5579  
Fax: 713-630-5510  
Email: [Sandra.Mcneely@christushealth.org](mailto:Sandra.Mcneely@christushealth.org)

**Network Partners:**

The Methodist Hospital; community hospitals; cardiology, internal medicine, and family practice clinics.

**Project Purpose:**

Examine a model for seamless transition between hospitalization, home care, and self-management for patients with Congestive Heart Failure (CHF) utilizing home monitoring technology; determine whether health care costs in a 60-day period are lowered among CHF patients who are home monitored; demonstrate improvement of clinical outcomes, patient quality of life and patient satisfaction through daily home monitoring of vital signs of CHF patients. Additional project activities: Development of CHF home telecare clinical pathway and CHF intervention decision tree.

**Outcomes Expected:**

Decreased ER visits, hospitalizations, length of stays measured by: Generalized Linear Mixed Models (GLMM) analysis; telephone interventions success measured by: Trending data reports, descriptive analysis; increased quality of life measured by: SF-36 Standard Tool, repeated measures of Analysis of Variance (ANOVA); high patient satisfaction measured by: Visiting Nurse Association (VNA) Patient Satisfaction Survey.

**Service Area:**

Six southeastern Texas counties (Harris, Galveston, Liberty, Montgomery, Brazoria, Fort Bend) serving one Primary Medical HPSA, one Dental HPSA, three Mental Health HPSAs.

**Services Provided:**

Since September 2001, home vital sign monitoring for CHF management: daily remote collection and evaluation of clinical data, telephone intervention protocol at first symptom recognition, and telephone teaching program. Others services include diabetes, chronic disease management, wound care, Ventricular Assistive Device (VAD) patients, remote medication management; remote vital sign monitoring in a residential facility.

**Equipment:**

Seventy HomMed Sentry Observer System units, one Central Station Monitor with Intel Pentium 500 MHz processor.

**Transmission:**

Java application of Windows 95/98 NT platform using Oracle 8 data base server; dual communication modes via wireless pager technology or standard phone lines.

Cook Children's Medical Center (CCMC)  
801 Seventh Avenue  
Fort Worth, Texas 76104  
[www.cookchildrens.org](http://www.cookchildrens.org)

Steve Anderson  
Andrea Smith, PhD, RN, CPNP  
Ph: 682-885-2103  
Fax: 682-885-1656  
Email: [andreas@cookchildrens.org](mailto:andreas@cookchildrens.org)

**Network Partners:**

Cook Children's Subspecialty Clinic in Abilene, Texas, is the single spoke partner.

**Project Purpose:**

To: 1) implement Rural Specialty Health Telemedicine as a pilot project utilizing genetics as the chosen pediatric specialty; and 2) implement a mechanism to provide Continuing Medical Education (CME) in Cook Children's Medical Center's rural service area. Major project activities include equipment selection, acquisition, and installation; training project participants in the use of the equipment; and project implementation, including the provision of genetic services and distance learning opportunities and the evaluation of those services and opportunities.

**Outcomes Expected:**

**Telemedicine:** 1) increased number of referrals by at least 20; 2) increased number of patient encounters by 60%; 3) decreased costs of care; 4) increased time efficiency of service delivery; 5) patient families will choose to utilize telemedicine services, (all of which can be measured via data analysis); and 6) patient families will be satisfied with telemedicine services (as measured by satisfaction survey). **Distance Learning:** 1) health care providers in outlying areas will have increased access to educational opportunities and Pediatric Grand Rounds (project implementation provides the opportunity); 2) health care providers will utilize distance learning (measured by numbers of CMEs applied for); and 3) health care providers will be satisfied with distance learning services (as measured by satisfaction survey).

**Service Area:**

**Telemedicine:** the primary service area is Abilene, Texas, in Taylor County, serving 1 HPSA and 2 MUAs. **Distance Learning:** overall service area is 110 counties in Texas, serving a total of 210 HPSAs and 139 MUAs.

**Services Provided:**

**Telemedicine:** direct patient clinical assessment, counseling, follow-up within the scope of Genetics, video-conferencing for general medical consultation. **Distance Learning:** video conferencing for medical consultation and education and "anytime" access to pediatric-specific education, collaboration with St. Jude Children's Hospital on pediatric oncology protocols, business development consultation.

**Equipment:**

Router, View Station FX - H.3232, Monitors & Cart, Medlink Cart for VC, Telemedicine Peripherals, 5 Megapixel Camera, MiniDV Video Camera, MGC25 VC Bridge.

**Transmission:**

Fractional T1 up to 1.5 MB/s, ISDN up to 768 KB/s.

Community Health Program/Specialty Access Through Telemedicine (SA++)      L. Ann Teske  
Harris County Hospital District      Ph: 713-873-3640  
2525 Holly Hall      Fax: 713-873-2899  
Houston, TX 77054-4124      E-mail: [lenore\\_teske@hchd.tmc.edu](mailto:lenore_teske@hchd.tmc.edu)  
<http://www.hchdonline.com>

**Network Partners:**

Harris County Hospital District Community Health Program, El Centro de Corazon (spoke), Baytown Community Health Center of HCHD (spoke), University of Texas Health Science Center at Houston Medical School (hub), Harris County Community Access Collaborative to share information and products, and the University of Texas School of Health Information Sciences to coordinate the project evaluation.

**Project Purpose:**

This pilot project will develop/demonstrate the efficacy of procedures and protocols using telemedicine equipment for consultation with dermatology and psychiatric specialties for patients seen at two community health centers in Harris County, Texas. Based on results of the demonstration, a plan will be developed to support and justify expansion of telemedicine at 10 other Hospital District clinics and up to 10 community organizations currently developing as Federally Qualified Health Centers (FQHCs).

**Outcomes Expected:**

Grant evaluation will include pre/post data analysis comparing targeted clinics with clinics not included in the study, pre/post surveys of physicians/administrators, and patient satisfaction surveys. The evaluation should identify perceived inefficiencies, barriers, provider/administrator satisfaction, patient satisfaction, and impact of the project on ER volume for specialty consults, number of consults for participating clinics, and number of patients retained by PCP following specialty consult.

**Service Area:**

The project will serve clinics located in the Baytown MUA, which has a Primary Care HPSA designation, and Ripley MUA, which has Mental Health, Dental, and Primary Care HPSA designations.

**Services Provided:**

No telemedicine services are currently provided, as this is a pilot project to implement the use of telemedicine to provide dermatology and psychiatric consultations. It is expected that the services will begin to be provided in March 2006.

**Equipment:**

Image management software for three sites, Desktop Computers for two spoke sites, high-resolution cameras for two spoke sites, General Exam Camera for Dermatology site visualization at two spoke sites, and Router at El Centro de Corazon. Equipment associated and the location from which the Specialists will transmit already exists and is being made available for the project. Both sites already have most of the required equipment and only the equipment that will be provided by the project is listed.

**Transmission:**

At the time of the development of the project, it was expected that T1 lines would be used as the Transmission Method. This is being investigated as a part of the development process and may change over the course of the project.

University of Texas Health Science Center in San Antonio  
7703 Floyd Curl Drive  
San Antonio, TX 78229-3900  
[www.uthscsa.edu](http://www.uthscsa.edu)

Daniel E. Hale, MD  
Amy L. Riojas, LMSW  
Ph: 210-567-5283  
Fax: 210-567-0492  
E-mail: [riojasa@uthscsa.edu](mailto:riojasa@uthscsa.edu)

**Network Partners:**

Rio Grande City Consolidated Independent School District (RGCCISD)

**Project Purpose:**

The program implements a comprehensive diabetes screening program in the school system and then enrolls children at high risk for type II diabetes into a treatment program. The children at risk are randomized into either a group that receives traditional treatment available in Rio Grande City or they are enrolled in a group receiving telemedicine consultations with a Pediatric Endocrinologist, Behavioral Therapist, and Pediatric Dietitian located at the University of Texas Health Science Center at San Antonio, 250 miles away.

**Outcomes Expected:**

Access to specialized therapy via telemedicine will affect the following measurable parameters:  
Weight (measure)—Scale (tool)  
Blood Pressure (measure)—Blood pressure machine (tool)  
Blood lipid, glucose and insulin levels (measure)—Blood work (tool)  
Self Concept (measure)—Piers-Harris 2 Children's Self-Concept Scale (tool)

**Service Area:**

The UTHSCSA/RGC Telehealth Network serves children in the RGCCISD. This school district encompasses the communities of Rio Grande City, La Grulla and Graciasville: all located within Starr County. Starr County is designated a single county HPSA, a single county dental HPSA, a single county Mental Health HPSA, and MUA named Starr Service Area.

**Services Provided:**

The UTHSCSA/RGC Telehealth Network has provided clinical telemedicine services and distance learning beginning in October, 2003. The Pediatric Endocrinologist, Behavioral Therapist and Pediatric Dietitian provide consultations to patients and families via interactive video-conferencing.

**Equipment:**

The equipment at UTHSCSA is a 27" Trinitron color television with PolyCom 512 Viewstation Videoconferencing unit, RGCCISD elementary schools use a PolyCom VSX 7000 unit with a 32" Toshiba color television.

**Transmission:**

Connections are made using IP and/or ISDN connections at 384 KB/s bandwidth.

TEXAS, Galveston County CMP FY 05  
The Texas Telehealth Disparities Network  
University of Texas Medical Branch Center to Eliminate Health Disparities

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UTMB Center to Eliminate Health Disparities  
301 University Boulevard  
Galveston, TX 77555-0129  
[www.utmb.edu/cehd](http://www.utmb.edu/cehd)

Barbara E. Breier, PhD  
John F. Thomas, PhD, ABD  
Ph: 409-266-9536  
Fax: 409-772-5064  
Email: [jofthoma@utmb.edu](mailto:jofthoma@utmb.edu)

**Network Partners:**

The University of Texas Medical Branch.  
The University of Texas at Brownsville.  
The University of Texas Health Center at Tyler.

**Project Purpose:**

The primary purpose of this proposal is to reduce or eliminate disparities in health care through the development of a telehealth network in three distinct and geographically distant areas of Texas: Galveston (Galveston County), Brownsville (Cameron County), and Tyler (Smith County). A secondary purpose is to determine if the appropriate use of telehealth can reduce health disparities and improve access to health care.

