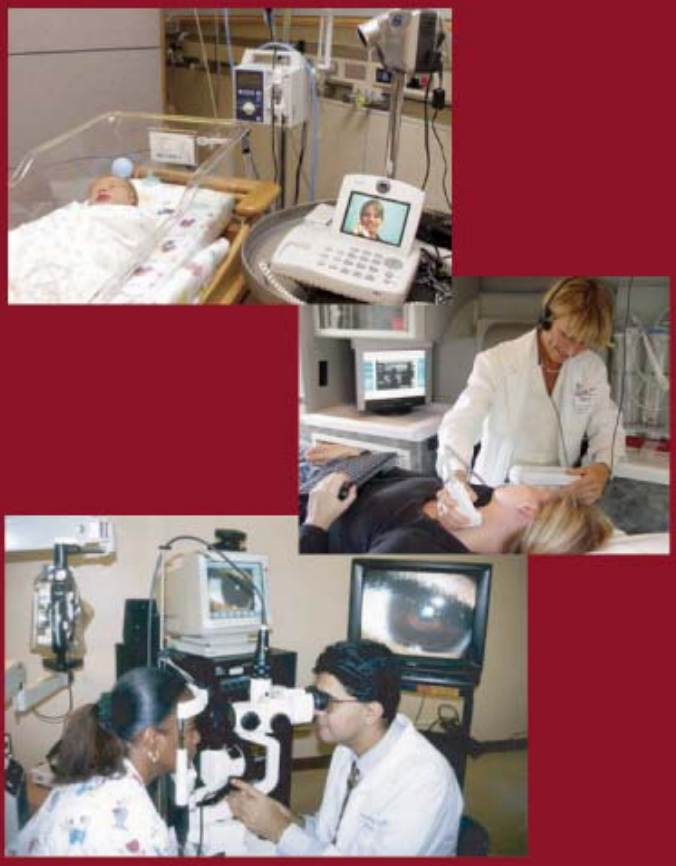
HRSA

OAT

GRANTEE DIRECTORY

2006-2007



Office for the Advancement of Telehealth — Health Resources and Services Administration — U.S. Department of Health & Human Services

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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 these profiles, definitions of some of the more commonly used acronyms and terms found throughout this material are provided.**

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Overview

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

These profiles contain information about grant projects administered by OAT from October 1, 2005 through September 30, 2007. During this period, OAT administered 148 telehealth/telemedicine projects. Of those, 24 were awarded funds totaling more than $6.1 million.

Projects administered by OAT receive funds in one of six ways:

1. The Telehealth Licensure Grant Program (TLGP): The TLGP is a competitive grant program that provides support for State professional licensing boards to carry out programs under which licensing boards of various States cooperate to develop and implement State policies that will reduce statutory and regulatory barriers to telemedicine. In 2006, two projects were funded through the TLGP as part of a 3-year award.

2. The Telehealth Network Grant Program (TNGP): This program replaced the Rural Telemedicine Grant Program (RTGP). The TNGP is a competitive grant program that 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 3-year award. In 2006, 12 projects were funded through the TNGP as part of a 3-year award.

3. The Telehealth Resource Center Grant Program (TRC): The TRC is a competitive grant program that provides support for the establishment and development of Telehealth Resource Centers (TRCs). These centers are to assist health care organizations, health care networks, and health care providers in the implementation of cost-effective telehealth programs to serve rural and medically underserved areas and populations. In 2006, six projects were funded through the TRC as part of a 3-year award.

4. The Telehomecare Grant Program (THC): The THC is a competitive grant program within the Telehealth Network Grant Program that focuses on demonstrating how telehealth networks can improve healthcare through provision of clinical care and remote monitoring of patients in their place of residence using telehealth technologies. These projects provide a mechanism to evaluate the cost-effectiveness of telehomecare services and may include, but are not limited to, case management by physicians, hospitals, medical clinics, home health agencies, or other health care providers who supervise the care of patients in their homes. In 2006, three projects were funded through the THC as part of a 3-year award.

5. 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 five projects that were funded from 2000-2002.

6. 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 2006, OAT administered 109 CMP projects, all of which were in an extension period.

OAT Grantee Organizations

The Office for the Advancement of Telehealth's (OAT) "Grantee Profiles 2006-2007" provides information about Grantee Organizations whose grants are administered by OAT. Projects included are those in an active status and/or projects receiving funding during fiscal years (FY) 2006 and 2007. *

***FY 2006 is the period October 1, 2005 through September 30, 2006.**
***FY 2007 is the period October 1, 2006 through September 30, 2007.**

This section contains a list of 2006–2007 OAT Grantee Organizations and their project names (descriptions).

Grantee Organizations

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

State **Grantee**

AK **Alaska Native Tribal Health Consortium**
- *Continued Advancement of Telehealth Capacity in Alaska*
- *The Summative Telemedicine Evaluation Project*

AK **Alaska Psychiatric Institute (API)**
- *API TeleBehavioral Health Project*

AL **University of South Alabama**
- *Center for Strategic Health Innovation (CSHI) RMEDE/BioTrac Project*
- *Center for Strategic Health Innovation (CSHI) Traditional Telemedicine*

AR **University of Arkansas for Medical Sciences**
- *South Arkansas Integrated Telehealth Oncology Program*
- *Telehealth for KIDS(Kids in Delta Schools)*

AZ **Arizona Board of Regents, University of Arizona**
- *Arizona Diabetes Virtual Center for Excellence (ADVICE)*
- *Institute for Advanced Telemedicine and Telehealth (THealth)*

AZ **Maricopa County, Arizona**
- *Correctional Health Services Telemedicine Initiative*

CA **California Telemedicine and eHealth Center**
- *Western Regional Telehealth Resource Center*

CA **Familia Unida Living with Multiple Sclerosis**
- *Telehealth Grant*

CA **Multi-Dimensional Imaging, Inc.**
- *Telemedicine for Improved Health Care and Education*

CA **Northern Sierra Rural Health Network**
- *Telehealth Network Grant Program*

CA **San Joaquin County Health Care Services**
- *Automated Drug Dispensing Medication Administration System*

CO **Avista Adventist Hospital**
- *Clinical Integration Through Health Informatics*

CO **University of Colorado Health Sciences Center**
- *Native Telehealth Outreach and Technical Assistance Program*

DC **American National Red Cross**
- *Congressionally Mandated Telehealth Grants*

DC **Center for Telehealth and E-Health Law**
- *National Telehealth Resource Center*

DC **Foundation For eHealth Initiative**
- *Connecting Communities for Better Health Program*

FL **BayCare Health System**
- *Electronic Medication and Clinical Services Ordering Subsystem*

FL **Florida Cancer Research Cooperative, University of South Florida**
- *Clinical Trial Patient/Physician Information & Education Program*

FL **University of Florida College of Dentistry (UFCD)**
- *University of Florida College of Dentistry (UFCD)*

GA **Ware County Health Department**
- *Rural Health Telemedicine Grant Program*
- *Southeast Telehealth Network Program*

HI **Hawai'i Primary Care Association (HPCA)**
- *The Hawai'i CHC Telehealth Network Project*

HI **The Queen's Medical Center**
- *Hawaii Neuroscience Telehealth Network*

IA **Iowa Chronic Care Consortium**
- *Iowa Medicaid Population Disease Management Demonstration*

IA **Mercy Foundation**
- *Midwest Rural Telemedicine Consortium*

ID **Clearwater Valley Hospital and Clinics, Inc.**
- *Clearwater Valley Hospital: Electronic Medical Records*

Grantee Organizations

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

State	Grantee
ID	**Idaho State University, Institute of Rural Health**
	• *Telehealth Idaho*
ID	**North Idaho Rural Health Consortium (NIRHC)**
	• *Expanding Telehealth to North Idaho Districts (EXTEND)*
ID	**Public Hospital Cooperative, Inc.**
	• *Cooperative Telehealth Network (CTN)*
IL	**Illinois Department of Human Services**
	• *Illinois Developmental Disabilities Telehealth Network and Services: A Program Dedicated to Optimizing Health and Support of Community Living*
IL	**The National Council of State Boards of Nursing**
	• *Moving Toward Portability: Uniform Core Licensure Standards for Nursing*
IL	**Saint John's Hospital**
	· *Neonatal Telehealth Project in Rural Illinois Located at the Perinatal Center*
IL	**Southern Illinois University School of Medicine**
	• *Downstate Regional Telehealth Project*
IN	**James Whitcomb Riley Hospital for Children**
	• *Riley Connections*
IN	**Health & Hospital Corporation of Marion County**
	• *Congressionally-Mandated Telehealth Grants*
KS	**University of Kansas Medical Center**
	• *Sustainability and Cost Benefit Evaluation of the Kansas Telehealth Network*
	· *Telehealth Access and Cost Benefit in Kansas*
KY	**The James B. Haggin Memorial Hospital**
	• *PACS (Picture Archiving and Communication System)*
KY	**Marcum & Wallace Memorial Hospital**
	• *Teleradiology Enhancement Project*
KY	**New Horizons Health Systems, Inc.**
	• *Information Technology Development and Improvement*
KY	**University of Kentucky Research Foundation—Kentucky TeleCare**
	• *Improving Health Outcomes for Children in Rural Kentucky Schools*
MA	**Massachusetts College of Pharmacy and Health Sciences**
	• *Worcester Campus Distance Learning Initiative—Phase II*
MA	**UMass Memorial Medical Center**
	· *PACS Teleradiology Project*
ME	**Eastern Maine Healthcare Systems**
	• *Improving Rural Maine's Critical Access to Emergency & Chronic Disease Care Through Telehealth/Monitoring*
ME	**Regional Medical Center at Lubec**
	• *Maine Nursing Home Telehealth Network*
	· *Northeast Telehealth Resource Center*
MI	**Altarum Institute**
	• *Concepts for a Michigan Health Information Network (MiHIN)*
MI	**Hurley Medical Center**
	• *Clinical Information System Replacement Project*
MI	**Marquette General Hospital**
	• *Midwest Alliance for Telehealth and Technologies Resources*
MI	**Michigan State University**
	· *Telehospice in Mid-Michigan*
MI	**Western Michigan University**
	· *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*

Grantee Organizations

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

State Grantee

MN Tri-County Hospital
- *Telehealth Network Grant Program*

MN University of Minnesota
- *Fairview—University of Minnesota Telemedicine Network*

MO Citizens Memorial Hospital District
- *Project Infocare: In-Home Telemanagement*

MT Benefis Healthcare Foundation
- *NMHA/REACH Telehealth Network Development Project*

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

MT Deaconness Billings Clinic Foundation
- *Revolutionizing Diabetes Care at Billings Clinic: A Model for Chronic Disease Care*

MT Saint Patrick Hospital & Health Foundation
- *Bringing Healthcare Home*
- *Montana Cardiology Telemedicine Network*

MT Saint Vincent Healthcare Foundation
- *Mansfield Health Education Center (MHEC)*
- *Northwest Regional Telehealth Resource Center (NRTRC)*

NC Duke University Medical Center
- *Patient Inclusion in a Community-Based Telehealth Network*
- *Patient Participation in a Rural Community-Based Telehealth Network*

NC Educational and Research Consortium of Western Carolinas
- *Western North Carolina Regional Data Link Project*

ND North Dakota State University College of Pharmacy, Nursing, and Allied Sciences
- *North Dakota Telepharmacy Project*

NE Good Samaritan Hospital Foundation
- *Mid-Nebraska Telemedicine Network (MNTN)*

NJ Hackensack University Medical Center
- *Implementation of Oncology Patient Management System*

NJ Saint Peter's University Hospital
- *Medical Technology Center for Infants and Children*

NM New Mexico Human Services Department
- *New Mexico Tele-Behavioral Health Improvement Project*

NM The University of New Mexico Health Sciences Center
- *Rural Health Telemedicine Program*

NV Nevada Rural Hospital Partners Foundation
- *Digital Imaging System for Rural Nevada (DISRN)*

NV University of Nevada, Reno
- *Biomedical Imaging Laboratory*

NY Community Health Care Services Foundation, Inc.
- *Introducing Home Telehealth in New York's 20th Congressional District*

NY Genessee Gateway Local Development Corporation, Inc.
- *Upstate New York Telemedicine Study*

NY Integrated Community Alternatives Network, Inc.
- *Foster Care Tracker and Assessment Tool*

NY Long Island Association for Millenium Center for Convergent Technologies
- *An Electronic Clinical Trial System to Reduce Drug Development Costs*

NY Montefiore Medical Center
- *Electronic Medical Records Expansion*

NY New York Presbyterian Hospital
- *Systems Technology Interfacing Teaching and Community Hospitals (STITCH)*

Grantee Organizations

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

State **Grantee**

NY **Research Foundation, State University of New York (SUNY) at Buffalo**
- *Telehealth New York*

NY **The Rosalind and Joseph Gurwin Jewish Geriatric Center of Long Island**
- *Demonstration of Implementation of Electronic Medical Record in Skilled Nursing Facility*

OH **Case Western Reserve University**
- *NetWellness*

OH **Children's Hospital Medical Center of Akron**
- *Tele-Health-Kids*

OH **Cincinnati Children's Hospital Medical Center**
- *Pursuing Perfection—Transforming Health Care Delivery*

OH **Ohio Board of Regents**
- *Medical Collaboration Network*

OH **Ohio State University Research Foundation (for the Ohio Supercomputer Center)**
- *Computational Approaches to Research on Cancer in Children and Others*

OH **Southern Consortium for Children**
- *Southern Ohio Telepsychiatric Network*

OK **INTEGRIS Health, Inc.**
- *INTEGRIS TeleHealth*

OK **OSU Center for Rural Health**
- *Rural Oklahoma Telemedicine Service Expansion*

PA **Community Nurses Home Health and Hospice, Inc.**
- *Home Telehealth*

PA **Geisinger Clinic**
- *Developing a Stoke Care Educational Program for Rural Pennsylvania*

PA **Good Samaritan Hospital Regional Medical Center**
- *Schuylkill Alliance for Health Care Access*

PA **Home Nursing Agency & Visiting Nurse Association**
- *Telehealth Network Grant*

PA **Jewish Healthcare Foundation**
- *Reinventing Healthcare: the Application of the Pittsburgh Regional Healthcare Initiative's Perfecting Patient Care (PPC) System to Chronic Medical Conditions*

PA **Magee Rehabilitation Hospital**
- *Virtual Reality Technology*

PA **Mercy Health Partners**
- *Using Information Technology to Enhance Patient Safety*

PA **Mercy Hospital of Pittsburgh**
- *Mobile Clinician Project*

PA **Millcreek Community Hospital**
- *Millcreek Health System Informatics Project*

PA **Oil Region Alliance of Business, Industry & Tourism**
- *The Venango Center for Healthcare Careers (VCHC)*

PA **Pennsylvania College of Optometry**
- *Urban Opthalmic Telehealth*

PA **Penn State University**
- *Digital Informatics and Communications System*

PA **Pennsylvania State University College of Medicine**
- *Physician-Scientist Initiative*

PA **Pinnacle Health System**
- *Reducing Variability to Deliver Safe Care*

PA **Safe Harbor Behavioral Health**
- *Safe Harbor Behavioral Health Telemedicine Program*

PA **SUN Home Health Services**
- *SUN Home Health Services Network*

PA **Susquehanna Health System**
- *Regional Electronic Medical Record*

PA **Thomas Jefferson University**
- *Integrative Medicine Informatics Feasibility Project*

PA **Tyrone Hospital**
- *The Tyrone Hospital Health Information Network*

PA **Wayne Memorial Hospital**
- *Improving Medication and Patient Safety*

Grantee Organizations

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

State **Grantee**

RI **Family Resources Community Action**
- *HIV/AIDS Comprehensive Psychosocial Support Project*

RI **Kent County Visiting Nurse Association d/b/a VNA of Care New England**
- *Advancing Point-of-Care Technology at VNA of Care New England*
- *Increasing Access to Telehealth—Phase II*

RI **Thundermist Health Center**
- *Thundermist Health Center Electronic Health Record*

SC **Advanced Technology Institute (ATI)**
- *Healthcare and Emergency Awareness Response for Telehealth (HEART) Phase II*

SC **Voorhees College**
- *Developing a Telehealth Infrastructure to Address Health Disparities Through Education and Training*

SD **Avera Rural Health Institute**
- *Great Plains Telehealth Resource and Assistance Center (TRAC)*

SD **Avera Rural Health Institute**
- *Avera Rural and Frontier Disease Management Telehealth Network*

TN **University Health System, Inc.**
- *High-Risk Newborn Services Project*

TN **University of Tennessee Health Science Center**
- *Delta Health Partnership*
- *Telehealth for Diabetic Patients in Hispanic and Underserved Rural Communities*

TX **Federation of State Medical Boards of the United States, Inc.**
- *Medical Licensure Portability to Facilitate Multi-State Telehealth Practice*

TX **Harris County Hospital District**
- *Specialty Access Through Telemedicine (SA++)*

TX **University of Texas Health Science Center at San Antonio**
- *Diabetes Risk Reduction via Community-Based Telemedicine (DiRReCT)*

TX **University of Texas Medical Branch Center to Eliminate Health Disparities**
- *The Texas Telehealth Disparities Network*

UT **Association for Utah Community Health (AUCH)**
- *Association for Utah Community Health Telehealth Program*

UT **Dr. Ezekiel R. Dumke College of Health Professions**
- *Health Opportunity Professional Exploration (HOPE)*

UT **Intermountain Healthcare**
- *HRSA Telemedicine Pilot Program for Interpreting Services for the Deaf*

UT **University of Utah**
- *Utah Telehealth Network Comprehensive Telehealth Services*

VA **University of Virginia**
- *Southwest Virginia Alliance for Telemedicine*

VT **The University of Vermont (UVM)**
- *Pediatric Teletrauma Project*

WA **Inland Northwest Health Services**
- *Northwest Telehealth—TeleER*
- *Northwest Telehealth—Telepharmacy*

WA **University of Washington**
- *Native People for Cancer Control Telehealth Network (NPCCTN)*

WA **Yakima Valley Memorial Hospital**
- *Bedside Medication Management (MAR) System*

WI **La Crosse Medical Health Science Consortium**
- *Virtual Population Health Centers in the Rural Midwest*

WI **Marshfield Clinic Telehealth Network**
- *Marshfield Clinic Telehealth Network*
- *Marshfield Clinic Telehealth Network 2006*

Grantee Organizations

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

State	Grantee
WV	**Appalachian Pain Foundation** • *Physician Education, Community Outreach Program to Prevent Diversion of Prescription Drugs*
WV	**Robert C. Byrd Center for Rural Health** • *Marshall University Southern West Virginia Rural Outreach Project*
WV	**West Virginia University, Mountaineer Doctor TeleVision (MDTV)** • *West Virginia Community Mental Telehealth Project*
WY	**Memorial Hospital of Laramie County d.b.a. Cheyenne Regional Medical Center** • *Regional Expansion of Telehealth and Distance Learning*
WY	**Wyoming Department of Health** • *Wyoming Network for Telehealth (WyNETTE)*

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 Licensure Grant Program (TLGP), Telehomecare Grant Program (THC), Telehealth Network Grant Program (TNGP), Telehealth Resource Center Grant Program (TRC), the Rural Telemedicine Grant Program (RTGP), Congressionally Mandated Projects, and Special Projects.

Funding years for current grantees are also provided.

Types of Grants

Telehealth Licensure Grant Program (TLGP)
FY 2006-09 Grantees

State	Name	Previously Funded
IL	The National Council of State Boards of Nursing	-
TX	Federation of State Medical Boards of the United States, Inc.	-

Telehomecare Grant Program (THC)
FY 2006-09 Grantees

State	Name	Previously Funded
MO	Citizens Memorial Hospital District	-
MT	Saint Patrick Hospital & Health Foundation	-
PA	Home Nursing Agency & Visiting Nurse Association	-

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
MN	University of Minnesota	RTGP 94-96, RTGP 00-02
MT	Benefis Healthcare Foundation	-
NC	Duke University Medical Center	-
NM	University of New Mexico Health Sciences Center	RTGP 97-99
OH	Southern Consortium for Children	-
SD	Avera Health	RTGP 94-96, RTGP 97-99
TN	University of Tennessee Health Science Center	RTGP 97-99, RTGP 00-02
TX	University of Texas Health Science Center at San Antonio	-
WI	Marshfield Clinic Telehealth Network	RTGP 97-99, RTGP 00-02

Types of Grants

Telehealth Network Grant Program (TNGP)
FY 2006-09 Grantees

State	Name	Previously Funded
CA	Northern Sierra Rural Health Network	-
GA	Ware County Board of Health	RTGP 00-02, TNGP 03-05
HI	The Queen's Medical Center	-
ID	Public Hospital Cooperative, Inc.	-
IL	Illinois Department of Human Services	-
KS	University of Kansas Medical Center	RTGP 00-02, TNGP 03-05
ME	Eastern Maine Healthcare Systems	-
MN	Tri-County Hospital, Inc.	-
NC	Duke University Medical Center	TNGP 03-05
OH	Children's Hospital Medical Center of Akron	-
WA	University of Washington	-
WI	Marshfield Clinic Telehealth Network	RTGP 97-99, RTGP 00-02, TNGP 03-05

Telehealth Resource Center Grant Program (TRC)
FY 2006-09 Grantees

State	Name	Previously Funded
CA	California Telemedicine & eHealth Center	-
DC	Center for Telehealth & E-Health Law	-
ME	Regional Medical Center at Lubec	RTGP 97-99, RTGP 00-02, TNGP 03-05
MI	Marquette General Hospital, Inc.	-
MT	Saint Vincent Healthcare Foundation	CMP FY 01, 02, 03
SD	Avera Health	RTGP 94-96, RTGP 97-99, 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	-
ME	Regional Medical Center at Lubec	RTGP 97-99
MN	University of Minnesota	RTGP 94-96
MT	St. Vincent Healthcare Foundation	-
NE	Good Samaritan Hospital Foundation	RTGP 94-96, 97-99
OK	INTEGRIS Health, Inc.	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.

Rural Telemedicine Grant Program (RTGP)
FY 1994-96 Grantees

Eleven projects were originally funded in this cycle.

The following projects have carryover dollars or a no-cost extension from a previous award.

State	Name	Year Funded
AL	**University of South Alabama (USA)**	
•	*Center for Strategic Health Innovation Traditional Telemedicine*	FY 02, 03, 04, 05
•	*Realtime Medical Electronic Data Exchange (RMEDE) Project*	FY 00, 04
AK	**Alaska Native Tribal Health Consortium**	
•	*Continued Advancement of Telehealth Capacity in Alaska*	FY 05
•	*The Summative Telemedicine Evaluation Project*	FY 02, 03
AK	**Alaska Psychiatric Institute (API)**	
•	*API TeleBehavioral Health Project*	FY 05
AZ	**Arizona Board of Regents, University of Arizona**	
•	*Institute for Advanced Telemedicine and Telehealth (THealth)*	FY 05
AZ	**Maricopa County, Arizona**	
•	*Correctional Health Services Telemedicine Initiative*	FY 02, 05
CA	**Familia Unida Living with Multiple Sclerosis**	
•	*Telehealth Grant*	FY 05
CA	**Multi-Dimensional Imaging, Inc.**	
•	*Telemedicine for Improved Health Care and Education*	FY 05
CA	**San Joaquin County Health Care Services**	
•	*Automated Drug Dispensing Medication Adminstration System*	FY 05
CO	**Avista Adventist Hospital**	
•	*Clinical Integration Through Health Informatics*	FY 05
CO	**University of Colorado Health Sciences Center**	
•	*Native Telehealth Outreach and Technical Assistance Program*	FY 03
DC	**American National Red Cross**	
•	*Congressionally Mandated Telehealth Grants*	FY 05
DC	**Foundation for eHealth Initiative**	
•	*Connecting Communities for Better Health Program*	FY 03, 04
FL	**BayCare Health System**	
•	*Electronic Medication and Clinical Services Ordering Subsystem*	FY 02, 03, 04, 05
FL	**Florida Cancer Research Cooperative, University of South Florida**	
•	*Clinical Trial Patient/Physician Information & Education Program*	FY 04, 05
FL	**University of Florida College of Dentistry (UFCD)**	
•	*University of Florida College of Dentistry (UFCD)*	FY 04
HI	**Hawai'i Primary Care Association (HPCA)**	
•	*The Hawai'i CHC Telehealth Network Project*	FY 02, 03, 04, 05
IA	**Iowa Chronic Care Consortium**	
•	*Iowa Medicaid Population Disease Management Demonstration*	FY 05
IA	**Mercy Foundation**	
•	*Midwest Rural Telemedicine Consortium*	FY 03, 04, 05
ID	**Clearwater Valley Hospital and Clinics, Inc.**	
•	*Clearwater Valley Hospital: Electronic Medical Records*	FY 05