**Outcomes Expected:**

Community assessment conducted by individual community coalitions that have identified condition or delivery system components that will be the focus of a telehealth delivery project in each site. Established telehealth delivery pilot projects aimed at reducing site-specific health disparities identified by community coalitions.

**Service Area:**

3 Counties across Texas: Galveston County PMSA 12, CMSA 79; Cameron County MSA 6, HPSA and MUA; Smith County MSA 24..

**Services Provided:**

UTMB has a long-standing history of advancing the use of telecommunications technology for the purpose of improving health care delivery to rural and underserved populations of Texas. UTMB's services comprise the largest operational telemedicine operation in the world, with over 300 locations and over 60,000 patient encounters annually.

**Equipment:**

Still to be determined by outcome of community assessments and pilot projects identified in communities.

**Transmission:**

OC-3 at 20MBps from UTMB out to subsites; subsites have full T1 capabilities and ISDN to potential pilot project applications in communities.

Electronic Health Network (EHN)  
301 University Blvd.  
Galveston, TX 77555-0145  
[www.ehn.utmb.edu](http://www.ehn.utmb.edu)  
[www.utmb.edu/telehealth](http://www.utmb.edu/telehealth)

Glenn G. Hammack, OD, MSHI, FAAO  
Ph: 409-747-5290  
Fax: 409-747-5297  
Email: [gghammack@utmb.edu](mailto:gghammack@utmb.edu)

**Network Partners:**

Rural hospitals, state universities, distance education programs, telemedicine services through agreements with counties, community mental health centers, state prison system, and cruise lines.

**Project Purpose:**

The project goals were as follows: Collect and analyze data on patient satisfaction and outcomes research; develop business models for corporate, remote, extreme environment, correctional system, and indigent care settings; develop protocols for primary care telemedicine and the various specialties; identify roles and necessary preparation of telehealth professionals; provide consulting services for the practice and technology of telehealth; rebuilt website; continue to operate telemedicine clinics; and establish sustainability.

These goals were accomplished by maintaining a clear focus on collaboration with both external and internal entities. Good relationships with physicians and administrators on and off campus have been instrumental in spreading the practice of telemedicine. Additionally, the integration of telemedicine practice into existing UTMB systems has saved a tremendous amount of university resources and showed that telemedicine practice can flourish within an academic research center. The long-term aim to combine all the telehealth activities at UTMB under one department was finally realized in December 2004 with the creation of the Electronic Health Network (EHN).

**Outcomes Expected:**

1. Patient satisfaction with telemedicine services.
2. Expansion of contracts.
3. Web site completed.
4. Operation of clinics.
5. Program sustainability.

**Service Area:**

Eastern and coastal Texas, state wide and world wide through various contracts. EHN (formerly The Telehealth Center) has contracts with Brazoria, Liberty, and Fort Bend counties to provide primary and specialty care. Brazoria County has 9 MUAs and no HPSAs. The entire county of Liberty County has been designated as an MUA and as an HPSA. Fort Bend has 5 HPSAs and 11 MUAs.

**Services Provided:**

Telehealth assistance: shared resources, expertise, information, distance education, telemedicine services.

**Equipment:**

177 telemedicine stations with Polycom videoconferencing equipment with appropriate medical peripherals.

**Transmission:**

Connectivity: private IP network over dedicated T1 lines, which carry voice, data, and video.

Association for Utah Community Health (AUCH)  
2570 West 1700 South  
Salt Lake City, UT 84104  
[www.auch.org](http://www.auch.org)

Joshua Wood, MA  
Ph: 801-924-2851  
Fax: 801-974-5563  
Email: [telehealth@auch.org](mailto:telehealth@auch.org)

**Network Partners:**

Association for Utah Community Health (AUCH) member organizations, including all federally qualified health centers in the State of Utah (seven urban and twelve rural/frontier sites), Utah Telehealth Network, Retina Associates of Utah and Wire One Technology, Inc.

**Project Purpose:**

Build a video conferencing network among Utah's federally qualified health centers providing distance learning and professional development opportunities to health center staff and community members. Increase the number of diabetic patients receiving retinal screenings by providing equipment and training to community health center staff. Reduce wait time for radiological interpretation results and increase the availability of specialist consultation by developing a teleradiology system network. Provide online information, learning tools and collaborative forums for community health center staff and patients.

**Outcomes Expected:**

Increase retinal screenings of FQHC patients with diabetes 25-40%. Increase in early diagnosis of diabetic retinopathy. Expand videoconferencing capacity among Utah's FQHCs 25-50%. Increase distance-learning/peer meetings over videoconferencing 25-50%. Performance measures and surveys will supplement equipment-use statistics and collaborative data collection.

**Service Area:**

Fifteen counties throughout Utah: Box Elder, Cache, Carbon, Davis, Emery, Grand, Iron, Morgan, Rich, San Juan, Salt Lake, Utah, Washington,, Weber, and Wayne—four full MUAs, six partial MUAs. Eleven full county geographic MHPSAs, twelve full county low-income DHPSAs, and three partial county low-income DHPSAs.

**Services Provided:**

Distance and peer learning network via IP videoconferencing was established in January 2005. Ophthalmology project providing store and forward retinal exams began in April, 2004. Teleradiology services began in early 2006.

**Equipment:**

A Polycom VSX 7400 is used for hub videoconferencing site, while Polycom VSX 7000s are used for remote sites. Kowa nonmydriatic fundus camera used for ophthalmology. Digital CR systems for teleradiology.

**Transmission:**

Full and fractional T1 lines, DSL, Internet are used for videoconferencing/distance learning activities. A bridging device is used on a contractual basis.

Weber State University HOPE Project  
3901 University Circle  
Ogden, UT 84408-3901  
[www.weber.edu/chp](http://www.weber.edu/chp)

Craig Gundy, PhD  
Ph: 801-626-7127  
Fax: 801-626-7683  
Email: [cgundy@weber.edu](mailto:cgundy@weber.edu)

**Network Partners:**

Northern Utah Area Health Education Center, Ogden, Utah; School Districts in Northern Utah, Weber, Ogden, Cache, Rich, Box Elder, Logan, Davis; Utah Education Network, Fire Departments/First Responder Agencies statewide and in Wyoming; International Critical Incident Stress Foundation.

**Project Purpose:**

The HOPE project is designed to address the critical shortage of health professionals in Utah and contiguous states. WSU will undertake the challenge to increase the outreach efforts to rural communities to provide the education needed for these residents to receive professional education, which will allow them to practice as a health professional in their communities. This will increase the supply of health care professionals so desperately needed in Utah. The project will also address the issue of Critical Incident Stress Management (CISM). HOPE will study closely the availability of stress management services, analyze needs, and investigate solutions to assist first responders.

**Outcomes Expected:**

Recruitment activities will occur statewide to attract individuals to health professions programs. Individuals in rural communities will gain access to and utilize distance-learning technologies to obtain professional training and certification in the allied health fields of Paramedic, Emergency Medical Technician, Clinical Laboratory Sciences, and others. Feasibility testing and a needs analysis will be implemented to determine the need for a Critical Incident Stress Training Institute. Distance technology will be developed and supported, for example, IP Video and on-line testing support.

**Service Area:**

All of Utah's 29 counties are designated as Health Professional Shortage Areas (HPSA) in at least one or more of the following: Dental, Primary Care, and/or Mental Health. The HOPE Grant is based in Weber County, but will serve all 29 counties in the state as well as some cities/counties in Southern Wyoming.

**Services Provided:**

The HOPE Project is providing: 1) Recruitment statewide and in Southern Wyoming to health care professional training programs; 2) Course/Program delivery via IP Video technology (Paramedic, EMT, and Clinical Lab Science); 3) Development of an ICU Simulation Lab for students; and 4) Establishment and support of on-line and distance courses, including computer and testing support.

**Equipment:**

Remote sites have 9 PolyCom VSX 7000S video conferencing systems; Broadcast Sites have 2 Tandberg MX 3000; PolyCom Bridge; Chi Tester.

**Transmission:**

Ethernet to dedicated fiber channel with tie into layer 2 switch to Utah's back bone. Chi Tester runs on front-end cluster of 3 Windows 2000 servers, plus a back-end Windows 2000 server SQL database.



**HRSA Telemedicine Pilot Program for Interpreting Services for the Deaf  
Intermountain Healthcare**

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IHC Health Services  
3930 Lake Park Blvd.  
Salt Lake City, UT 84120  
[www.intermountainhealthcare.org](http://www.intermountainhealthcare.org)

Molly J. Fielding, MBA  
Ph: 801-442-1504  
Fax: 801-442-1132  
Email: [molly.fielding@intermountainmail.org](mailto:molly.fielding@intermountainmail.org)

**Network Partners:**

Not Applicable.

**Project Purpose:**

Implement pilot technology to provide appropriate communication to deaf and hearing impaired patients for meaningful access to Intermountain's services that are compliant with Americans with Disabilities Act regulations. Evaluate the technology with the Project Team's key personnel for resolution and ASL-level interpretations. Provide efficient and timely interpretation services for the deaf that enhance quality of care and reduce health system waste.

**Outcomes Expected:**

Decrease the length of time patients must wait for an interpreter by at least 50% and decrease the overall costs of providing interpretation services by 20%. Further, this will provide a setting that the patient perceives as less intrusive since a third person (the interpreter) will not be in the room. In addition, maximize the cost and administrative advantages of a combined IP infrastructure for both video and telephone.

**Service Area:**

The project service area includes all of Utah and Cassia, Idaho.

**Services Provided:**

On-demand video interpretation for deaf patients. This service will be available 24 hours a day. It will help decrease wait times for patients who need interpreting services and will provide patients with more options to address their communication needs.

**Equipment:**

The Polycom Practitioner Cart utilizes the Polycom VSX 7000 as the core for real time interactive voice and video communications. It includes two 17" LCDs in the dual monitor version.

**Transmission:**

Intermountain has DS3 connections from the main hospitals to the central hub that has a DS3 connection to the Internet.

Utah Telehealth Network  
585 Komas Drive, Suite 204  
Salt Lake City, UT 84108  
[www.utahtelehealth.net](http://www.utahtelehealth.net)

Marta Petersen, MD  
Deb LaMarche  
Ph: 801-587-6190  
Fax: 801-585-7083  
Email: [deb.lamarche@utahtelehealth.net](mailto:deb.lamarche@utahtelehealth.net)

**Network Partners:**

Spencer S. Eccles Health Sciences Library, John A. Moran Eye Center, Utah Diabetes Center, Intermountain Spinal Cord Injury Program, Bear Lake Community Health Center, Garden City; Utah Navajo Health System, Montezuma Creek; San Juan Hospital, Monticello; Monument Valley Health Center; Gunnison Valley Hospital; Beaver Valley Hospital; South Davis Community Hospital, plus 17 UTN member sites.

**Project Purpose:**

Upgrade network infrastructure to support expanding telehealth activity.  
Implement telehealth services for diabetes management and diabetic retinopathy.  
Implement remote spinal cord injury patient management.  
Expand continuing education modalities and offerings.  
Implement a planning process to provide remote access to centralized patient-related IT resources by rural hospitals.  
Produce an updated business plan for long term financial stability.

**Outcomes Expected:**

Improved network management & staff efficiency—automated reporting via integrated database.  
Patient/Provider and Education Participant Satisfaction—Likert surveys.  
Quantify Patient Usage of Services Provided—OAT GPRA Performance Measures.  
Quantify Education Participation—OAT GRPA Performance Measures.

**Service Area:**

Current project serves five counties (Rich, San Juan, Sanpete, Beaver, Davis), which include 4 full county HPSAs, 1 partial county HPSA, 3 full county MUAs, and 1 partial county MUP. Network serves 18 Utah counties, all of which are full or partial HPSAs.

**Services Provided:**

Dermatology; psychiatry (medication management); developmental disabilities; cardiology; infectious disease; orthopedics; pediatric orthopedics; acute stroke intervention; burn; pharmacy; radiology; continuing education & training; nursing oncology doctoral program; bioterrorism preparedness; diabetes services (2006); spinal cord injury patient management (2006).

**Equipment:**

Accord MGC100 bridge, Polycom videoconferencing systems (Viewstation, VS 4000, VSX7000 VSX3000, Via Video and PVX); Madge multiplexer; Cisco routers; HP Procurve switches; Netscreen firewalls; Pyxis pharmacy dispensing system.

**Transmission:**

Dedicated T1 and T1 frame relay; DS3s, ISDN PRI; DSL.

The Community Health Center  
617 Riverside Avenue  
Burlington, VT 05401

Dave Simmons  
802-864-6309 ext. 197  
Fax: 802-860-4325  
Email: [dsimmons@chcb.org](mailto:dsimmons@chcb.org)

**Network Partners:**

Fletcher Allen Health Care, Champlain Valley Area Health Education Centers.

**Project Purpose:**

CHCB will completely upgrade all technology infrastructure including patient management systems software, add electronic medical records and real time connections to three satellite sites. Project improves quality assurance capacity, allows for the addition of oral health services, reduces potential for medical errors and supports growth in numbers of patients seeking care from Chittenden County's only Federally Qualified Health Center.

**Outcomes Expected:**

Improved scheduling and patient access to providers.  
Enhanced chronic disease management capability and follow-up care.  
Streamlined billing functions with electronic submissions.  
Improved accuracy of data reports as system moves from manual data entry to automated immediate, real time access to electronic medical records at all sites.  
Measurement tools include Patient Satisfaction Tools, Uniform Data System Reports.

**Service Area:**

Chittenden County and the Medically Underserved Area (MUA) of Burlington and Winooski Cities.

**Services Provided:**

Primary health care and human services program, behavioral health services.  
Dental services (implemented January 2004).

**Equipment:**

Dell 2650 and 6650 servers. New medical and dental practice management software systems including Electronic Medical Records.

**Transmission:**

Gigabit Ethernet WAN via fiber network to remote sites including lab services at Fletcher Allen Health Care. T1 speed Internet access via fiber network.

University of Vermont/Fletcher Allen Health Care Telemedicine Program  
89 Beaumont Avenue, Given D-104  
Burlington, VT 05401  
[www.fahc.org/telemedicine](http://www.fahc.org/telemedicine)

William Charash, MD  
Michael P. Caputo, MS  
Ph: 802-656-9658  
Fax: 802-656-4800  
E-mail: [Michael.Caputo@uvm.edu](mailto:Michael.Caputo@uvm.edu)

**Network Partners:**

Currently includes Fletcher Allen Health Care (Level 1 trauma center), Porter Hospital, Rutland Regional Hospital in VT and Alice Hyde Hospital, Massena Memorial, Canton-Potsdam Hospital, Adirondack Medical Ctr. and Moses Ludington Hospital in NY. This project will add Copley Hospital and Northwestern Regional Medical Center, both located in Vermont.

**Project Purpose:**

Both adults and children in rural communities die at nearly twice the rate of their urban counterparts from motor vehicle accidents, homicides, falls, and suicides. This is partially due to discrepancies in access to care at specialized trauma centers. Will use a two-way interactive video telemedicine link between our Level 1 trauma center, trauma surgeons' homes and rural hospital EDs, to reduce disparities in clinical trauma care by providing 24-hour access to trauma center specialty surgeons and pediatric intensivists.

**Outcomes Expected:**

Compare the impact of teletrauma upon survival, complications, length of stay and injury severity of a teletrauma vs. general trauma population using data from the FAHC Trauma Registry and from the Teletrauma Evaluation Form. This form collects data on patient's injuries, mechanism of injury, vital signs, questions from the rural provider and advice from trauma surgeon, as well as data using a Likert-type scale to measure physician's perception of improved quality of care, quality of video and audio, equipment ease of use, and quality of communication between the consulting physicians. The Trauma Registry includes variables such as injury time, injury severity score, arrival/discharge times, complications, and discharge disposition. Expected that use of this system will reduce time to transfer and improve outcomes.

**Service Area:**

The original telemedicine program started in 1968 (Tampas, J.P. & Soule, A.B. (1968), "Experiences with Two-Way Television in a Teaching Hospital Complex," JAMA, 204 (13), 83-5. The current teletrauma portion of the program has been operational since 1999 and services 4 counties in Vermont and three non-MSA or rural counties in northeastern New York. All but one of these areas have designated partial HPSAs and partial MUAs

**Services Provided:**

We provide teleconsults for trauma/emergency (24/7), pediatric surgical care, surgical follow-up, psychiatry, and dermatology services. We provide Continuing Medical Education to providers in our network. Also provide contractual services to prisons in NY.

**Equipment:**

Polycom Viewstation 512 and Polycom VSX 3000 & 7000. Polycom bridge at hub.

**Transmission:**

ISDN 3-BRI up to 384 KB/s. Working toward use of IP in selected situations. Starting to use Internet and Internet2 as the transmission pathway for certain projects.

University of Virginia  
1214 Lee Street  
Charlottesville, VA 22908  
[www.telemmed.virginia.edu](http://www.telemmed.virginia.edu)

Karen S. Rheuban, MD  
Richard J. Settimo  
Ph. 434-924-5470  
Fax: 434-924-5747  
Email: [rjs2b@virginia.edu](mailto:rjs2b@virginia.edu)

**Network Partners:**

Augusta Medical Center, Fishersville, VA, Rockingham Memorial Hospital, Harrisonburg, VA and Stonewall Jackson Medical Center, Lexington, VA.

**Project Purpose:**

The purpose of this project is to expand an existing 48-site Telehealth network in Virginia to expand access to specialty care and interactive health-related distance learning to the citizens and health professionals served by three additional community hospitals in the Commonwealth of Virginia. The hospitals identified are located in Central Virginia and serve a population of more than 259,000 citizens. The hospitals also serve patients from surrounding counties that are medically underserved (Page, Bath, Highland, and Alleghany).

**Outcomes Expected:**

Outcomes: Increased utilization of specialty services; increased referrals by regional providers; decreased patient transfers out of primary medical community.

Tools: Medical Center/Physician practice plan referring data (pre-post telemedicine in community); Patient satisfaction survey (per Health Evaluation Sciences); Provider satisfaction survey (per Health Evaluation Sciences).

**Service Area:**

Seven counties in central, west, and southwest Virginia (pop 259,000): Augusta, Rockingham, Rockbridge (prime), Bath, Page, Highland, and Alleghany (secondary).

**Services Provided:**

Cardiology; Dermatology, Endocrinology; Ear/Nose/Throat; Emergency, Gastroenterology, Genetic Counseling, Geriatrics, OB/GYN, Hematology, ID Hepatology, Nephrology, Neurology, Neurosurgery, Nutrition, Oncology, Ophthalmology, Orthopedics, Pain Management, Pediatrics, Pediatric Cardiology, Psychiatry; Pulmonary, Plastic Surgery, Retinopathy, Surgery, Thoracic Surgery, Transplant, Urology, Wound Care, and Toxicology.

**Equipment:**

Polycom and Tandberg Video Conferencing units with peripherals, electronic stethoscope, camcorder, document camera computer with TV/Monitor.

**Transmission:**

ATM, T-1, ISDN, Internet using our own VTC Bridge, testing wireless transmissions.

Children's Hospital & Regional Medical Center  
4800 Sand Point Way NE  
PO Box 5371/Mail Stop T0111  
Seattle, Washington 98105-0371

Sandy Melzer, MD  
Project Director  
Ph: 206-987-2622  
Fax: 206-987-5022

Email: [sandy.melzer@seattlechildrens.org](mailto:sandy.melzer@seattlechildrens.org)

**Network Partners:**

Spoke sites include rural and community hospitals, regional outpatient specialty clinics, a pediatric clinic, a juvenile detention facility and related children's services.

**Project Purpose:**

The purpose of the project is to improve the health of children with chronic conditions who reside in rural and underserved areas of the Pacific Northwest. This will be accomplished primarily through use of telemedicine technology to provide effective and timely access between community-based providers, patients and their families who are in need of pediatric specialty services and pediatric specialty providers at Children's. The CHART Program also supports continuing medical education, health education for parents, and care coordination efforts among professionals and families.