State	Name	Year Funded
ID	**Idaho State University, Institute of Rural Health**	
•	*Telehealth Idaho*	FY 01, 02, 03, 04, 05
ID	**North Idaho Rural Health Consortium (NIRHC)**	
•	*Expanding Telehealth to North Idaho Districts (EXTEND)*	FY 02, 03, 04, 05
IL	**Saint John's Hospital**	
•	*Neonatal Telehealth Project in Rural Illinois Located at the Perinatal Center*	FY 05
IL	**Southern Illinois University School of Medicine**	
•	*Downstate Regional Telehealth Project*	FY 01
IN	**James Whitcomb Riley Hospital for Children**	
•	*Riley Connections*	FY 03
IN	**Health & Hospital Corporation of Marion County**	
•	*Congressionally-Mandated Telehealth Grants*	FY 05
KY	**The James B. Haggin Memorial Hospital**	
•	*PACS (Picture Archiving and Communication System)*	FY 05
KY	**Marcum & Wallace Memorial Hospital**	
•	*Teleradiology Enhancement Project*	FY 05
KY	**New Horizons Health Systems, Inc.**	
•	*Information Technology Development and Improvement*	FY 05
MA	**Massachusetts College of Pharmacy and Health Sciences**	
•	*Worcester Campus Distance Learning Initiative—Phase II*	FY 01, 03, 05
MA	**UMass Memorial Medical Center**	
·	*PACS Teleradiology Project*	FY 04, 05
MI	**Altarum Institute**	
•	*Concepts for a Michigan Health Information Network (MiHIN)*	FY 05
MI	**Hurley Medical Center**	
·	*Clinical Information System Replacement Project*	FY 05
MI	**Michigan State University**	
·	*Telehospice in Mid-Michigan*	FY 05
MI	**Western Michigan University**	
·	*The Application of Tele-Allied Health in Rural Counties in Southwest Lower Michigan*	FY 04
MN	**Fairview Health Services**	
·	*Ambulatory Electronic Medical Record System—Twin Cities Metropolitan Care Systems*	FY 02, 04, 05
MT	**Billings Clinic Foundation**	
•	*Effect of an Integrated CIS on Inpatient and Post-Discharge Medication Administration Errors and Chronic Disease Management*	FY 02, 03, 04
MT	**Deaconess Billings Clinic Foundation**	
•	*Revolutionizing Diabetes Care at Billings Clinic: A Model for Chronic Disease Care*	FY 05
MT	**Saint Patrick Hospital & Health Foundation**	
•	*Mansfield Health Education Center (MHEC)*	FY 01, 02, 03
MT	**Saint Vincent Healthcare Foundation**	
•	*Montana Cardiology Telemedicine Network*	FY 05
NC	**Education and Research Consortium of Western Carolinas**	
•	*Western North Carolina Regional Data Link Project*	FY 02
ND	**North Dakota State University College of Pharmacy, Nursing, and Allied Sciences**	
•	*North Dakota Telepharmacy Project*	FY 02, 03, 04, 05

State	Name	Year Funded
NE	**Good Samaritan Hospital Foundation**	
•	*Mid-Nebraska Telemedicine Network (MNTN)*	FY 04, 05
NJ	**Hackensack University Medical Center**	
•	*Implementation of Oncology Patient Management System*	FY 05
NJ	**Saint Peter's University Hospital**	
•	*Medical Technology Center for Infants and Children*	FY 05
NM	**New Mexico Human Services Department**	
•	*New Mexico Tele-Behavioral Health Improvement Project*	FY 05
NV	**Nevada Rural Hospital Partners Foundation**	
•	*Digital Imaging System for Rural Nevada (DISRN)*	FY 04
NV	**University of Nevada, Reno**	
·	*Biomedical Imaging Laboratory*	FY 04
NY	**Community Health Care Services Foundation, Inc.**	
•	*Introducing Home Telehealth in New York's 20th Congressional District*	FY 05
NY	**Genesee Gateway Local Development Corporation, Inc.**	
•	*Upstate New York Telemedicine Study*	FY 05
NY	**Integrated Community Alternatives Network, Inc.**	
•	*Foster Care Tracker and Assessment Tool*	FY 05
NY	**Long Island Association for Millenium Center for Convergent Technologies**	
•	*An Electronic Clinical Trial System to Reduce Drug Development Costs*	FY 05
NY	**Montifiore Medical Center**	
•	*Electronic Medical Records Expansion*	FY 03, 04, 05
NY	**New York Presbyterian Hospital**	
•	*Systems Technology Interfacing Teaching and Community Hospitals (STITCH)*	FY 03, 05
NY	**Research Foundation, State University of New York (SUNY) at Buffalo**	
•	*Telehealth New York*	FY 03
NY	**The Rosalind and Joseph Gurwin Jewish Geriatric Center of Long Island**	
•	*Demonstration of Implemetnation of Electronic Medical Record in Skilled Nursing Facility*	FY 05
OH	**Case Western Reserve University**	
•	*NetWellness*	FY 02, 03, 04
OH	**Cincinnati Children's Hospital Medical Center**	
•	*Pursuing Perfection—Transforming Health Care Delivery*	FY 05
OH	**Ohio Board of Regents**	
•	*Medical Collaboration Network*	FY 04
OH	**Ohio State University Research Foundation (for the Ohio Supercomputer Center)**	
·	*Computational Approaches to Research on Cancer in Children and Others*	FY 04
OK	**INTEGRIS Health, Inc.**	
•	*INTEGRIS TeleHealth*	FY 04
OK	**OSU Center for Rural Health**	
•	*Rural Oklahoma Telemedicine Service Expansion*	FY 05
PA	**Community Nurses Home Health and Hospice, Inc.**	
•	*Home Telehealth*	FY 04

State	Name	Year Funded
PA	**Geisinger Clinic**	
•	*Developing a Stoke Care Educational Program for Rural Pennsylvania*	FY 03
PA	**Good Samaritan Hospital Regional Medical Center**	
•	*Schuylkill Alliance for Health Care Access*	FY 05
PA	**Jewish Healthcare Foundation**	
•	*Reinventing Healthcare: the Application of the Pittsburgh Regional Healthcare Initiative's Perfecting Patient Care (PPC) System to Chronic Medical Conditions*	FY 05
PA	**Magee Rehabilitation Hospital**	
•	*Virtual Reality Technology*	FY 05
PA	**Mercy Health Partners**	
•	*Using Information Technology to Enhance Patient Safety*	FY 04, 05
PA	**Mercy Hospital of Pittsburgh**	
•	*Mobile Clinician Project*	FY 05
PA	**Millcreek Community Hospital**	
•	*Millcreek Health System Informatics Project*	FY 05
PA	**Oil Region Alliance of Business, Industry, & Tourism**	
•	*The Venango Center for Healthcare Careers (VCHC)*	FY 04
PA	**Pennsylvania College of Optometry**	
•	*Urban Opthalmic Telehealth*	FY 02, 04
PA	**Penn State University**	
•	*Digital Informatics and Communications System*	FY 03
PA	**Pennsylvania State University College of Medicine**	
•	*Physician-Scientist Initiative*	FY 02, 05
PA	**Pinnacle Health System**	
•	*Reducing Variability to Deliver Safe Care*	FY 05
PA	**Safe Harbor Behavioral Health**	
•	*Safe Harbor Behavioral Health Telemedicine Program*	FY 05
PA	**SUN Home Health Services**	
•	*SUN Home Health Services Network*	FY 05
PA	**Susquehanna Health System**	
•	*Regional Electronic Medical Record*	FY 01, 02, 03, 04, 05
PA	**Thomas Jefferson University**	
•	*Integrative Medicine Informatics Feasibility Project*	FY 04, 05
PA	**Tyrone Hospital**	
•	*The Tyrone Hospital Health Information Network*	FY 05
PA	**Wayne Memorial Hospital**	
•	*Improving Medication and Patient Safety*	FY 05
RI	**Family Resources Community Action**	
•	*HIV/AIDS Comprehensive Psychosocial Support Project*	FY 04
RI	**Kent County Visiting Nurse Association d/b/a VNA of Care New England**	
•	*Advancing Point of Care Technology at VNA of Care New England*	FY 04
•	*Increasing Access to Telehealth—Phase II*	FY 05
RI	**Thundermist Health Center**	
•	*Thundermist Health Center Electronic Health Record*	FY 05
SC	**Advanced Technology Institute (ATI)**	
•	*Healthcare and Emergency Awareness Response for Telehealth (HEART) Phase II*	FY 03, 04, 05

Types of Grants

State	Name	Year Funded
SC	**Voorhees College**	
•	*Developing a Telehealth Infrastructure to Address Health Disparities Through Education and Training*	FY 05
TN	**University Health System, Inc.**	
•	*High-Risk Newborn Services Project*	FY 05
TN	**University of Tennessee Health Science Center**	
•	*Delta Health Partnership*	FY 05
•	*Telehealth for Diabetic Patients in Hispanic and Underserved Rural Communities*	FY 04
TX	**Harris County Hospital District**	
•	*Specialty Access Through Telemedicine (SA++)*	FY 05
TX	**University of Texas Medical Branch Center to Eliminate Health Disparities**	
•	*The Texas Telehealth Disparities Network*	FY 05
UT	**Association for Utah Community Health (AUCH)**	
•	*Association for Utah Community Health Telehealth Program*	FY 04, 05
UT	**Dr. Ezekiel R. Dumke College of Health Professions**	
•	*Health Opportunity Professional Exploration (HOPE)*	FY 05
UT	**Intermountain Healthcare**	
•	*HRSA Telemedicine Pilot Program for Interpreting Services for the Deaf*	FY 05
UT	**University of Utah**	
•	*Utah Telehealth Network Comprehensive Telehealth Services*	FY 04
VA	**University of Virginia**	
•	*Southwest Virginia Alliance for Telemedicine*	FY 02, 04
VT	**The University of Vermont (UVM)**	
•	*Pediatric Teletrauma Project*	FY 02, 04
WA	**Inland Northwest Health Services**	
•	*Northwest Telehealth—TeleER*	FY 05
•	*Northwest Telehealth—Telepharmacy*	FY 04
WA	**Yakima Valley Memorial Hospital**	
•	*Bedside Medication Management (MAR) System*	FY 05
WI	**La Crosse Medical Health Science Consortium**	
•	*Virtual Population Health Centers in the Rural Midwest*	FY 01, 03, 04
WV	**Appalachian Pain Foundation**	
•	*Physician Education, Community Outreach Program to Prevent Diversion of Prescription Drugs*	FY 04
WV	**Robert C. Byrd Center for Rural Health**	
•	*Marshall University Southern West Virginia Rural Outreach Project*	FY 05
WV	**West Virginia University, Mountaineer Doctor TeleVision (MDTV)**	
•	*West Virginia Community Mental Telehealth Project*	FY 02
WY	**Memorial Hospital of Laramie County dba Cheyenne Regional Medical Center**	
•	*Regional Expansion of Telehealth and Distance Learning*	FY 04
WY	**Wyoming Department of Health,**	
•	*Wyoming Network for Telehealth (WyNETTE)*	FY 04

Project Descriptions by State

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

ALABAMA, Mobile County — CMP FY 00, 04

Center for Strategic Health Innovation Traditional Telemedicine

University of South Alabama

Center for Strategic Health Innovation
307 University Boulevard N., HSB 1100
Mobile, AL 36688
www.cshi.southalabama.edu

Carl W. Taylor
Ph: 251-461-1805
Fax: 251-461-1819
Email: cwtaylor@usouthal.edu

Network Partners:

University of South Alabama Health System
Alabama Department of Public Health
Southwest Alabama Abuse Network (SWAN)
Baptist Health System
Rural Hospitals

Project Purpose:

Grant funding of this project ended February 2006. The program mission was to extend 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.

Outcomes Expected/Project Accomplishments:

During this project period, the CSHI traditional telemedicine program was able to provide a variety of traditional telemedicine consults as well as numerous educational healthcare programs for remote facilities.

Service Area:

Primary service areas included six rural hospitals, one Public Health Clinic, one state Public Health Department, two non-health institutions and four urban hospitals.

Services Provided:

Services provided included, but were not limited to traditional telemedicine services for Children's Sexual Abuse and Psychiatric examinations, Peer Review through the SWAN network, HIV patient examinations, and videoconferencing sites.

Equipment:

Included 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.

ALABAMA, Mobile County — CMP FY02, 03, 04, 05

Realtime Medical Electronic Data Exchange (RMEDE) Project

University of South Alabama

Center for Strategic Health Innovation
307 University Boulevard N., HSB 1100
Mobile, AL 36688
www.cshi.southalabama.edu

Carl W. Taylor
Ph: 251-461-1805
Fax: 251-461-1819
Email: cwtaylor@usouthal.edu

Network Partners:

University of South Alabama Health System
Alabama Department of Public Health
Alabama State Medicaid Agency

Project Purpose:

RMEDE builds upon the home monitoring BioTrac program by integrating home health monitoring data with claims data to create a true 360-degree view of the patient's health. A virtual medical record (VMR) is created providing detailed information about the patient from multiple accessible data sources that otherwise are not available to the provider. This project also studies patient claims information and proposes to deliver outcome-oriented results in an effort to improve the dual bottom lines of quality and cost improvement in rural health care throughout the state.