**Outcomes Expected:**

The Project will improve access to pediatric specialty care in rural and under-served areas of the Pacific Northwest; promote coordinated care through clinical partnerships that enhance care for children with chronic conditions; provide continuing health education to health care professionals and health education sessions to parents of children with chronic conditions; and work toward Program sustainability. Parent and provider satisfaction questionnaires are used to evaluate telemedicine services. Program growth and service need statistics are documented.

**Service Area:**

The CHART Program uses a telemedicine and video teleconferencing network to link Children's with 11 regional spokes: in Alaska, at Anchorage; in Washington, at Wenatchee, Olympia, Yakima, Naselle, Aberdeen, Longview, Bellingham, Kennewick, and Spokane; in Montana, at Missoula; and, in Idaho, at Boise.

**Services Provided:**

Clinical pediatric specialty services include pulmonary, dermatology, endocrinology, neurology and neuro-developmental follow-up services, mental health (including child psychiatry and psychology), echocardiography and distance learning (including case conferences).

**Equipment:**

Two Polycom FX and 11 MP units, digital cameras, document cameras, LCD projectors with laptop PCs, electronic stethoscope, and a Woods light for dermatology.

**Transmission:**

Clinical video teleconferencing occurs with 3 ISDN lines. Two of the systems have 4 ISDN lines.

Inland Northwest Health Services  
157 S. Howard, Suite 500  
Spokane, WA 99201  
[www.inhs.org](http://www.inhs.org)  
[www.nwtelehealth.org](http://www.nwtelehealth.org)

Denny Lordan, BS  
Ph: 509-232-8121  
Fax: 509-232-8357  
[lordand@inhs.org](mailto:lordand@inhs.org)

**Network Partners:**

Northwest Telehealth's network includes 65 participating sites. TeleER sites include Deaconess Medical Center, Sacred Heart Medical Center, Northwest MedStar, and 12 rural hospitals in Washington State.

**Project Purpose:**

1) To provide 24/7 access to specialists for consultations between urban trauma centers and rural hospital providers; 2) Provide easy-to-use, fixed video conferencing equipment in rural emergency departments connecting to "virtual beds in trauma centers"; 3) Increase project utilization by providing access to wound care physicians, pediatric emergency physicians, and intensivists in addition to emergency services; 4) Incorporate the availability of shared electronic medical record and imaging capabilities between referring and consulting providers to improve patient outcomes; and 5) To incorporate 3-way video connections between a medical air transport communications center with sending and receiving facilities to improve quality of care and follow up on patient disposition.

**Outcomes Expected:**

1) Improved patient outcomes by providing timely access to emergency and wound care specialists paired with the ability to visualize patient conditions; 2) Improved utilization of video conferencing equipment located in emergency departments by minimizing the intrusion of technology and procedures in the consultation process; 3) To improve the coordination of care prior to patient transport through an improved visualization of the current condition; and 4) To demonstrate the value of shared electronic medical record data to the clinical consultation process over telehealth.

**Service Area:**

Serving 65 sites within Washington and Idaho, including 23 counties. TeleER project sites serve 7 HPSA/MUAs.

**Services Provided:**

Northwest TeleHealth has been operational since 1997 and provides services in mental health, diabetic patient education, neurology, emergency services, dermatology, wound care, rehabilitation, employee assistance programs, nutrition, telepharmacy, distance learning, practitioner, and patient education, support groups, satellite downlinks.

**Equipment:**

Polycom video conferencing systems, Polycom bridge, AMD Telemedicine General Exam Cameras.

**Transmission:**

Full T1 and broadband connections between telehealth network sites, ISDN and IP off-network.

Inland Northwest Health Services  
157 S. Howard, Suite 500  
Spokane, WA 99201  
[www.inhs.org](http://www.inhs.org)  
[www.nwtelehealth.org](http://www.nwtelehealth.org)

Renee LaRocca, BSME, MBA, MEM  
Ph: 509-232-8110  
Fax: 509-232-8357  
[laroccr@inhs.org](mailto:laroccr@inhs.org)

**Network Partners:**

Northwest Telehealth's network includes 65 participating sites. TelePharmacy sites include Sacred Heart Medical Center and 4 rural hospitals in Washington State.

**Project Purpose:**

1) To develop a Telepharmacy model that utilizes existing technology to provide quality 24-hour pharmacy services with reasonable cost limits to rural health care settings; 2) enhance rural, underserved communities' safety and well-being by reducing the number of medication errors; 3) address the growing health professional shortage of pharmacists through the use of Telepharmacy; and 4) utilize shared information to drive performance improvement regarding rural pharmacy services.

**Outcomes Expected:**

1) Rural Hospitals will have continuous pharmacy oversight; 2) Rural hospitals without full time pharmacist coverage will be compliant with the Washington State Board of Pharmacy's policies; 3) Increased trust in the medication administration process used in the community's health care settings; 4) Reduced number of Adverse Drug Events (ADEs); 5) Reduced health care dollars being spent as a result of preventable events; 6) The location of a pharmacist will become less significant; 7) Improvement of all Telepharmacy hospitals' medication administration process; 8) The development of common policies, procedures and formularies; and 9) Telepharmacy program demonstrates cost savings, administrative efficiencies, and increased patient safety.

**Service Area:**

Serving 65 sites within Washington and Idaho, including 23 counties. TelePharmacy project sites serve 4 HPSA/MUAs.

**Services Provided:**

Northwest TeleHealth has been operational since 1997 and provides services in mental health, diabetic patient education, neurology, emergency services, dermatology, wound care, rehabilitation, employee assistance programs, nutrition, telepharmacy, distance learning, practitioner, and patient education, support groups, satellite downlinks.

**Equipment:**

Polycom video conferencing systems, Polycom bridge, Pyxis Automated Medication Dispensing Systems.

**Transmission:**

Full T1 and broadband connections between telehealth network sites, ISDN and IP off-network.



Yakima Valley Memorial Hospital—Information Systems  
2811 Tieton Drive  
Yakima, WA 98902  
[www.yakimamemorialhospital.org](http://www.yakimamemorialhospital.org)

James Aberle  
Ph: 509-575-8681  
Fax: 509-574-5800  
[jim.aberle@yvmh.org](mailto:jim.aberle@yvmh.org)

**Network Partners:**

Not Applicable.

**Project Purpose:**

Reduce medication administration errors and cycle time to improve patient safety in an acute care environment. The project will emphasize the use of informatics and advanced information technologies such as bar codes, wireless networks and clinical decision support to accomplish these goals.

**Outcomes Expected:**

Reduce medication administration errors by 50%. Reduce medication administration cycle time by 50%. Reduce the cost of medication errors through the reduction of adverse drug reactions by 50%. Reduce the time to communicate patient medication status at shift change by 50%. Reduce the number of delays between dispensing and administering medications by 50%.

**Service Area:**

Memorial's primary service area is Yakima County, consisting of 4,296 square miles in Central Washington State. Yakima County is a primary medical care population group HPSA, mental health low income HPSA and full county MUA.

**Services Provided:**

Not Applicable.

**Equipment:**

180 bedside computers with barcode scanners, Siemens Medication Administration Check system and Cisco wired and wireless network.

**Transmission:**

100/1000 MB/s switched Ethernet LAN.

Physician Education, Community Outreach Program to Prevent Diversion of  
Prescription Drugs  
Appalachian Pain Foundation

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Appalachian Pain Foundation  
PO Box 3312  
Charleston, WV 25333  
[www.PainCentral.com](http://www.PainCentral.com)

Skip Lineberg, Executive Director  
Ph: 304-342-6970  
Fax: 304-342-6973  
[info@paincentral.com](mailto:info@paincentral.com)

**Network Partners:**

Purdue Pharma, Novartis Pharma, Medtronic Neurological, American Osteopathic Medicine Association, West Virginia Hospital Association, WVHA—Health Education Foundation.

**Project Purpose:**

To develop a curriculum for a pain management course to be taught in medical centers throughout the region. In addition, the APF is developing education initiatives, management forums, information web sites and meeting with law enforcement, industry, physicians, clinicians and community leaders to help ensure that patients receive proper, ethical and effective pain treatment and to reduce the diversion of prescription pain-killer medications.

**Outcomes Expected:**

Grow the APF membership to self-sustaining levels; validate APF as a regional resource for clinical and administrative dialogue on appropriate and outcome supported pain management; represent to legislation generators, administrators and enforcers the importance of reasonable, rational and responsible assessment and management of chronic pain; create a Board of Advisors from broad interdisciplinary and administrative backgrounds to promote balance and reality-tested goals and activities of APF.; conduct patient education seminars (via Webcast) and to confer continuing education credits for such educational events.

**Service Area:**

Primary service area includes West Virginia and the Appalachian region.

**Services Provided:**

The services provided in this project include developing a comprehensive educational curriculum designed to educate healthcare professionals, related professions and key sectors of communities about effective pain management and the dangers of the abuse of prescription medication.

**Equipment:**

Distance learning video and audio processing equipment for Webcast and videoconferencing.

**Transmission:**

Internet protocols (IP), Internet—World Wide Web.

Robert C. Byrd Center for Rural Health  
Joan C. Edwards School of Medicine  
1600 Medical Center Drive, Suite 1400  
Huntington, WV 25701  
[crh.marshall.edu/](http://crh.marshall.edu/)

Jennifer Plymale, MS  
Amber Vance, MS  
Phone: 304-691-1184  
Fax: 304-691-1183  
Email: [Elkins34@marshall.edu](mailto:Elkins34@marshall.edu)

**Network Partners:**

Walter Reed Army Medical Center, Tug River Health, Lincoln Primary Care Center, JW Endicott MD, Mason County Health Department, Pleasant Valley Hospital, Larry J Harless Community Center, Southwestern Area Health Education Center.

**Project Purpose:**

The purpose of this project is to increase access to preventive health care for Southern West Virginia utilizing a comprehensive chronic disease assessment, community focused interventions, and deployment of mobile medical units focusing on pediatrics and preventive medicine.

**Outcomes Expected:**

Improved prevention, detection, and management of the most prevalent and debilitating chronic diseases of the region such as heart disease, diabetes, selected cancers, and obesity. Provide families in underserved rural communities access to healthcare services currently unavailable by designating and implementing targeted intervention programs.

**Service Area:**

Southern West Virginia; primarily Mason, Lincoln, Mingo and McDowell Counties.

**Services Provided:**

The services in this project are the development and deployment of a comprehensive chronic disease and colorectal cancer screening program; continued development and deployment of a community-based electronic health record, emphasizing a comprehensive chronic disease assessment; continued and expanded operations of the Center's pediatric mobile medical unit, in addition to the deployment of a preventive medicine mobile medical unit.

**Equipment:**

Video conferencing (H.323) for telemedicine is provided by a V-Tel Galaxy Class video conferencing; H.323 video conferencing is available with a roll-about Polycom ViewStation FX unit, and 384 KB/s ISDN-based video conferencing.

**Transmission:**

Dedicated T-1 lines, Internet Protocols (IP).

West Virginia University, MDTV  
PO Box 9081  
Morgantown, WV 26506-9081  
[wvthenet.hsc.wvu.edu](http://wvthenet.hsc.wvu.edu)

JoAnn Hornsby, MD/Christopher Budig  
Christopher Budig  
Phone: 304-293-6945  
Fax: 304-293-8565  
Email: [cbudig@hsc.wvu.edu](mailto:cbudig@hsc.wvu.edu)

**Network Partners:**

Appalachian Community Health Center, East Ridge Health Systems (1 satellite) FMRS Mental Health Council (3 satellite), Healthways (1 satellite), Logan-Mingo mental Health (1 satellite), Northwood Health Systems (2 satellite), Prestera (10 satellite), Senecal Mental Health (4 satellite), Southern Highlands Mental Health Center (2 satellite), Valley Healthcare (4 satellite), Westbrook Health Services (1 satellite).

**Project Purpose:**

Provide telemedicine services to the rural community mental healthcare centers (CMHC). West Virginia has 14 major community mental health care centers. All of these sites are in need of additional psychiatric healthcare services. A secondary purpose is to allow for healthcare workers in these communities to utilize these telemedicine units for continuing professional education and in that same spirit allow the community members to take advantage of the health education programs provided through MDTV.

**Outcomes Expected:**

Help patients in rural areas obtain improved access to psychiatric care. To be able to relieve some of the current strain on the community mental health centers by the creation of psychiatric telemedicine clinics. Overall patient care improves while physician time commitment is shortened. This leads to cost savings and patient satisfaction improvements. Evaluation/Surveys will be utilized in determining patient/provider comfort levels during consultations vs. face-to-face consultations.

**Service Area:**

Counties served are all within the state of West Virginia: There are 34 counties participating in this project. Within the 34 counties, 23 are HPSA and 26 are MUA.

**Services Provided:**

Mountaineer Doctor Television has been operational since 1992 and is providing telemedicine, distant education, continuing medical education as well as administrative services throughout the state of West Virginia and beyond.

**Equipment:**

44 Remote Sites received a Tandberg 880 ISDN-IP Codec; The MDTV office received 1 Tandberg 6000 codec, 3 Tandberg 2500 codec, and 7 Tandberg 880 codecs; 1 Tandberg Gateway, 2 Tandberg MCUs, Sanyo Video Projector, DVC ProCamera and DVC Pro Studio VCR.

**Transmission:**

Internet, (IP) transmissions are possible between individual clinics and MDTV. Connections are established using the following: Frame Relay 768 KB/s bandwidth.

La Crosse Medical Health Science Consortium  
1300 Badger Street, Suite 3065  
La Crosse, WI, 54601  
[www.uwlax.edu/lmhsc](http://www.uwlax.edu/lmhsc)

John N. Katrana  
Ph: 608-785-5150  
Fax: 608-785-5154  
Email: [katrana.john@uwlax.edu](mailto:katrana.john@uwlax.edu)

**Network Partners:**

Gundersen Lutheran Medical System, Western Wisconsin Technical College, Viterbo University, Franciscan Skemp Healthcare/Mayo Health System, University of Wisconsin—La Crosse, Black River Falls Memorial Hospital, Tomah Memorial Hospital, Hess Memorial Hospital, Vernon Memorial Hospital, Prairie du Chien Memorial Hospital, Rural Wisconsin Health Cooperative, Ho Chunk Health Care Center—Black River Falls and Ho Chunk House of Wellness—Baraboo, Reedsburg Area Medical Center, Reedsburg, Moundview Memorial Hospital, Krohn Clinic, Mile Bluff Clinic.

**Project Purpose:**

Develop distance education partnerships among the Consortium's educational institutions, rural hospitals, and clinics. Focus on delivery through interactive two-way video and Web-based health programs for health professions education as well as professional development.

**Outcomes Expected:**

Project outcomes focus on: 1) degree to which the project is able to address shortages in allied health personnel in the region; 2) the professional development and continuing education needs of health professionals throughout the region; and 3) development of online courses in the health professions. Measurement is by the quantification of attendance at/or participation in the respective programs.

**Service Area:**

Counties in which network participants are located include: Jackson, Monroe, LaCrosse, Vernon, Crawford, Sauk, and Juneau counties.

**Services Provided:**

Credit Courses, noncredit and CEU courses, certificate programs and special workshops for nursing and allied health professionals and students pursuing health careers, in addition, nursing lectureships.

**Equipment:**

Teaching Station with AMX room control that controls the video projector, visualizer, audio, and computer. Classrooms and lecture halls in the Health Science Center (opened 2000) were designed specifically for distance education.

**Transmission:**

In designated rooms there is access to ISDN, Video Over IP, DS-3 connections. Polycom Viewstation Bridge allows to connect multiple locations simultaneously. For line Interconnections, T1 is used.

Marshfield Clinic TeleHealth Network  
1000 N. Oak Avenue  
Marshfield WI 54449  
[www.marshfieldclinic.org/telehealth](http://www.marshfieldclinic.org/telehealth)

Nina M. Antoniotti, RN, MBA, Ph.D.  
Ph: 715-389-3694  
Fax: 75-387-5240  
E-mail: [antoniotti.nina@marshfieldclinic.org](mailto:antoniotti.nina@marshfieldclinic.org)

**Network Partners:**

15 Physician Offices, 4 Dental Offices, 2 Skilled Nursing Facilities, 1 School, 1 County Jail, 1 Geriatric Education Center, 1 University School of Dentistry, 3 Food Manufacturers, 1 Indian Health Center.

**Project Purpose:**

Provide preventative dental and health services, dental and health case management, and public health services to address the needs of people with chronic conditions such as Diabetes in a variety of settings including the home, rural health clinics, and Native American health centers. Distance education will also be provided for health care professionals, patients, and their families in conjunction with the clinical services provided.

**Outcomes Expected:**

To increase the number of children and elderly who have access to dental services and participating in sealant programs by age 6 and 10. To provide preventative dental care or early oral health detection for residents of nursing homes. To decrease the delay in receiving timely retinal screening in high-risk populations. To increase the detection rate of hidden diabetic retinal damage in asymptomatic diabetic populations. To increase educational opportunities for communities in the areas of food safety. To increase access to timely referrals for suspected food contamination illnesses. To decrease the incidence of food contamination. To increase the safety of food production. To control the impact of food contamination by intrinsic, secondary, or intentional threat.

**Service Area:**

Rural and underserved areas in North Central Wisconsin. 8.7% of the population lives below the poverty level. 15% are disabled, 9.6% are a designated dental Health Professional Shortage Area (HPSA). The majority of the counties to be served are partial primary care HPSAs.

**Services Provided:**

Dermatology, Psychiatry, Child Psychiatry, Psychotherapy, Oncology, Cardiology, Speech Pathology, Nutrition—Diabetes Management, Nutrition—all others, Diabetes Management, Endocrinology, Burn Care, Neurology, Pulmonary Medicine, Plastic Surgery, Long Term Care, School TeleHealth, BACH, Cancer, Prostate, and Chronic Pain Support Group, Research Oncology, Home TeleHealth, Parkinson Clinic, EAP, Infectious Diseases, Occupational Medicine, Wound Therapy, ADHD Parenting Class, Anticoagulation Management, Nurse Triage, and Diabetes and Asthma Care Management, Pain Management, Food Safety, TelePathology, Palliative Care, Dentistry, Remote Monitoring.

**Equipment:**

Polycom network for patient sites and VCON products on the PC for providers. AMD patient peripherals, patient exam cameras (commercially available high-end video camcorders). Standard TV monitors/video switchers in exam rooms. Video bridge—ACCORD.

**Transmission:**

IP video at 512 KB/s over proprietary lines, IP video at 384 KB/s over proprietary lines, ISDN video at 384 KB/s over leased lines.

Rural Wisconsin Health Cooperative (RWHC)  
880 Independence Lane, PO Box 490  
Sauk City, WI 53583  
[www.rwhc.com](http://www.rwhc.com)

Tim Size, MPH  
Larry Clifford, MA  
Ph: 608-643-2343  
Fax: 608-643-4936  
[lclifford@rwhc.com](mailto:lclifford@rwhc.com)

**Network Partners:**

Rural Wisconsin Health Cooperative  
Wisconsin Primary Health Care Association

**Project Purpose:**

To help rural communities build the necessary human, technical and financial infrastructure to develop sustainable telehealth/telemedicine programs. Establish a videoconferencing network that will connect multiple sites, thereby enabling rural hospitals and clinics to access a wide range of telehealth services. Within a year, the participating hospitals/clinics will be linked by a robust state-of-the-art videoconferencing system and have a workable plan for developing shared teleradiology/PACS services. Assess the participants' readiness for teleradiology and develop an implementation plan for a shared picture archiving and communications system (PACS).

**Outcomes Expected:**

Improve compliance and outcomes involving patients with chronic conditions through teleradiology, education and remote consultation with specialists, thereby reducing inappropriate clinic visits and hospital readmissions by 10%. On-site telehealth coordinators will collect data relating to: costs, utilization, outcomes, and patient/provider satisfaction. With guidance from RWHC staff members with experience in clinical/financial performance measurement, the telehealth coordinators will design and implement a survey that will track the selected measures.