Outcomes Expected/Project Accomplishments:

The RMEDE project strives to not only develop an application to improve patient outcome and reduce healthcare costs, but also to apply these across a broad, statewide patient population and physician base. In order to accomplish this statewide application, USA CSHI works collaboratively with the Medicaid Patient 1st program Physician Advisory Panel. The RMEDE proprietary software develops a Combined Health Score (CHS) which is a unique collective statement linking the quality of the provider to the response and compliance of the patient. Over time, it is anticipated that this CHS will be a far better predictor of patient health than quality of care alone.

Service Area:

The RMEDE project has a statewide reach for Medicaid providers. Of these, 58 providers have patients participating in the home monitoring program.

Services Provided:

Services provided include a VMR with home health monitoring of patients suffering from chronic illnesses such as diabetes, congestive heart failure, and hypertension.

Equipment:

Cybernet Medical MedStar monitoring units with A & D Medical peripherals.

Transmission:

Home monitoring utilizes Plain Old Telephone System (POTS) with Internet access at the project site and at each provider's location.

ALASKA, Anchorage County CMP FY 05

Continued Advancement of Telehealth Capacity in Alaska

Alaska Native Tribal Health Consortium, Alaska Telehealth Advisory Council

Alaska Native Tribal Health Consortium
Alaska Telehealth Advisory Council
4000 Ambassador Drive
Anchorage, AK 99508
www.anthc.org

Thomas Nighswander, MD, MPH
Ph: 907-729-3682
Fax: 907-729-1901
Email: tnighswander@anthc.org

Network Characteristics:

Partners external to the grantee include the ANTHC Division of Information/Technology, the Alaska Federal Heath Care Access Network (AFHCAN), the University of Alaska, Anchorage, Alaska Physician's EHR Alliance, Edward Deaux, Ph.D., and Gary Hart, MD.

Project Purpose:

Continued Advancement of Telehealth Capacity in Alaska focuses on (1) contributing to Telehealth expansion to three community health centers, (2) establishment of a Telemedicine ENT Center of Excellence, (3) developing an Alaska RHIO, (4) developing a private physician electronic health record office pilot and support structure using health information electronic exchange across State lines, (5) training in the use of this technology, (6) update the OAT definition of "Frontier," and (7) participation in development of national telemedicine technical guidelines.

Outcomes Expected/Project Accomplishments:

- For expansion to community health centers, AFHCAN software development process is modified for compliance with cGMO.
- AFHCAN tele-ENT equipment is placed, tested and used at Yakama site.
- Alaska Chartlinks (RHIO) is created, with Steering, IT and Clinical workgroups established and outside funding commitments secured, and a sustainable business plan completed.
- The Alaska EHR Alliance is created, with 501(c) (3) status pending, and business plan development finalized. Additional outside funding has been received.
- Comprehensive Evaluation Plan finalized.

Service Area:

State of Alaska. One component additionally serves the Yakama Nation in Washington.

Services Provided:

Alaska Chartlinks and the EHR Alliance efforts are primarily infrastructure and pilot development. This grant has also provided faculty training in the use of telemedicine for distance education, and provider training in delivery of telemedicine services. Clinical telemedicine services include ENT, Cardiology, Dermatology, and Audiology with expansion to Community Health Centers

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.

The Summative Telemedicine Evaluation Project
The Alaska Native Tribal Health Consortium

Alaska Native Tribal Health Consortium
Alaska Telehealth Advisory Council
4000 Ambassador Drive
Anchorage, AK 99508
www.anthc.org

Thomas Nighswander, MD, MPH
Ph: 907-729-3682
Fax: 907-729-1901
Email: tnighswander@anthc.org

Network Partners:

The Alaska Telemedicine Advisory Council (ATAC) partnered with the University of Alaska to conduct this project, which ended February 28, 2006.

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/Project Accomplishments:

STEP outcomes included assessment of provider attitudes, and shifts in attitudes and skills; documentation of 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. A Telehealth Business Model was developed and circulated. The report "Billing Practices and Reimbursement Status Report on Telemedicine Procedures" was produced.

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, including the formation of an Alaska Regional Health Information Organization (RHIO), expansion of telemedicine into the private sector, and development of a physicians' Electronic Health Record (EHR) Alliance.

Equipment:

Not applicable.

Transmission:

Not applicable.

Alaska Psychiatric Institute (API)

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

Mr. Ron Adler, CEO
Ms. Robin Hobbs, MSW, Project Coordinator
Ph: 907-269-7278
Fax: 907-269-7246
Email: Robin_Hobbs@health.state.ak.us

Network Partners:

Tanana Chiefs Conference (Fairbanks) (2003), Yukon Flats Health Center (Ft. Yukon) (2003), Edgar Nollner Health Center (Galena) (2003), The Dena'ina Clinic (Kenai) (2006), Alaska Native Tribal Healthcare Consortium (2003), The Sunshine Community Health Center (Talkeetna) (2006), Central Peninsula General Hospital (Soldotna) (2006), the Seldovia Village Tribal Clinic (Homer) (2007), the Seldovia Village Tribe (Seldovia) (2007), the Camai Health Clinic (Nanek) (2006), Hoonah Medical Clinic (2007), Justin Mohatt, MD (Seattle) (2006).

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."
(1) Provide behavioral health services via video-teleconferencing to remote areas not served by mental health professionals
(2) Develop distance delivered psycho-education to consumers.

Outcomes Expected/Project Accomplishments:

(1) Increase ability for rural clinics to provide behavioral outpatient services (tracking types and frequencies of services provided, patient referral patterns);
(2) Develop a sustainable business model (explore operational strategies, develop collaborative business relationships, explore and implement funding opportunities);
(3) Develop a sustainable model of care to deliver services using local mid-level practitioners, village health aides, and village counselors).

Service Area:

Southeast Alaska, Kenai Peninsula, Yukon-Koyukuk (Interior Alaska).

Services Provided:

Psychiatric assessment/therapy services for children, youth, adults; neuro-psych screening; Licensure supervision, case consultation.

Equipment:

Polycom VSX 7000.

***Transmission*:**

Full and fractional T-1 lines.

ARIZONA, Pima County — RTGP 97-99, TNGP 03-05

Arizona Diabetes Virtual Center of Excellence (ADVICE)

Arizona Board of Regents, University of Arizona

Arizona Telemedicine Program
1501 N. Campbell Avenue, PO Box 245105
Tuscon, AZ 85718
www.telemedicine.arizona.edu

Ronald S. Weinstein, MD
Sandy Beinar
Ph: 520-626-2493
Fax: 520-626-1027
Email: 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, Sapori 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, specialty health care, 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.

Outcomes Expected/Project Accomplishments:

K-12 science fair educational value and diabetes fact conveyance (measure) – survey (tool)
Student Health Professional telemedicine knowledge (measure) – survey (tool)
Educational impact (measure) – satisfaction and knowledge survey (tool)
Clinical services impact (measure) – patient record evaluation & OAT forms (tool)

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 were 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), Polycom VSX5000, Polycom PVX.

Transmission:

Full T1, Internet, POTS, 802.11b wireless, video teleconference (VTC) bridge.

ARIZONA, Pima County CMP FY 05

Institute for Advanced Telemedicine and Telehealth (THealth)

Arizona Board of Regents, University of Arizona

Arizona Telemedicine Program
1501 N. Campbell Avenue, PO Box 245105
Tuscon, AZ 85178
www.telemedicine.arizona.edu

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

Network Partners:

Project partners are the Colleges at the Arizona Health Sciences Center in Tucson, including the Medicine, Nursing, Pharmacy, and Public Health, all of whom are active programs with the Arizona Telemedicine Program and are integral to the program. Future partners will be the Indian Health Service and Yuma Proving Ground (DOD).

Project Purpose:

THealth will include a state-of-the-art learning center designed for contextual-based learning by interdisciplinary teams of students of various healthcare professions including medicine, nursing and pharmacy. Curricula will be developed to take advantage of both on-site and extramural telemedicine patients. Distance education will also be provided to clinical sites.

Outcomes Expected/Project Accomplishments:

THealth will be regarded as a next generation video-conferencing facility that leverages accessibility to 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.

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 162 sites in Arizona and adjacent states. Initially the service area will be Tucson and Phoenix.

Services Provided:

Curriculum will be designed to complement and broaden that of the medical school curriculum. It 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 courses will be offered as well.

Equipment:

State-of-the-art conferencing theater, fully equipped telemedicine training center, digital dermascope, otoscope, opthalmoscope, stethoscope, specialized control, and monitoring devices.

Transmission:

Full T1, Internet, POTS, 802.11b wireless, video teleconference (VTC) bridge.

Correctional Health Services Telemedicine Initiative

Maricopa County, Arizona

Correctional Health Services
234 North Central
Phoenix, AZ 85003
www.maricopa.gov

Rebecca Nicholson PHR, MBA
Ph: 602-506-0897
Fax: 602-506-2577
Email: renichol@mail.maricopa.gov

Network Partners:

Maricopa County Sheriff Jail Facilities: Durango Jail, Estrella Jail, Estrella Support (Tent City) Jail, Towers Jail, Lower Buckeye Jail, 4th Avenue Jail
Maricopa County District Facility Substations: District I Facility (Mesa), District II Facility (Avondale), District III Facility (Surprise)

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 subspecialty medical 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. Each jail location 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:

Maricopa County: Arizona Department of Corrections (ADC)
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; Pharmacy communications/reviews—planned implementation first quarter of 2007

Equipment:

Tandberg Director Unit with VCR, DVD, and computer presentation capabilities
Tandberg 1000
Tandberg Intern Ii
Tandberg SC880
AMD-2500 General Exam Camera and AMD-8200 Vital Signs Monitor (with SC880)
Otoscope and accessories
American Medical Development-Welch Allyn VDX-300 ENT scope

Transmission:

A full T-1 bandwidth is currently being used.

ARKANSAS, Pulaski County RTGP FY 97-99, TNGP 00-02, 03-05

South Arkansas Integrated Telehealth Oncology Program

University of Arkansas for Medical Sciences (UAMS)

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

Network Partners:

The tertiary hub center (20 sites) at UAMS in Little Rock, plus 34 rural hospitals, seven AHECs, two CHCs, one county health department, 90 schools, six community mental health centers, and six human development centers. Additional health departments and hospitals were added in 2006. UAMS Network operational since 1995. Actual number of patients served 10/1/05 to 9/30/06: 1,159.

Project Purpose:

Link rural providers, health care infrastructure and targeted populations with evidence-based prevention, screening, treatment and palliative care guidelines for oncology. Extend specialty oncology consultation services into rural settings, and provide continuing education for rural practitioners, and consumer education and cancer support programs for the public.

Project Accomplishments/Project Accomplishments:

Oncology services via telehealth increased from 0 to 242/yr; multidisciplinary cancer case conferences for rural providers increased from 0 to 45/yr; continuing professional education programs increased from 0 to 60/yr; cancer education programs and support groups for patients and families increased from 5 to 9/yr; clinical trial discussions increased from 0 to 11 times/yr. Evaluation using OAT GPRA Performance Measures with 244-item data form scanned into Microsoft SQL database.

Service Area:

Medical Center of South AR and AHEC SA (Union Co.), Bradley County Med Center (Bradley Co.), Ouachita County Med Center (Ouachita Co.), Mena Med Center (Polk Co.), CABUN Migrant Health Center (Hempstead Co.); CABUN CHC (Calhoun Co.), AHEC SW (Miller Co.), AHEC FS (Sebastian Co.), AHEC NE (Craighead Co.), AHEC NW (Washington Co.), AHEC PB (Jefferson).

Services Provided:

Professional oncology services, continuing education, case conferences, and public education in cancer prevention, detection, and treatment, plus dermatology, diabetes management, high-risk obstetrics and genetics, cardiology, endocrinology, neurology, mental health, pediatrics, and pharmacy. New this year: pre-/post-op for transplants, and neonatology back-transport and fetal echo.

Equipment:

Remote sites: 2 WellchAllyn Video Colposcopes, 3 General exam cameras; UAMS/ACRC site: 1 Polycom View Station, 1 LifeSize Unit.

***Transmission*:**

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

ARKANSAS, Pulaski County — TNGP 06-09

Telehealth for Kids In Delta Schools (Telehealth KIDS)

University of Arkansas for Medical Sciences (UAMS)

UAMS Center for Distance Health
4301 West Markham, Slot 812
Little Rock, AR 72205-7199
http://www.uams.edu/cdh

Ann Bynum, Ed.D.
Ph: 501-686-2595
Fax: 501-686-2585
Email: bynumcarola@uams.edu

Network Partners:

New sites in Lee County are Whitten Elementary School, Lee High School, Lee County Health Unit, and Lee County Cooperative Clinic (CHC). These sites will join the existing 50 site UAMS' Rural Telehealth Network, operational since 1995. Estimated # of patient encounters 10/1/06-9/30/07: 400.

Project Purpose:

Provide telehealth pediatric services to children in two Lee County schools who do not have access to pediatric services due to poverty or lack of transportation. School-based services will 1) Increase number of students receiving pediatric services; 2) Increase number of Diabetic students performing self-glucose monitoring daily; 3) Decrease school absenteeism of students with asthma; 4) Reduce behavioral problems; and 5) Increase referrals and educational resources to students/families.

Outcomes Expected/Project Accomplishments:

Increased access to pediatric services; Reduced Hemoglobin A1c in diabetic students; Increased proficiency of self-administered asthma medications; Reduced school absenteeism, emergency room (ER) visits, and hospital admissions; Cost savings from reduced ER and hospital visits; Reduced classroom behavioral disruptions; and Increased family access to resources. A goal attainment model will be used to evaluate the Telehealth for KIDS project.

Service Area:

Whitten Elementary School, Lee High School, Lee County Health Unit, and Lee County Cooperative Clinic (CHC), in the remote Mississippi Delta community of Marianna in Lee County. At the schools, 90 percent of all students are African-American, and 93 percent are eligible for free/reduced lunch.

Services Provided:

Real-time telehealth consults with Pediatric and Behavioral specialists at UAMS for services that are unavailable otherwise, and educational programming regarding pediatric and behavioral topics for students, parents, and school staff. Connect local health professionals at the Lee County Health Unit and CHC to facilitate referrals, ease follow-up care with students, and provide continuing education.

Equipment:

Remote sites: two Tandberg MXP interactive video systems, two Polycom interactive educational units, 20 Viterion 100 Home Health Monitors with peak flow and blood glucose measures for rural students; and two Logitech Desktop interactive cameras and laptops.

***Transmission*:**

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

California Telemedicine and eHealth Center

California Telemedicine & eHealth Center
1215 K Street, Suite 800
Sacramento, CA 95814
www.cteconline.org

Barbara Johnston, MSN
Ph: 916-552-7679
Fax: 916-552-7526
Email: bjohnston@calhealth.org

Network Partners:

Current CTEC funded Networks include: Community Clinic Health Network (May 2005), Central Valley eHealth Network (March 2005), Central Valley Teleopthalmology Network (May 2005), Del Norte Clinics Network (January 2005), Teledentistry Network (May 2005), North Coast Telemedicine Network (January 2005), Northern California Telemedicine Network (January 2005), Northern Sierra Health Network (January 2005), Shasta Community Health Center Network (January 2005), and Southern California eHealth Network (June 2005). Actual number of patient encounters 1 OCT 05-30 SEP 06: 2,801.

Project Purpose:

To serve as a model Telehealth Resource center for new and developing Telehealth networks. CTEC will focus its strategic efforts for the next three years on building Telehealth capacity among providers, increasing access to specialty care, decreasing the digital divide as it relates to health care services, and improving access to quality care for rural and medically underserved populations.

Outcomes Expected/Project Accomplishments:

Expand the Telemedicine Learning Center into a second location in Southern California. Develop online Distance learning modules, which will be made available through CTEC's website. Publish two Telehealth Best Practice Guides each year and publish biennial updates for current CTEC resources.

Service Area:

Rural and medically underserved communities in the Western Region of the United States.

Services Provided:

Services include behavioral health, cardiology, dentistry, dermatology, endocrinology, gastroenterology, general surgery, internal medicine, infectious diseases, language interpretation, mental health/psychiatry, nephrology, neurology, nutrition, OB/GYN, ophthalmology, optometry, orthopedics, otohinolaryngology, pain management, pediatrics, pediatric endocrinology, pediatric neurology, podiatry, public health, pulmonary care, radiology, and rheumatology.

Equipment:

Networks use mixture of room-sized, set-top, and desktop videoconferencing systems from Polycom and Tandberg. Store and forward programs use open source EyePACs for ophthalmology and Second Opinion for dermatology.

Transmission:

Approximately 65 percent of the networks are connected by ISDN, the remainder used T-1 lines for IP-based videoconferencing.

Familia Unida Living with Multiple Sclerosis

Familia Unida Living with Multiple Sclerosis
4716 E. Cesar Chavez Ave. Bldg. A
Los Angeles, CA 90022
www.msfamiliaunida.org

Irma Resendez, MSW
Ph: 323-261-5565
Fax: 323-261-5999
Email: iresendez@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/Project Accomplishments:

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:

Sony Vio Computer VGN FS 804w; 2 Toshiba Satellite Tablet TOS; 2 Dell Business, computer Supplies; Dell Computers, computer supplies; 1 MacBook; Final Cut Studio 5.1, B&H Photo & Video equipment.

Transmission:

In the process of developing 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.

Multi-Dimensional Imaging, Inc.
2722 Walnut Avenue
Tustin, CA 92780
http://www.mdivac.com

Harvey Eisenberg, MD
Ph: 949-278-8890
Fax: 949-200-3689
Email: 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/Project Accomplishments:

Transmission of large patient data files are now successfully sent from Spoke to Hub and clarity of visual/audio transmission are sent from Hub to Spoke for patient consultation. Administrative services will be streamlined with successful transmission of payment from Spoke to Hub, successful intake, storage and transmission of health and patient satisfaction forms. 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 1Mbps of bandwidth, coupled with a full T1 at the hub secured at each end with a VPN. Teleconferencing is secured using AES encryption.

CALIFORNIA, Nevada County TNGP 06-09

Telehealth Network Grant Program

Northern Sierra Rural Health Network

Northern Sierra Rural Health Network
138 New Mohawk Road STE 100
Nevada City, CA 95959-2921
www.nsrhn.org

Speranza Avram
Susan Thomas
Ph: 530-722-1156
Fax: 530-722-1154
Email: tsc@nsrhn.org

Network Partners:

The Northern Sierra Rural Health Network consisting of 29-member telehealth network sites consisting of rural hospitals, community health centers, rural health clinics, public health departments, private physicians, and tribal health centers. Specialty services are provided by urban community health centers and university systems.

Project Purpose:

Expand the range and scope of telehealth services by adding new sites, develop new types of teleheatlh services, integrate telehealth with our health information exchange efforts, and expand the ability of rural providers to use telehealth technology to support distance learning.

Outcomes Expected/Project Accomplishments:

Increase the capacity of the Northern Sierra Rural Health Network to use telehealth to increase access to health care by adding twelve new telehealth sites in our rural region, expand access to specialty care services for rural and underserved patients, enhance the ability of rural providers to recruit and retain a rural workforce, support the ability of regional and statewide organizations to use videoconferencing.

Service Area:

The region consists of nine counties that comprise the northeastern corner of California. The region covers 30,000 square miles and contains a population of 435,706 residents. 81 percent of these residents live in rural or frontier communities, 50 percent of the communities are designated as a MUA/MUP, 65 percent are Health Professional Shortage Areas (HPSA) and 50 percent are designated dental health HPSAs.

Services Provided:

Our current telehealth network supports the ability of 29 rural and safety-net providers to participate in a variety of telehealth services and activities. Since 1999, our network members have completed over 5,000 clinical telehealth consultations, and over 1,100 distance learning continuing education and other telehealth events. Our goal is to expand these numbers by 5 percent each year.

Equipment:

Polycom VSX 7000 with interface and Quad BRI module, Optima Series 32" Tall Cart, monitor, Polycom PVX desktop video software and hardware, Accord MGC-100 24-port video conferencing bridge.

Transmission:

A broad telecommunications network consisting of high-speed T1 and PRI lines that are shared by 11 of our network members. Other members connect via ISDN and video-over-IP into our videoconferencing bridge.

CALIFORNIA, San Joaquin County CMP FY 05

Automated Drug Dispensing Medication Administration System

San Joaquin County Health Care Services

San Joaquin General Hospital
PO Box 1020
Stockton, CA 95201
www.sjgeneralhospital.com

Jennifer Hirai, Pharm D.
Donald Johnston, Jr
Ph: 209-468-6790
Fax: 209-468-6546
Email: 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 will include upgrading 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.

Outcomes Expected/Project Accomplishments:

We replaced 10 older switches in our inpatient/outpatient areas to provide full gigabit bandwidth over those links. The new units also provide Power-over-Ethernet (POE) which has simplified the deployment of the hospital's first wireless network in the Emergency Department. Patient wrist-band and label barcodes have been specified and are in the process of being implemented throughout our Hospital Information System, along with the scanners and handheld devices to read them.

Service Area:

San Joaquin General Hospital of 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:

Cisco switches were used in upgrading the network backbone. Siemens wireless equipment and security server provided the wireless network in the Emergency Department. Symbol Technologies and Zebra Technologies were the manufacturers of the barcode devices (printers, scanners, handhelds).

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.

COLORADO, Boulder County CMP FY 05

Clinical Integration Through Health Informatics

Avista Adventist Hospital

Integrated Physician Network Avista
1913 S 88th St.
Superior, CO 80027
www.avistahospital.org / www.ipnavista.com

Christopher D. Sprowl, MD
Rochelle Hass, Director of Operations
Ph: 303-661-4440
Fax: 303-661-4449
Email: rhass@ipnavista.com

Network Partners:

Integrated Physician Network, Clinica Campesina Family Health Clinic, Boulder County Public Health. Formed 09/01/05.

Project Purpose:

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

Outcomes Expected/Project Accomplishments:

Improve communications between providers – implementation of a shared Electronic Medical Record. Improve quality of care – diabetes registry, lab results for HbA1c and eye exam, protocols embedded in the EMR, and registries for 4 other health disparities. Improve the value of the health care– lower expenses for physicians and payers, lower premium rates, and a 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, Family Practice, Internal Medicine, Ophthalmology, Laboratory Interfaces. 2007 – Cardiology.

Equipment:

Laptop computers, projectors, fax servers, fax machines, multi-page scanners, ID card scanners, desk top computers, cell phones, NextGen EPM-EMR software, Mobile MD middle-ware, Medi-Tech software.

Transmission:

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

COLORADO, Adams County — CMP FY 03

Native Telehealth Outreach and Technical Assistance Program

University of Colorado Health Sciences Center

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

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/Project Accomplishments:

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 National Red Cross

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

Cindy Payne
Ph: 202-303-4171
Fax: 202-638-3967
Email: PayneC@usa.redcross.org

Network Partners:

Not Applicable.

Project Purpose:

To provide training services related to the implementation of the eProgesa COTS product for BioArch Program, that includes the replacement of the American 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 American 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 percent of the Nation's blood supply. In supplying nearly half the Nation's blood, the American Red Cross administers the largest blood collection and distribution network in the United States.

Outcomes Expected/Project Accomplishments:

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 percent 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.

National Telehealth Resource Center

Center for Telehealth and E-Health Law

Center for Telehealth & E-Health Law
c/o Drinker Biddle Gardner Carton LLP
1301 K Street NW, East Tower, 9th Floor
Washington, DC 20005-3317
www.telehealthlawcenter.org , www.ctel.org

Robert J. Waters, JD
Ph: 202-230-5090
Fax: 202-230-5300
Email: info@ctel.org

Network Partners:

The Center for Telehealth & E-Health Law (CTeL) will continue its long tradition of convening telehealth leaders from across the Nation to discuss key legal and regulatory issues facing the telehealth industry. NTRC will collaborate with the four regional telehealth resource centers.

Project Purpose:

The NTRC serves as the source for legal and regulatory information affecting the telehealth industry and provides technical assistance to current OAT and HRSA grantees and those that seek grant funding for telehealth programs. Critical legal and regulatory information will be available on the NTRC website at www.telehealthlawcenter.org.

Outcomes Expected/Project Accomplishments:

NTRC will create a user-friendly repository of information on legal and regulatory information affecting the telehealth industry.

Service Area:

The NTRC is a national resource center and provides information to current OAT and HRSA grantees and those that seek grant funding for telehealth programs.

Services Provided:

The NTRC provides information on legal and regulatory issues facing telehealth to current OAT and HRSA grantees and those that seek grant funding for telehealth programs.