**Service Area:**

Three community health clinics (WPHCA members) and nine rural hospitals (RWHC members) provide enhanced primary care to over 625,000 residents in a 26-county region covering south-central Wisconsin. Most/all encompass HPSAs and MUAs.

**Services Provided:**

Services provided include: videoconferencing, distance learning, remote consultation with medical specialists, and teleradiology services that will include a shared PACS system.

**Equipment:**

Each of the participating sites will receive a Polycom H.323 Viewstation (videoconferencing system) with a 32" monitor and cart.

**Transmission:**

The network features frame-relay ports for dedicated T1 access, VPN options, videostreaming, and sub-network integration. The network also provides a video bridge for multi-point videoconferencing.

St. Elizabeth Hospital Community Foundation  
1506 South Oneida St  
Appleton, WI 54915-1397  
[www.affinityhealth.org](http://www.affinityhealth.org)

Ann Byrne, RN, BSN  
Ph: 920-730-2650  
Fax: 920-730-2665  
Email: [abyrne@affinityhealth.org](mailto:abyrne@affinityhealth.org)

**Network Partners:**

Affinity Health System  
UW Health

**Project Purpose:**

To broaden the population of pediatric patients we serve in the Fox River Valley. The first objective is to purchase peripheral attachments for patient exams in Appleton. The second objective is to purchase the basic receiving components for Madison. Provide training and education for MDs and staff on the use of the equipment and determination of the appropriate patient population to receive services through telemedicine.

**Outcomes Expected:**

By the end of the project grant period, we will have purchased and installed the peripheral equipment, base unit and conducted the training necessary to add 7-10 more pediatric sub-specialists to the telemedicine program. Patient satisfaction at least 90% for all telemedicine visits. Measurement tools used: Patient satisfaction survey, developed for project, completed implementation timeline and OAT –GPRA Performance Measures.

**Service Area:**

We predominantly serve Calumet, Outagamie and Winnebago counties. We also do draw patients from Northeastern Wisconsin and the UP of Michigan.

**Services Provided:**

We currently provide a pediatric endocrinology telemedicine clinic for stable endocrine patients every other month. We also provide a diabetes follow up clinic quarterly for stable diabetic patients. We are in the process of developing a stable asthma telemedicine clinic to be implemented in 2006.

**Equipment:**

One Tandberg 500213 HCSIII-6000 videoconferencing system in Appleton, WI.  
One Tandberg 500213 HCSIII-6000 videoconferencing system in Madison, WI.  
Peripheral attachments: Stethoscope, Otoscope, Ophthalmoscope, Document camera and video printer.

**Transmission:**

Our system runs on 3 ISDN lines, with each line operating at 115 KB/s, for a total of 384 KB/s.



United Medical Center  
214 E.23rd Street  
Cheyenne,WY 82009  
[www.umcwy.org](http://www.umcwy.org)

Dana K. Barnett  
Ph: 307-633-6083  
Fax: 307-633-3575  
Contact Person [dbarnett@umcwy.org](mailto:dbarnett@umcwy.org)

**Network Partners:**

Platte County Memorial Hospital, Wheatland, WY; Community Hospital, Torrington, WY; Iverson Memorial Hospital, Laramie, WY; Memorial Hospital of Converse County, Douglas, WY; Niobrara Health and Life Center, Lusk, WY.

**Project Purpose:**

Development and Implementation of a video conferencing system to include clinical telehealth applications, and enhance distance education opportunities within the region. This will be accomplished by engineering appropriate connectivity with facilities in the region, deploying necessary endpoints and clinical application peripherals and creating interactive educational programs.

**Outcomes Expected:**

Deployment of necessary infrastructure and peripheral equipment to accommodate clinical telehealth and educational services, and development of network organization dedicated to the implementation of clinical and educational services in the region.

**Service Area:**

The project will serve the following Wyoming Counties: Albany; Laramie; Platte, HPSA for primary care; Goshen, MUA; Converse, HPSA for primary care; and Niobrara, HPSA for primary care.

**Services Provided:**

Currently there is no functioning health care related video-conferencing network in the region. Services provided will include clinical applications such as wound care, cardiology, surgery follow-up, disease management, home monitoring, and Clinical Medical Education. Other services will be developed as identified by network providers.

**Equipment:**

Video conferencing units and peripheral clinical equipment at remote sites based on specific applications. Peripheral equipment to include general exam cameras, and electronic stethoscopes.

**Transmission:**

IP for clinical and educational programs using T1 lines.

Office of Telemedicine  
211 West 19<sup>th</sup> Street, Suite 120  
Cheyenne WY 82001  
[wdh.state.wy.us/telemed](http://wdh.state.wy.us/telemed)  
[www.wyomingtelehealth.org](http://www.wyomingtelehealth.org)

Fran Cadez, JD, MBA  
Ph: 307-638-4515  
Fax: 307-638-4612  
E-mail: [fcadez@state.wy.us](mailto:fcadez@state.wy.us)

**Network Partners:**

Center for Rural Health Research and Education, University of Wyoming, Laramie WY,  
Institute for Rural Health, Idaho State University, Pocatello ID, Veterans Administration, Wyoming, and  
other community partners and locations to be determined

**Project Purpose:**

The Wyoming Network for Telehealth (WyNETTE) will improve access to and quality of Wyoming's health care through the application of technology. The project will take a three-pronged approach: (a) increasing care opportunities through telemedicine; (b) increasing the number, types, and skills of health professionals through distance delivery of health care education; and (c) increasing access to information that will support direct care and the administration of care through informatics. The project aims to improve the climate for the integration of health care and technology through pilot projects and demonstration grants.

**Outcomes Expected:**

WyNETTE will increase the use of telemedicine, distance education, and informatics among health-care practitioners in Wyoming. Data on these items, as well as evaluation of the access to services and quality of care, will be gathered through on-site interviews with community partners to be added as the project progresses, collection of data on variables to be determined by an advisory committee, and project-wide planning/implementation/evaluation data collected automatically through the point of service. Three representative sites will be selected for monitoring of patient health status and quality of care through implicit and explicit review of processes and outcomes.

**Service Area:**

The entire State of Wyoming (23 counties) will be served by this project. Eighteen of these counties are designated as single county HPSAs or contain service areas designated as HPSAs. Three additional counties contain designated MUAs as well. All 23 counties are designated as mental health PSAs. Pilot projects will be selected to represent a variety of geographic and demographic locations.

**Services Provided:**

A Web portal provides access for all hospitals and clinics in the state to on-line medical library resources; real time primary care follow-up; telepsychiatry; home health monitoring. Anticipated services include videoconferencing for continuing education, store and forward applications, and legal and policy resources and information.

**Equipment:**

Current Equipment includes multiple Polycom Viewstation videoconferencing systems, 1 Tandberg Intern telemedicine unit, and 1 Dell Web server.

**Transmission:**

Current transmission methods used include Internet and telephone (land-line) service. This project is not providing transmission services, which are the responsibility of the partner sites.

# **Acronyms And Glossary**

## Acronyms

ADSL	Asymmetrical Digital Subscriber Line
ATM	Asynchronous Transfer Mode
BRI	Basic Rate Interface
CATV	Cable television
Dental HPSA	Dental Health Professional(s) Shortage Area
DSL	Digital Subscriber Line
DDN	Defense Data Network
DS	Digital telecommunications channels
GB/s	Gigabits per second
HF	High frequency
HPSA	Health Professional(s) Shortage Area
IP	Internet Protocol
ISDN	Integrated Services Digital Network
K	Kilo
KB/s	Kilobits per second
LAN	Local Area Network
MAN	Metropolitan Area Network
MB	Megabyte
MB/s	Megabits per second
MCU	Multipoint control unit
MHPSA	Mental Health Professional(s) Shortage Area
MHz	Megahertz
MUA	Medically Underserved Areas
MW	Microwave
OC	Optical Carrier
PACS	Picture Archiving and Communications System
POTS	Plain Old Telephone Service
PRI	Primary Rate Interface
TCP/IP	Transmission Control Protocol/Internet Protocol
VLAN	Virtual local area network
VPN	Virtual Private Network
VTC	Video teleconference (ing)
WAN	Wide Area Network
WWW	World Wide Web

# Glossary

## **Analog**

An analog (US analog) signal is electrical and varies constantly in voltage, unlike a digital signal that varies between two constant values, usually denoted as 0 and 1. The value of the analog signal varies all the time during transmission, whereas a digital signal changes only between two set values without intermediate variations.

## **Asymmetrical Digital Subscriber Line (ADSL)**

Refers to a pair of modems connected by a copper line that yields asymmetrical transmission of data.

## **Asynchronous Transfer Mode (ATM)**

A way of transmission where a start signal precedes individual characters and one or more stop signals follow it. Due to this start/stop system, delays may occur between characters. Also denotes the complete system of protocols and equipment associated with cell based communications network. These networks have the ability to transmit voice, data, and video traffic simultaneously using a statistical multiplexing scheme. This type of switching is expected to bridge the gap between packet and circuit switching. ATM uses packets referred to as cells that are designed to switch cells so rapidly that there is no perceptible delay.

## **Audio-teleconferencing**

Two-way electronic voice communication between two or more people at separate locations.

## **Backbone**

The high-traffic-density connectivity portion of any communications network. In packet-switched networks, a primary forward-direction path traced sequentially through two or more major relay or switching stations. *Note:* In packet-switched networks, a backbone consists primarily of switches and interswitch trunks.

## **Bandwidth**

Measures the ability of a communications channel to carry information. The capacity of information increases relative to a higher megahertz (cycles per second) in an analog transmission, and in megabits/second (MB/s) for digital transmission.

## **Basic Rate Interface (BRI)**

An ITU-T Integrated Services Digital Network (ISDN) multipurpose user interface standard that denotes the capability of simultaneous voice and data services provided over two clear 64-KB/s channels and one clear 16-KB/s channel (2B+D) access arrangement to each user location.

## **Bit**

Binary digit, the smallest possible unit of information making up a character or a word in digital code processed by computers.