Equipment:

N/A

Transmission:

N/A

Foundation For eHealth Initiative

Foundation for eHealth Initiative (FeHI)
818 Connecticut Avenue, Suite 500
Washington, DC 20006
www.ehealthinitiative.org
www.ccbh.ehealthinitiative.org

Doug Emery
Ph: 202-624-3270
Fax: 202-429-5553
Email: doug.emery@ehealthinitiative.org

Network Partners:

Stakeholders engaged in more than 200 State, regional, and community-based health information exchange projects across the Nation. Includes 10 community-based multi-stakeholder collaboratives funded by FeHI that are improving health and healthcare through health information exchange (HIE): 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; and HealthBridge, CT.

Project Purpose:

To improve 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 assistance 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/Project Accomplishments:

- Increase in the number of sustainable health information exchange initiatives across the Nation 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.
- Evaluation measurement tools: eHI Annual Surveys; resources and tools generated by grantees and other stakeholders; accomplishments of CCBH funded collaboratives; Stakeholder interviews.

Service Area:

The program supports stakeholders in every state in the U.S.

Services Provided:

Seed funding to communities who are improving healthcare through HIE; development of 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; dissemination 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/World Wide Web, wireless technology, and broadband transmission.

BayCare Health System

BayCare Health System
17757 US Hwy 19
Clearwater, FL 33764
http://www.BayCare.org

Lindsey Jarrell, Chief Information Officer
Steve Farrell, Senior Project Manager
Ph: 727-467-4639
Fax: 727-467-4627
Email: Steve.Farrell@BayCare.Org

Network Partners:

Three major Community Healthcare Alliances: St. Anthony's Health Care, Morton Plant Mease Health Care, and St. Joseph's-Baptist Health Care. BayCare Health System was formed in 1997 and includes these hospitals: St. Anthony's, Morton Plant, Mease Dunedin, Mease Countryside, NorthBay, St. Joseph's, St. Joseph's Women's, Tampa Children's and South Florida Baptist.

Project Purpose:

Create an Electronic Medical Record (EMR) 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.

Outcomes Expected/Project Accomplishments:

All of the original expected outcomes are still in measurement and/or applications are in the development stage. 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:

All nine hospital sites listed above had equipment and/or services funded by the grant. 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, HP servers and workstations, Oracle database and Cerner application software. Microsoft Windows and Citrix desktop software, and Cloverleaf (Quovadx) integration engine.

Transmission:

Data Center to facilities via a 20MB ATM. Facilities to the desktop via 100MB Ethernet, Cisco Wireless LAN

Clinical Trial Patient/Physician Information & Education Program

Florida Cancer Research Cooperative, University of South Florida

University of South Florida
3500 E. Fletcher Ave., Suite 225
Tampa, FL 33613
www.floridacancertrials.com

Karen Moffitt, Ph.D./Nina Entrekin, MS, RN
Karen Moffitt, PhD
Ph: 813-975-6958
Fax: 813-975-6596
Email: 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 website 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/Project Accomplishments:

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 Poweredge 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 (UFCD)

University of Florida College of Dentistry
PO Box 100405
Gainesville, FL 32610-0405
www.dental.ufl.edu/
www.dental.ufl.edu/offices/alumni/tele.asp

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

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/Project Accomplishments:

Expansion and evaluation of video-conferencing capabilities from the Gainesville campus to dental clinics throughout the state has been completed. This includes classroom/conference room facilities upgrades and distance learning for dental students and residents via videoconferencing throughout UFCD's network of clinics. The mobile videoconference cart has been tested on-site.

Web-based educational experiences for dental students, dental residents, faculty and dental practitioners have been offered and include the ongoing "oral pathology" case of the month. The educational website related to teledentistry and distance education and the testing of the "virtual" dental study club concept is completed.

Digital radiography implementation has been completed at the Gainesville, Hialeah and St. Petersburg sites, with implementation in Jacksonville expected in the next few months.

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 include digital radiography and eventually, teledentistry consultations. In addition, Distance Learning technology was 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 7000, 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.

Ware County Board of Health

Ware County Board of Health
Ware County Board of Health
1101 Church Street
Waycross, GA 31501

Diane Watson, RNC, MSN, MPH
Ph: 912-287-4890
Fax: 912-287-4033
Email: dcwatson9@dhr.state.ga.us

Network Partners:

Medical College of Georgia, Memorial Health University Medical Center, Grady Health System, GA. Dept., of Human Resources, Wayne Wellness, Toombs Wellness, Ware Wellness, Coffee Wellness, Bulloch Wellness, Bulloch HD, Coffee HD, Appling HD, Tattnall District Office, Brantley HD, Charlton HD, Wayne HD, Ware HD, DAISY Clinic, Southeast Health District

Project Purpose:

The project will expand telehealth network capability with the addition of interactive videoconferencing in four remote, rural health department sites. These sites will join 14 existing area telehealth sites that already provide staff development and continuing education. The sites will provide weekly nutritional counseling services for clients with nutritional deficiencies.

Outcomes Expected/Project Accomplishments:

The network will be expanded to include four new sites. 645 clients will receive nutritional services via telehealth per year. Clients' nutritional risk status will improve in 25 percent of those receiving nutritional counseling. The network will decrease travel and administrative costs associated with staff educational and administrative activities.

Service Area:

The counties funded through the grant include Atkinson, Candler, Clinch, and Evans. They are part of a public health district whose service area is comprised of sixteen rural counties in Southeast Georgia. The area is roughly the size of the state of Massachusetts and is made up of predominately medically underserved communities.

Services Provided:

The new additional to the network will provide distance learning for public health staff. Clients that are identified as having or being at high risk for nutritional deficiencies will receive nutritional counseling via telehealth.

Equipment:

All new sites will be equipped with Polycom VSX 7400 videoconferencing units. Cisco 1721 routers and LAN switches will be installed at each location.

Transmission:

All network connections are TI dedicated private line data circuits.

GEORGIA, Ware County — RTGP 00-02, TNGP 03-05

Rural Health Telemedicine Grant Program

Ware County Board of Health

Southeast Health Unit
1101 Church Street
Waycross, GA 31501

Diane Watson, Telehealth Director
Ph: 912-287-4890
Fax: 912-287-403
Email: dcwatson9@gdph.state.ga.us

Network Partners:

Medical College of Georgia, Memorial Health University Medical Center, Grady Health System, Ga. Dept., Of Human Resources, Wayne Wellness, Toombs Wellness, Ware Wellness, Coffee Wellness, Bulloch Wellness, Bulloch HD, Coffee HD, Appling HD, Tattnall District Office, Brantley HD, Charlton HD, Wayne Hd, DAISY Clinic, Southeast Health District

Project Purpose:

To impact health care provision through improved access, quality, and availability. The project provided a critical service link for children with special health care needs and has now embarked on similar service provision for clients with HIV/AIDS. The project focused on expanding health care provision for underserved clients as well as distance learning for staff.

Outcomes Expected/Project Accomplishments:

- 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 service for 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 all agency Wellness Centers. The perinatal clinic provides level II ultrasound & genetics counseling as part of high risk obstetrical care.

Equipment:

Polycom iPower 970 videoconferencing units are located in two sites, Polycom 680 in two sites, Polycom iPower 9000 in 12 sites and Polycom VSX 7400 in four3 sites.

Transmission:

All wide area network (WAN) connections are T1 dedicated private line data circuits.

The Hawai'i CHC Telehealth Network Project

Hawai'i Primary Care Association (HPCA)

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

Orin Kanaema Sherman, MBA
Ph: 808-536-8442
Fax: 808-524-0347
Email: csakuda@hawaiipca.net

Network Partners:

All Federally Qualified Community Health Centers (FQHCs) in Hawai'i, 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, (3) use telehealth to meet important non-clinical needs: administration, education, and outreach.

Outcomes Expected/Project Accomplishments:

(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, ongoing 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 percent of Hawai'i's population. 80 percent of these represent Medically Underserved Populations (MUPs), 20 percent 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, 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, dermascopes, otoscopes, opthalmoscopes.

Transmission:

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

Hawaii Neuroscience Telehealth Network

The Queen's Medical Center

The Queen's Medical Center
1301 Punchbowl Street
Honolulu, HI 96813
http://www.queens.org/services/neurosciences.html

Cherylee Chang MD, FACP
Karen Seth
Ph: 808-537-7152
Fax: 808-547-4001
Email: kseth@queens.org

Network Partners:

Hilo Medical Center and Kona Community Hospital, both in Hawaii County. The Hawaii Neuroscience Telehealth Network will be operational by March 2007.

Project Purpose:

To develop a telemedicine system to connect two hospitals without neuroscience expertise to a medical center that has expertise in this area at all times in order to improve the quality of acute neurological and neurosurgical care for patients at these rural sites.

Outcomes Expected/Project Accomplishments:

The system will be easy to use with few system or technical failures as measured by technical end user evaluations, usage frequency, and technical failures. This system will enhance the quality and scope of acute neurological patient care at the initiating sites, during transport and for those who are transferred.

Service Area:

The Hawaii Neuroscience Telehealth Network will initially serve Hawaii County via the rural hospital sites of Hilo Medical Center and Kona Community Hospital. Hawaii County has a population of about 160,000 with a land area of 4,038 square miles. It is designated as both a Medically Underserved Population (MUP) and a primary care Health Professional Shortage Area (HPSA).

Services Provided:

Emergency neurology and neurocritical care and potential referral to neurosurgical specialty care.

Equipment:

This telehealth network is based on a three component architecture managed by Interactive Care Technologies: 1) An ASP server application, called the Virtual Care Team; 2) Two iCare Vision Elite camera systems for remote sites that are digital, wireless, battery-operated with a single off-on switch; and 3) Telehealth ISP routing methodology that layers on top of consumer Internet connectivity.

Transmission:

Telehealth ISP and Internet, ASP hosted source, video traffic protected by end-to-end encryption using VPN SSL technologies, and POTS.

Clearwater Valley Hospital: Electronic Medical Records

Clearwater Valley Hospital and Clinics, Inc.

Clearwater Valley Hospital and Clinics, Inc. Administration
301 Cedar St.
Orofino, ID 83544
http://www.clearwatervalleyhospital.com

Pam McBride
Ph: 208-289-5509
Fax: 208-289-2437
Email: peterpam@cpcinternet.com

Network Partners:

St. Mary's Hospital, 701 Lewiston St., Cottonwood, ID 83522; clinics in Orofino, Cottonwood, Kamiah, Pierce, Kooskia, Nezperce, Craigmont, and Grangeville, ID. Partnership operational since February, 1998. Actual number of patient encounters 1 October 05 – 30 September 06: 44,591. Estimated number of patient encounters October 06 – September 07: 49,050.

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 two 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/Project Accomplishments:

Hardware and software installed.
Training completed for end-users of active modules.

Service Area:

Three contiguous counties in frontier north-central Idaho, serving 14 HPSAs and three MUAs. All have whole country Geographic Mental Health HPSAs. Clearwater—MUA and Geographic Primary Care HPSA and low-income Population Group HPSA in Primary Care; clinics in Orofino and Pierce; Lewis—Geographic and Facility Primary Care HPSAs, MUA and MUP designations; clinics in Kooskia and Kamiah; Idaho—low-income Population Group and Geographic HPSAs in Primary Care, clinics in Cottonwood, Grangeville, Nezperce, and Craigmont.

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 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.

IDAHO, Bannock County — CMP FY 01, 02, 03, 04, 05

Telehealth Idaho

Idaho State University, Institute of Rural Health

Telehealth Idaho
921 So. 8th Ave., Stop 8174
Pocatello, ID 83209-8174
www.isu.edu/irh & www.telida.isu.edu

B. Hudnall Stamm, PhD
Ph: 208-282-4436
Fax: 208-282-4074
Email: telida@isu.edu

Network Partners:

Community: 12 hospitals, two clinics, one dental practice, one hospital network (five hospitals), and four State associations. University: The College of Pharmacy, Idaho Health Sciences Library, Dental Sciences, Clinical Psychology, Family Medicine, and Hispanic Health Center. Corporate: Healthwise, Inc. & Well Diagnostics. Operational August 1, 2001.

Project Purpose:

Improve access to healthcare for people 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 3-pronged approach to increase, extend, and preserve health professionals in Idaho (see specific objectives below).

Outcomes Expected/Project Accomplishments:

Improved quality and quantity of access to healthcare for people living in Idaho's rural and frontier areas (Goal 1). We also have established a statewide telehealth resource center (Goal 2). An anticipated overarching outcome is a healthcare culture change incorporating Health Information Technology (HIT) among health professionals in Idaho. Below are our three objectives and the outcome measures used to evaluate them.

- *Objective 1: Increase the workforce through new and upgraded education:* Frequency counts of sessions, participants, and a standardized, self-report course evaluation.
- *Objective 2: Extend the reach of existing providers by using telehealth-based supervision and consultation.* Frequency counts, standardize self-report evaluations for direct patient care.
- *Objective 3: Preserve Existing Professionals:* Data is collected from health professionals using standardized measures of (a) telehealth utilization (b) overall quality of life (Life Status Review, LSR) and (c) professional quality of life (The Professional Quality of Life Scale, ProQOL). Data area also collected on frequency of use for various online tools such as the digital medical library.

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.
Business analysis and cost-effectiveness studies.

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 — CMP FY 02, 03, 04, 05

Expanding Telehealth to North Idaho Districts (EXTEND)

North Idaho Rural Health Consortium (NIRHC)

North Idaho Rural Health Consortium
Kootenai Medical Center
2003 Lincoln Way
Coeur D' Algne, ID 83814
www.nirhc.org

Tom Hauer
Ph: 208-666-2987
Fax: 208-666-2389
Email: hauert@kmc.org

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:

Extend existing service providers, by further developing and expanding telehealth treatment applications, to better serve the rural population of northern Idaho. 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/Project Accomplishments:

EXTEND will evaluate 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:

Five counties in northern Idaho: Boundary, Bonner, Kootenai, Shoshone, and Benwah counties.

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.

IDAHO, Bannock County — TNGP FY 06-09

Cooperative Telehealth Network (CTN)

Public Hospital Cooperative, Inc.

Public Hospital Cooperative, Inc.
651 Memorial Drive—East Campus
Pocatello, ID, 83201

Jon Smith
Ph: (208) 239-2912
Fax: (208) 239-3777
Email: jons@portmed.org

Network Partners:

Participating Sites: Portneuf Medical Center-hub (Pocatello, ID), eight hospitals located in Southeast Idaho and West Wyoming, and a Federally Qualified Health Center with various sites in Idaho; Project partners include: Idaho State University, Partners in Health Telemedicine Network.

Project Purpose:

CTN will focus on developing a network that enables residents in rural /frontier counties to have access to mental health and other clinical services typically available only in urban settings. CTN will enable us to meet the goals of increasing quality and years of healthy life and eliminating health disparities by making needed specialty mental health services available at the local hospitals for all rural residents.

Outcomes Expected/Project Accomplishments:

Idaho State University Institute of Rural Health will evaluate the feasibility, quality of care, cost-effectiveness, satisfaction, and outcomes data related to delivering healthcare using telehealth. Quantitative and qualitative measurements are included into each clinical and educational telehealth application. CTN will measure performance with the OAT GPRA tool.

Service Area:

The Eastern Idaho Telehealth Network will serve the following Idaho and Wyoming counties: Bannock, Bingham, Caribou, Lemhi, Madison, Minidoka, Oneida, Power, Teton, Lincoln (WY). The total geographic area covered by the Eastern Idaho Telehealth Network participants is approximately 25,000 square miles.

Services Provided:

Cooperative Telehealth Network will be providing mental health services (February 2007) and distant education for hospital staff (CMEs, CEUs) and community members (diabetes management, healthy living, depression). Other possible clinical services include dermatology, orthopedics, and radiology.

Equipment:

Participating Sites: 6 Tandberg 880 MXP IP Units with Natural Presenter Software (equipment vendor—Wire One Technologies)

Transmission:

Full point-to-point T-1 lines will be used from participating sites to the hub site (Portneuf Medical Center).

ILLINOIS, Sangamon County TNGP FY 06-09

Illinois Developmental Disabilities Telehealth Network and Services: A Program Dedicated to Optimizing Health and Support of Community Living

Illinois Department of Human Services

Illinois Department of Human Services,
Division of Developmental Disabilities,
Bureau of Clinical Services
319 East Madison St., Suite 2A
Springfield, IL 62701-1035

Rod Curtis, MD
Arden R. Gregory RN, DNSc
Ph: 217-782-9449
Fax: 217-782-0012
Email: Arden.Gregory@illinois.gov
Rod.Curtis@illinois.gov

Network Partners:

State Operated Developmental Centers: Choate Developmental Center, Howe Developmental Center, Murray Developmental Center, Shapiro Developmental Center; Community Providers of Developmental Disabilities Providers: Achievement Unlimited, Inc., Charleston Transitional Facility, Kreider Services, Inc., Specialized Training for Adult RehabiliTation (START).

Project Purpose:

Develop a comprehensive Telehealth network that will enable clinical assistance to providers of community-based services for people with intellectual disabilities. Services provided through the Telehealth program will include clinical case reviews, health care related educational venues and administrative support.

Outcomes Expected/Project Accomplishments:

1) Improve efficiency and efficacy of care delivery and support to intellectually disabled individuals who experience behavioral and medical exacerbations. 2) Reduce admissions to State Operated Developmental Centers, ERs and psychiatric facilities. 3) Enhance professional clinical management.

Service Area:

Underserved rural counties in the Northwest, Central West & East, and Southern Illinois.

Services Provided:

Provide clinical assistance to individuals with intellectual disabilities residing in community-supported agencies in rural areas throughout Illinois; educational venues for direct care staff, physicians, medical students, nurses, and other professionals serving people with intellectual disabilities.

Equipment:

8 Polycom 7000s (IP/ISDN) (1/site), DSU/CSU Interface Card, Ethernet Router, 32" Monitor w/ S-Video inputs

Transmission:

Dedicated T1 connection; Illinois Century Network Backbone

Moving Toward Portability: Uniform Core Licensure Standards for Nursing

National Council of State Boards of Nursing

The National Council of State Boards of Nursing (NCBSN)
111 East Wacker Drive, Suite 2900
Chicago, IL 60601
www.ncsbn.org

Kristin Ann Hellquist, MS
Ph: 312-525-3665
Fax: 312-279-1032
Email: kellquist@khellquist.org

Network Partners:

NCSBN has partnerships with states that contract with it for portability purposes, the contract advisory panel and other external stakeholders related to portability.

Project Purpose:

Assist states in implementing the Nurse Licensure Compact (NLC) and criminal background checks (CBC). Remove regulatory barriers while increasing access to safe nursing care through licensure portability. Enhance licensure portability for nurses and thereby increase telehealth practice.

Outcomes Expected/Project Accomplishments:

Improve the quality, timeliness, and immediate accessibility of criminal history and related records. Demonstrate an increase in the number of nurses who are involved in telehealth through research, utilization of survey methodology. Decrease barriers associated with nurse licensure portability.

Service Area:

Boards of nursing who have not yet implemented CBCs or the NLC are eligible to receive funds.

Services Provided:

Assist Boards of Nursing in meeting NCSBN uniform core requirements. Provide development and data analysis of financial tools to standardize costs associated with implementing the NLCs and CBCs. Create and disseminate two white papers (one on exploring portability of CBCs and the other on exploring nursing union resistance to the NLC).

Equipment:

Not applicable.

Transmission:

Not applicable.

Neonatal Telehealth Project in Rural Illinois Located at the Perinatal Center

Saint John's Hospital

Perinatal Center, St. John's Hospital
415 North 9th Street, Room 4W16
Springfield, IL 62769
www.st-johns.org

Dennis Crouse MD, PhD, FAAP/ Cherie Miller-Kling
Ph: 217-544-6464 extension 30460
Fax: 217-757-6844
Email: dcrouse@siumed.edu; cherie.miller-kling@st-johns.org

Network Partners:

Blessing Hospital, 11/7/05; Carle Foundation Hospital; Crawford Memorial Hospital, 3/17/06; Dr. John Warner Hospital, 4/4/06; Ferrell Hospital 4/4/06; Hillsboro Area Hospital, 3/30/06; Mason District Hospital, 3/17/06; Richland Memorial Hospital, 11/4/05; St. Vincent Memorial Hospital, 11/7/05; Thomas H. Boyd Memorial Hospital, 3/21/06.

Project Purpose:

Develop Neonatal and Perinatal Telehealth 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.

Outcomes Expected/Project Accomplishments:

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. Sites: St. John's Hospital, Sangamon County.

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.

ILLINOIS, Sangamon County CMP FY 01

Downstate Regional Telehealth Project

Southern Illinois University School of Medicine

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

Deborah E. Seale
Ph: 217-545-7830
Fax: 217-545-7839
Email: dseale@siumed.edu

Network Partners:

Participating sites include: Critical access and small rural hospitals, Area Health Education Centers, family practice clinics, universities and colleges, rural mental health hospitals, large urban hospitals, Veteran Affairs Hospital, home health agency, state and community agencies. 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/Project Accomplishments:

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 number of sites, participants, programs, services delivered as well as duration. Evaluate project development timeline.

Service Area:

Ninety-six 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 Network (IRIN), 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.

INDIANA, Marion County — CMP FY 03

Riley Connections

James Whitcomb Riley Hospital For Children

Clarian Health Partners
1633 North Capitol Avenue
Indianapolis, IN 46202
www.clariantelemedicine.org

Richard Helsper MBA, CHE
Ph: 317-274-3408
Fax: 317-274-5645
Email: rhelsper@clarian.org

Network Partners:

Bedford Regional Hospital, Bedford, IN; Deaconess Hospital, Evansville, IN Union Hospital, Terre Haute, IN; Memorial Hospital, South Bend, IN; Lutheran Hospital, Fort Wayne, IN; Tipton County.

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. Support the advancement of telemedicine policy and reimbursement in Indiana.

Outcomes Expected/Project Accomplishments:

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

Service Area:

Lawrence County, IN; Vanderburgh County, IN; Vigo County, IN; St. Joseph County, IN; Allen County, IN; Tipton County.

Services Provided:

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

Equipment:

At remote sites: 5 Tandberg 2500 video codec conferencing carts, 2 stethoscopes (AMD 3550), 3 general exam cameras (AMD 2550), 2 Compaq notebook computers.

Transmission:

Full T-1 Lines between Clarian Health Partners and Deaconess Hospital, Bedford Regional Hospital, Tipton Hospital, and Union Hospital. Internet to Memorial Hospital and Lutheran Hospital for continuing medical education.

Health & Hospital Corporation of Marion County

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

Thomas Kuster, CNMT
Gurinder Hohl, MPH
Ph: 317-221-3112
Fax: 317-221-2020
Email: ghohl@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/Project Accomplishments:

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 12 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.

Iowa Chronic Care Consortium

Des Moines University
3200 Grand Avenue
Des Moines, Iowa 50312
www.iowaccc.com

William Appelgate, PhD
Ph: 515-271-1516
Fax: 515-271-7062
Email : william.appelgate@dmu.edu

Network Partners:

Iowa Medicaid Enterprise
Des Moines University
Pharos Innovations
Approximately 200-250 Iowa Medicaid members will be served through this project.

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). Eligible members will be enrolled in a daily auto voice response system (AVR), which prompts self-reporting of concerning symptoms and weight gain. The goal is to identify and mitigate early warning signs of CHF exacerbations. Additional care management, as needed, will be provided through Iowa Medicaid Enterprise Care managers.

Outcomes Expected/Project Accomplishments:

Clinical Improvement: Clinical parameters, (measure): Telehealth data management technology.
Patient Satisfaction: Telephone surveys will be completed with all patients in the program.
Patient Functionality: Will measure through Minnesota Living with Heart Failure survey.
Health Care Utilization: Will evaluate all health claims data on participants, as well as a matched cohort.

Service Area:

It is anticipated that this project will serve Medicaid members in any one of the 99 counties in Iowa, in which they may reside.

Services Provided:

Intervention: AVR system as developed by Pharos Innovations, Inc. Care management and self-management education provided by Iowa Medicaid Enterprise Care Managers.

Equipment:

Telephones: Patient monitoring through the Pharos Tel-Assurance system.
Scales, both regular and for those who weigh in excess of 325 pounds.

Transmission:

Plain Old Telephone Service (POTS).

Mercy Foundation

Midwest Rural Telemedicine Consortium
1111 6th Avenue
Des Moines, IA 50314-2611
http://www.mrtc.iowa.org

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

Network Partners:

Mercy Medical Center – Des Moines, Mercy Medical Center – North Iowa, and 23 affiliate facilities in Algona, Ames, Audubon, Belmond, 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, develop a support mechanism for Limited English Proficient (LEP) patients, and increase access for delivery of clinical services.

Outcomes Expected/Project Accomplishments:

Outcomes include an increase in current network utilization (clinical, educational and administrative); improved ability for facilities to address the language needs for LEP patient populations; 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, Mental Health, 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.