## **Bridge**

Device connecting two separate networks at the OSI Data Link Layer (Level Two Media Access Control Layer). Once bridging is accomplished, the bridge makes interconnected LANs look like a single LAN, passing data between the networks and filtering local traffic. There are two key classifications of bridge: those supporting Spanning Tree and, for Token Ring networks, those supporting Source Routing. Bridges connect networks using dissimilar protocols and do not interpret the data they carry. They control network traffic and security, filtering where necessary to boost network, performance and contain sensitive data to particular LAN areas.

**Broadband**

A general term for a telecommunications medium of sufficient capacity to transmit high quality voice, data and video transmissions. Broadband has been defined in many ways; e.g., a Wide Area Network (WAN) providing bandwidth greater than 45 MB/s (T3); voice, data, and/or video communications at rates greater than 1.544 MB/s (T-1), but has been Federally defined as data transmission each way, of 200 kilobits/second or more.

**Bundle(d)**

A group of optical fibers or electrical conductors, such as wires and coaxial cables, usually in a single jacket. *Note:* Multiple bundles of optical fibers or electrical conductors may be placed in the same cable

**Byte**

A string or cluster of eight bits to represent a character.

**Cable**

An assembly of one or more insulated conductors, or optical fibers, or a combination of both, within an enveloping jacket. *Note 1:* A cable is constructed so that the conductors or fibers may be used singly or in groups. *Note 2:* Certain types of communications cables, especially long submarine cables but also terrestrial cables, whether the communications media are metallic or optical fiber, may contain metallic conductors that supply power to repeaters (amplifiers).

**Cable Modem**

In CATV systems, a bidirectional high-speed digital communications interface, located on a subscriber's or user's premises, and used, for example, for Internet access or other digital communications.

**Cable television (CATV)**

A transmission system that distributes broadcast television signals and other services by means of a coaxial cable.

**Codec**

A "code/decode" electrical device that converts an analog electrical signal into a digital form for transmission purposes and then converts it back at the other end.

**Dedicated T1**

A permanent telephone line reserved exclusively for one patient, accessible all hours of the day. These lines usually offer better quality than standard telephone lines, but may not significantly augment the performance of data communications. May also be known as "leased," or "private" lines.

**Defense Data Network (DDN)**

Used generally to refer to Milnet, Arpanet and the TCP/IP protocols those networks use. More specifically refers to Milnet and associated parts of the connected Internet that connect military installations.

**Dental Health Professional(s) Shortage Area (Dental HPSA)**

An area is so designated if the following three criteria are met: 1. The area is a rational area for the delivery of dental services; 2. One of the following conditions prevails in the area: (a) The area has a population to full-time-equivalent dentist ratio of at least 5,000:1, or (b) The area has a population to full-time-equivalent dentist ratio of less than 5,000:1 but greater than 4,000:1 and has unusually high needs for dental services or insufficient capacity of existing dental providers; and 3. Dental professionals in contiguous areas are over utilized, excessively distant, or inaccessible to the population of the area under consideration (*See <http://bhpr.hrsa.gov/shortage/hpsacritdental.htm>*).

**Digital Subscriber Line (DSL)**

In Integrated Services Digital Networks (ISDN), equipment that provides full-duplex service on a single twisted metallic pair at a rate sufficient to support ISDN basic access and additional framing, timing recovery, and operational functions. *Note:* The physical termination of the DSL at the network end is the line termination; the physical termination at the customer end is the network termination.

**Digital telecommunications channels (DS)**

These channels are capable of transmitting high volume voice, data or compressed video signals. DS1 and DS3 are also known as T1 and T3 carriers. Transmission rates are 64 KB/s for DS0, 1.544 MB/s for DS1, and 45 MB/s for DS3.

**Digitizer**

A device that converts an analog signal into a digital representation of the analog signal. A digitizer usually samples the analog signal at a constant sampling rate and encodes each sample into a numeric representation of the amplitude value of the sample. A device that converts the position of a point on a surface into digital coordinate data.

**Direct Digital Imaging**

Involves the capture of digital images so that they can be electronically transmitted.

**DS1 (T1)**

A digital carrier capable of transmitting 1.544 MB/s of electronic information. The general term for a digital carrier available for high-value voice, data, or compressed video traffic.

**DS3 (T3)**

A carrier of 45 MB/s bandwidth. One DS3 channel can carry 28 DS1 channels.

**Duplex**

A transmission system allowing data to be transmitted in both directions simultaneously.

**Encryption**

A system of encoding data on a Web page or e-mail where the information can only be retrieved and decoded by the person or computer system authorized to access it. Often used on the web to protect financial data.

**Ethernet**

A communications protocol that utilizes various types of cable at a rate of 10 MB/s.

**Fiber optics**

Hair-thin, flexible glass rods encased in cables that use light to transmit audio, video, and data signals.

**Film Digitizer**

A device that allows scanning of existing static images so that the images can be stored, manipulated, or transmitted in digital form.

**Filmless Radiology**

Use of devices that replace film by acquiring digital images and related patient information and transmit, store, retrieve, and display them electronically.

**Fractional T1**

A portion of the 1.544 MB/s (T1-aggregate) bit stream; the available fractions being determined by the type of multiplexer used to achieve the T1 aggregate bit stream.

**Frame relay**

Created to improve the rate of data transfer compared to previous transmission protocols, frame relay is a streamlined process of sending and acknowledging transmitted packets of data.

**Full Duplex**

A communication channel over which both transmission and reception are possible at the same time.

**Full T1** *see T1***Gigabits per second (GB/s)**

A measure of bandwidth and rate of data flow in digital transmission.

**Health Professional(s) Shortage Area (HPSA)**

Means any of the following which the Secretary determines has a shortage of health professional(s): (1) An urban or rural area (which need not conform to the geographic boundaries of a political subdivision and which is a rational area for the delivery of health services); (2) a population group; or (3) a public or nonprofit private medical facility (*See <http://bhpr.hrsa.gov/shortage/hpsacrit.htm>*).

**Half-duplex**

A communication channel over which both transmission and reception are possible, but only in one direction at a time.

**H channel**

The ISDN packet switched channel on Basic Rate Interface, designed to carry user information streams at different speeds, depending on type: H11=1536 KB/s, H0=384 KB/s and H12= 1920 KB/s.

**Hertz**

A measure of radio frequency. One Hz = one cycle per second.

**High frequency (HF)**

Frequencies from 3 MHz to 30 MHz.

**Image Processing**

Use of algorithms to modify data representing an image, usually to improve diagnostic interpretation.

**Informatics**

The deployment of systems that collect, organize, and report health data to improve the quality and cost-effectiveness of health care, public health, and providers and consumers decision-making about health care management (e.g., electronic medical record, integrated health care management systems, disease tracking systems).



**Integrated Services Digital Network (ISDN)**

A completely digital telephone system that is slowly enjoying more popularity throughout the United States which permits the integrated transmission of voice, video, and data to users at a higher speed than would be possible over typical telephone lines. It also provides connections to a universal network. It currently requires special installation and equipment.

**Internet (1)**

A group of networks interconnected so that they appear to be one continuous network, and can be addressed seamlessly at the Network Layer Three of the OSI model. Typical internets are built using routers, either to form a backbone network comprised of routers, or to link together LANs at the Network Layer.

**Internet (2)**

A collection of networks and gateways, including the Milnet and NSFNET, all using the TCP/IP protocol suite. It functions as a single, cooperative virtual network. The Internet provides universal connectivity and three levels of network services: connectionless packet delivery; full duplex stream delivery and application level services including electronic mail and EDI.

**Internet Protocol (IP)**

The messenger protocol of the TCP/IP (Transmission Control Protocol/Internet Protocol), describing software that tracks the internet address of nodes, routes outgoing messages, and recognizes incoming messages. It facilitates the identification of the Internet Protocol Address (IP Address), of a computer or other device on the Internet (normally printed in dotted decimal form such as 128.127.50.224).

**Interoperability**

The condition achieved among communications and electronics systems or equipment when information or services can be exchanged directly between them, their users, or both.

**Kilo**

$1,000 = 10^3$

**Kilobits per second (KB/s)**

A measure of bandwidth and rate of data flow in digital transmission. One KB/s is 1,024 kilobits per second.

**Local Area Network (LAN)**

A network of computers, generally small in number, whose reach is limited, typically within a building or campus, linked to allow access and sharing of data and computer resources by users. Differentiated from MAN and WAN by the size of the area, LAN is the smallest.

**Medically Underserved Areas (MUA)**

May be a whole county or a group of contiguous counties, a group of county or civil divisions or a group of urban census tracts in which residents have a shortage of personal health services. (see <http://bhpr.hrsa.gov/shortage/>)

**Megabits per second (MB/s)**

A measure of bandwidth and rate of data flow in digital transmission. One MB/s is equivalent to one million bits per second.

**Mental Health Professional(s) Shortage Area (MHPSA)**

An area is so designated if the following criteria are met: 1. The area is a rational area for delivery of mental health services; 2. One of the following conditions exists within the area: (a) population-to-core mental health professional ratio greater than or equal to 6,000:1 and a population-to-psychiatrist ratio greater than or equal to 20,000:1, or (b) a population-to-core-professional ratio greater than or equal to 9,000:1, or (c) a population-to-psychiatrist ratio greater than or equal to 30,000:1; 3. The area has unusually high needs for mental health services, and has: (a) a population-to-core mental health professional ratio greater than or equal to 4,500:1, and a population-to-psychiatrist ratio greater than or equal to 15,000:1, or (b) a population-to-core professional ratio greater than or equal to 6,000:1, or (c) a population-to-psychiatrist ratio greater than or equal to 20,000:1; and 4. An area will be considered to have unusually high needs for mental health services if one of the following criteria is met: (a) 20 percent of the population (or of all households) in the area have incomes below the poverty level; (b) the youth ratio, defined as the ratio of the number of children under 18 to the number of adults of ages 18 to 64, exceeds 0.6; (c) the elderly ratio, defined as the ratio of the number of persons aged 65 and over to the number of adults of ages 18 to 64, exceeds 0.25; (d) a high prevalence of alcoholism in the population, as indicated by prevalence data showing the area's alcoholism rates to be in the worst quartile of the nation, region, or State; (e) a high degree of substance abuse in the area, as indicated by prevalence data showing the area's substance abuse to be in the worst quartile of the nation, region, or State (See <http://bhpr.hrsa.gov/shortage/hpsaguidement.htm>).

**Metropolitan Area Network (MAN)**

A network of computers whose reach extends to a metropolitan area. MANs may be used to link telemedicine applications at a data rate similar to DS1. In some cases, MANs may be used by cable companies to offer links to off-network services such as the internet, airline reservation systems, and commercial information services, in addition to data exchange abilities. Compared to LAN and WAN, MAN is in between the two.

**Megabyte (MB)**

A measure of computer storage and memory capacity. One MB is equivalent to 1.024 million bytes, 1,024 thousand bytes, or 1.024 kilobytes. However, this term is also applied to the more rounded term of 1 million bytes.

**Megahertz (MHz)**

A measure of bandwidth and rate of information flow for analog transmission. One MHz equals 10 to the sixth power cycles per second.

**Microwave (MW)**

Loosely, an electromagnetic wave having a wavelength from 300 mm to 10 mm (1 GHz to 30 GHz). Note: Microwaves exhibit many of the properties usually associated with waves in the optical regime, e.g., they are easily concentrated into a beam.

**Modem (Modulator/De-modulator)**

A device that translates digital signals to pulse tone (analog) signals to enable transmission over telephone lines and reconverts them to digital form at the point of reception, thus permitting a computer to communicate with another computer over a regular telephone line. These devices are usually identified by the speed (in bits per second or bps) of communication they permit. The higher the bps, the faster the modem.

**Multipoint Control Unit (MCU)**

A multipoint device, by means of which two or more audiovisual terminals may intercommunicate in a conference call. *Note:* A "principal MCU" has been assigned a superior controlling function in a call where two or more MCUs in that call are termed "satellite MCUs". The physical realization of an MCU may be such that two or more independent conferences may be set up within the same unit; logically, however, there is no relationship between these conferences; the text of this definition refers to an MCU only as a logical entity pertinent to the particular call of concern.

**Network**

A set of nodes, points or locations that are connected via data, voice, and video communications for the purpose of exchanging information. Interconnected telecommunications equipment used for data and information exchange. Consists of different types: LAN, MAN, and, WAN being examples.

**Open Systems Architecture**

A design that permits the interconnection of system elements provided by many vendors. The system elements must conform to interface standards.

**Optical Carrier (OC)**

The nomenclature for the line rate of the optical transmission signal.

**Optical Ring (Disk)**

A computer storage disk used solely for large quantities (gigabytes, GBs) of data.

**Peripheral**

Any device that is attached to a computer externally. Scanners, mouse pointers, printers, keyboards, and monitors are all examples of this. Scales, blood pressure cuffs, spirometers, and glucometers are also examples.

**Picture Archiving and Communications System (PACS)**

A system capable of acquiring, transmitting, storing, retrieving, and displaying digital images and relevant patient data from various imaging sources and communicates the information over a network.

**Platform**

The type of computer on which a given operating system or application runs. The operating system in use on a given computer. The application program in use on a given computer and operating system. The term cross-platform may be used to characterize an application program or operating system that may be run on more than one platform.

**Primary Rate Interface (PRI)**

An integrated services digital network (ISDN) interface standard (a) that is designated in North America as having a 23B+D channels, (b) in which all circuit-switched B channels operate at 64 KB/s, and (c) in which the D channel also operates at 64 KB/s. *Note:* The PRI combination of channels results in a digital signal 1 (T1) interface at the network boundary.

**Push**

In networking, to send data from a server to a client in compliance with a previous request from (via) the client, as soon as the data are available.

**Real Time**

The capture, processing, and presentation of data, audio, and/or video signals at the time the data is originated on one end and received at the other end. When signals are received at rates of 30 frames per second, real time is achieved.

**Redundant or Redundancy**

Known as fault-tolerance, in data transmission, refers to characters and bits that can be removed from a transmission without affecting the message. In data processing and data communications, it means providing backup for components: should one of them fail, the system continues to run without operation. Total redundancy is usually impractical, but organizations with mission-critical applications attempt to install a high level of redundancy on the basis that downtime loses money, lives, depending on the business.

**Router**

In data communications, a functional unit used to interconnect two or more networks. Routers operate at the network layer (layer 3) of the ISO Open Systems Interconnection - Reference Model. The router reads the network layer address of all packets transmitted by a network, and forwards only those addressed to another network.

**Satellite**

An electronic retransmission instrument serving as a repeater, which is a bi-directional device used to amplify or regenerate signals, placed in orbit around the earth in geostationary orbit for the purpose of receiving and retransmitting electromagnetic signals. It typically receives signals from a single source and retransmits them over a wide geographic area, known as the satellite's "footprint."

**Server**

A network device that provides service to the network users by managing shared resources. The term is often used in the context of a client-server architecture for a local area network (LAN).

**Slow scan video**

A device that transmits and receives still video pictures over a narrow telecommunications channel.

**Store-and-forward**

Transmission of static images or audio-video clips to a remote data storage device, from which they can be retrieved by a medical practitioner for review and consultation at any time, obviating the need for the simultaneous availability of the consulting parties and reducing transmission costs due to low bandwidth requirements.

**Streaming**

A technique for transferring data (usually over the Internet) in a continuous flow to allow large multimedia files to be viewed before the entire file has been downloaded to a client's computer.

**Switch**

In communications systems, a mechanical, electro-mechanical, or electronic device for making, breaking, or changing the connections in or among circuits. To transfer a connection from one circuit to another. In a computer program, a conditional instruction and a flag that is interrogated by the instruction or a parameter that controls branching and that is bound, prior to the branch point being reached.

**Synchronous transmission**

The process by which bits are transmitted at a fixed rate with the transmitter and receiver synchronized, eliminating the need for start/stop elements, thus providing greater efficiency.

**T1 (DS1)**

A type of telephone line service offering high-speed data or voice access, with a transmission rate of 1.544 MB/s. It is also known as D1.

**T3 (DS3)**

A digital transmission system for high volume voice, data, or compressed video traffic, with a transmission rate of 44.736 MB/s. It is also known as D3.

**Telecommunications**

The use of wire, radio, visual, or other electromagnetic channels to transmit or receive signals for voice, data, and video communications.

**Teleconferencing**

Interactive electronic communication between multiple users at two or more sites, which facilitates voice, video, and/or data transmission systems: audio, audiographics, computer and video systems.

**Teleconsultation**

The physical separation between multiple providers during a consultation.

**Telediagnosis**

The detection of a disease as a result of evaluating data transmitted to a receiving station from instruments monitoring a remote patient.

**Telehealth**

The use of electronic information and telecommunications technologies to support and promote long-distance clinical health care, patient and professional health-related education, public health, and health administration.

**Telematics**

The use of information processing based on a computer in telecommunications, and the use of telecommunications to permit computers to transfer programs and data to one another.

**Telemedicine**

The use of electronic communication and information technologies to provide or support clinical care at a distance. Included in this definition are patient counseling, case management, and supervision/preceptorship of rural medical residents and health professions students when such supervising/precepting involves direct patient care.

**Telementoring**

The use of audio, video, and other telecommunications and electronic information processing technologies to provide individual guidance or direction. An example of this help may involve a consultant aiding a distant clinician in a new medical procedure.

**Telemonitoring**

The process of using audio, video, and other telecommunications and electronic information processing technologies to monitor the health status of a patient from a distance.

**Telepresence**

The method of using robotic and other instruments that permit a clinician to perform a procedure at a remote location by manipulating devices and receiving feedback or sensory information that contributes to a sense of being present at the remote site and allows a satisfactory degree of technical achievement. For example, this term could be applied to a surgeon using lasers or dental handpieces and receiving pressure similar to that created by touching a patient so that it seems as though s/he is actually present, permitting a satisfactory degree of dexterity.

**Transmission Control Protocol/Internet Protocol (TCP/IP)**

The underlying communications rules and procedures that allow computers to interact with each other on the Internet.

**Transmission Speed**

The speed at which information passes over a communications channel; generally given in either bits per second (bps) or baud.

**Videoconferencing**

Actual-time, generally two way transmission of digitized video images between multiple locations; uses telecommunications to bring people at physically remote locations together for meetings. Each individual location in a videoconferencing system requires a room equipped to send and receive video.

**Videophone**

A telephone that is coupled to an imaging device that enables the call receiver or the call originator, or both, to view one another as on television, if they so desire. A military communications terminal that (a) has video teleconference capability, (b) is usually configured as a small desktop unit, designed for one operator, and (c) is a single, integrated unit.

**Video teleconference (ing) (VTC)**

A teleconference that includes video communications. Pertaining to a two-way electronic communications system that permits two or more persons in different locations to engage in the equivalent of face-to-face audio and video communications. *Note:* Video teleconferences may be conducted as if all of the participants were in the same room.

**Virtual Private Network (VPN)**

The provision of private voice and data networking from the public switched network through advanced public switches. The network connection appears to the user as an end-to-end, nailed-up circuit without actually involving a permanent physical connection, as in the case of a leased line. VPNs retain the advantages of private networks but add benefits like capacity on demand.

**Virtual Local Area Network (VLAN)**

A computer network using internetworks as data links that are transparent for users and that do not have restrictions on protocols, so that the network has the characteristics of a local area network.

**Virtual Reality**

A computer-based technology for simulating visual, auditory, and other sensory aspects of complex environments to create an illusion of being a three-dimensional world. That world is designed by the computer, and viewed through a special headset that responds to your head movements while a glove responds to your hand movements. For example, while in a virtual room you may move your hand up in order to fly or tap to change the color of a wall.

**Wide Area-Network (WAN)**

Data communication networks that links together distant networks and their computers to provide long-haul connectivity between separate networks located in different geographic areas.

**Wireless**

Descriptive of a network or terminal that uses electromagnetic waves (including rf, infrared, laser, visible light—and acoustic energy) rather than wire conductors for telecommunications.

**World-Wide Web (WWW)**

The universe of accessible information, including graphics, sound, text and video accessible through the Internet. The Web has a body of software, a set of protocols and defined conventions for accessing such information, including HTML (HyperText Markup Language), the Web's software language, and TCP/IP, a family of networking protocols providing communication across interconnected networks.

**Sources for this section include:**

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