KANSAS, Wyandotte County RTGP FY 00-02 TNGP FY 03-05

Sustainability and Cost Benefit Evaluation of the Kansas Telehealth Network

University of Kansas Medical Center

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

Gary Doolittle, MD
Ph: 913-588-2226
Fax: 913-588-2227
Email: gdoolit@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. Actual number of patient encounters 1 OCT 05-30 SEP 06: 2,298.

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/Project Accomplishments:

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).

University of Kansas Medical Center

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

Ryan Spaulding, PhD
Ph: 913-588-2226
Fax: 913-588-2227
Email: rspaulding@kumc.edu

Network Partners:

Cedar Vale Clinic, Central Kansas Educational Cooperative, Crawford County Mental Health Center, Flint Hills Community Health Center, Goodland Medical Center, Hays AHEC, Northeast Kansas Center for Health & Wellness, Parsons State Hospital, Salina Regional Health Center's Early Childhood Intervention Center, Sedan City Hospital, South Central Kansas Special Education Cooperative, Southeast AHEC, Southwest AHEC.

Project Purpose:

The project will evaluate access and cost-benefit of pediatric special needs services delivered via telemedicine across the Kansas Telehealth Network, which links the University of Kansas Medical Center (KUMC) to 13 partner sites in rural Kansas. Cost accounting procedures will be used to compare costs of telemedicine to more traditional service delivery methods, and validated quality of life instruments will be employed to measure the benefit of telemedicine. The services being evaluated include developmental pediatrics, Autism/Asperger's interventions, child psychiatry and behavioral pediatrics from such specialists as Developmental Pediatricians, Child Psychiatrists, and Child Psychologists, respectively.

Outcomes Expected/Project Accomplishments:

It is hypothesized that access to pediatric special needs services will be improved and that the cost of providing the service via telemedicine will be lower than providing the same service in a traditional outreach setting. It is also expected that quality of life measures will demonstrate at least an equivalent level of care via telemedicine as that which is observed in traditional settings. Together, these cost-benefit data will provide evidence that telemedicine can be a cost-effective and clinically-beneficial service.

Service Area:

This network will serve 13 sites in 11 counties across Kansas, covering 9,115 square miles and a population of 267,772. Ten of the 11 counties are HPSAs or partial HPSAs, 8 are mental health HPSAs and 9 are MUAs or partial MUAs. This area has a disproportionately high number of elderly, children, Native Americans and Hispanics compared to Kansas overall. In the proposed service area, 13.2 percent of the population lives below 100 percent of the poverty level and 37.3 percent live below 200 percent of the poverty level. Children living in poverty in the area is 16.4 percent.

Services Provided:

The services provided include developmental pediatrics, Autism/Asperger's interventions, child psychiatry, child psychology and behavioral pediatrics from the respective specialist, such as Developmental Pediatricians and Psychiatrist. Other services provided by KUCTT are: Cardiology; Diet and Nutrition including Diabetes Care and Management; Oncology; Rehabilitation; Physical Therapy and Speech Language Pathology; and a wide range of Pediatric Services. Patient education and continuing education services are provided as well.

Equipment:

All sites are equipped with PolyCom F/X Viewstations or the Polycom VSX 7000.

Transmission:

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

PACS (Picture Archiving and Communication System)

The James B. Haggin Memorial Hospital

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

Earl J. Motzer, PhD
Ph: 859-733-4801
Fax: 859-734-5563
Email: 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/Project Accomplishments:

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

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

Sharon Whitaker
Ph: 606-726-2106
Fax: 606-723-2951
Email: slwhitaker@marcumandwallace.org

Network Partners:

Lourdes Hospital

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. Actual number of patient encounters 1 OCT 05-30 SEP 06: 13,506.

Outcomes Expected/Project Accomplishments:

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 radiologist reading stations.

Transmission:

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

New Horizons Health Systems, Inc.

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

Bernard T. Poe, RPh
Ph: 502-484-3663
Fax: 502-484-2702
Email: 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/Project Accomplishments:

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 (EHR) 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, Fayette **RTGP 94-96, RTGP 97-99, TNGP FY 03-05**

Improving Health Outcomes for Children in Rural Kentucky Schools

University of Kentucky Research Foundation – Kentucky TeleCare

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

James Norton, PhD
Rob Sprang, MBA
Ph: 859-257-6404
Fax: 859-257-2881
Email: rsprang@email.uky.edu

Network Partners:

The Kentucky TeleCare Network was created in 1993 at the University of Kentucky and reaches out to over 25 healthcare facilities across the state, including hub sites at St. Claire Regional Medical Center in Morehead and Lewis County Primary Care in Vanceburg. The network served over 1600 patients between 1 OCT 05 and 30 SEP 06 and is expected to serve over 1,800 patients in the following 1 year period.

Project Purpose:

Expand the Kentucky TeleCare Network to hospitals, primary care clinics and public school clinics to serve the needs of rural Kentuckians. Use the network to deliver clinical and educational programs that will have a significant impact on acute and chronic disease, helping reduce unnecessary transportation and providing needed care more quickly than would otherwise be possible.

Outcomes Expected/Project Accomplishments:

Traditional clinics in public schools and primary care clinics for specialty services have helped reduce the number of patients who seek specialty care from primary care providers, and healthcare education of public school students has improved health awareness. A mobile telehealth van, serving coal mining facilities is helping improve patient compliance with medication and treatment.

Service Area:

University of Kentucky, Fayette County, Bath County Middle School, Carter County Primary Care, Menifee County Primary Care, Elliott County Primary Care, Olive Hill Elementary, Carter County, Lewis County Family Health, Lewis County High School, Tollesboro Family Health, Lewis County, Tollesboro Elementary School, Lewis County, Laurel Elementary School, Lewis County.

Services Provided:

The network provides educational programming, such as Grand Rounds, targeted, disease-specific education, Medical student and resident programs. Clinical services, including Pediatric Cardiology, Infectious Disease, Dermatology, Child and Adult Psychiatry, Pre and post operative visits, surgical specialty clinics, Gastroenterology, Rheumatology, primary care, Neurology, Memory Disorder Clinic.

Equipment:

The network utilizes Polycom endpoints, video bridges, firewall traversal devices and gatekeepers. Clinical equipment includes American TeleCare stethoscopes, camcorders and other specialty cameras.

Transmission:

T-1s connect endpoints to video bridges and bridges are connected by one or more T-1s.

Improving Rural Maine's Critical Access to Emergency & Chronic Disease Care Through Telehealth/Monitoring

Eastern Maine Healthcare Systems

Eastern Maine Healthcare Systems
43 Whiting Hill Rd.
Brewer, ME 04412-1005
http://www.rmcl.org/

Erik Steele, DO
Wanda Pacifici
Ph: 207-973-7700
Fax: 207-973-5640
Email: wpacifici@emh.org

Network Partners:

Eastern Maine Healthcare Systems; Eastern Maine Medical Center; Acadia Hospital; Eastern Maine HomeCare; EMS; The Aroostook Medical Center; Inland Hospital; Blue Hill Memorial Hospital; Mayo Regional Hospital and Sebasticook Valley Hospital; Redington-Fairview and Penobscot Bay Medical Center-Network formed 1996.

Project Purpose:

To provide patient-centered care to rural residents in northern, central, and eastern Maine through effective use of telehealth technology, linking care between providers to reduce ED visits and re-hospitalizations; stabilizing and improving care provided by Critical Access Hospitals within EMHS' service area.

Outcomes Expected/Project Accomplishments:

To improve emergency access to trauma & orthopedic specialists to reduce ratio of unnecessary transfers from CAH & improve patient's outcomes transferred after telemedicine communication. Reduce medical errors in treatment of injured trauma patients. Improve trauma & orthopedic consultations access for follow-up. Improve self-management of glucose control. Improve emergency access to pediatric critical care specialists.

Service Area:

EMMC and Acadia Hospital: Penobscot County; TAMC and Eastern Maine Homecare: Aroostook County; SVH & Redington-Fairview: Somerset County; Inland Hospital: Kennebec County; Blue Hill Memorial Hospital: Hancock; Mayo Regional: Piscataquis County and Penobscot Bay: Knox County.

Services Provided:

Diabetes Care and Management; Mental Health; Remote Patient Monitoring and Trauma/Emergency Medicine.

Equipment:

Remote sites: 5 Polycom videoconferencing units, 10 Tandberg videoconferencing units.
Home monitoring equipment: 32 ATI units, 7 AMD units; Tandberg MPS800 Bridge

Transmission:

Full T1 lines, ISDN and IP (Internet protocol) to hospitals, Internet, POTS to homes
Vendors used: Polycom and Tandberg

MAINE, Washington County RTGP 97-99, RTGP 00-02, TNGP FY 03-05

Maine Nursing Home Telehealth Network

Regional Medical Center at Lubec

Regional Medical Center at Lubec
43 S. Lubec Rd.
Lubec, ME 04652
www.rmcl.org

Carol Carew, RN, MBA
Ph: 207-733-5541
Fax: 207-733-2947
Email: ccarew@rmcl.org

Network Partners:

Participants include six nursing homes, five primary care providers, specialist physicians in pain management, wound care, allergy/immunology, occupational medicine, a mental health counselor, and distance education providers such as the Maine Alzheimer Association and an emergency preparedness expert. For OCT 05-SEP 06, 19 patients received 39 clinical consults; expected for OCT 06-SEP 07, 25 patients and 50 consults.

Project Purpose:

1) To demonstrate the feasibility and effectiveness of delivery of primary and specialty care services to rural nursing home patients by telemedicine. 2) To enhance the capacity of nursing home staff to deliver effective care through distance education. 3) To improve patient well-being through communication with their family members using POTS-based videophones.

Outcomes Expected/Project Accomplishments:

For 3 years ending SEP 06, 104 clinical telemedicine consults were delivered, including 38 for wound care, 57 for mental health, 2 for pain management, and 7 for primary care. Surveys revealed patients and providers were highly satisfied with specialty care, which usually would not have been accessible due to travel distances and associated costs. Staff distance education, covering 38 topics with 323 participants, was highly valued. Primary care telemedicine and use of videophones for patient-family links were judged not feasible due to implementation barriers.

Service Area:

Five of the nursing homes are located in two large entirely rural counties in northern (Washington, Aroostook) and one in a largely non-rural county (Androscoggin); two key specialist providers in wound care and pain management are in southern Maine, 4-6 hours distance from the rural facilities.

Services Provided:

Telemedicine services were developed for primary care, wound care, pain management, mental health counseling, occupational health, and allergy/immunology. Providers could not be found for geriatric psychology, dermatology, and pulmonology. Monthly distance education for nursing home staff was provided. Videophones were provided for linking patients with distant families.

Equipment:

ISDN-based PolyCom Viewstations with AMD 2500 hand held cameras; AMD videophones.

Transmission:

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

MAINE, Washington County — TRC FY 06-09

Northeast Telehealth Resource Center

Regional Medical Center at Lubec

Maine Telemedicine Services
43 S. Lubec Rd.
Lubec, ME 04652
www.rmcl.org

Carol Carew, RN, MBA
Ph: 207-733-1090 Ext 2196
Fax: 207-733-2847
Email: ccarew@rmcl.org

Network Partners:

Partners of HealthCare Systems, Boston, MA (Joe Turnello, Co-PI, Partners Telemedicine)—network of 75 sites including 7 Harvard affiliated hospitals; 1,200 clinical consults in 2005 University of Vermont College of Medicine, Burlington VT (Terry Rabinowitz, Co-PI, Fletcher Allen Health Care Telemedicine Program)—36 sites including 13 hospitals in VT & NY. In Maine, applicant contracts with various organizations in an open network of over 300 sites.

Project Purpose:

The Northeast Telehealth Resource Center will provide educational, technical, and coordination support and guidance to health care organizations in the 7 northeast states seeking to develop, expand, or improve the effectiveness of telemedicine programs. An additional focus will be on helping collaboratives seeking to enhance regulatory and reimbursement policies.

Outcomes Expected/Project Accomplishments:

Documented linkage of TRC efforts to: development of new rural telehealth access sites, new clinical telehealth services, increased access to continuing medical education, and improved Medicaid and private payor reimbursement policies.

Service Area:

The Regional Medical Center at Lubec (Washington County, ME), Partners HealthCare (Suffolk County, MA), and the University of Vermont School of Medicine (Chittenden County, VT) will collectively serve all counties of the seven northeast states: ME, MA, VT, NH, NY, CT, RI.

Services Provided:

Technical, educational, and clinical development assistance in telehealth for clinical outpatient specialty care, emergency medicine, nursing home specialty care, store and forward applications, home health care, telehealth network operations, e-health, medical education by distance education, telecommnications, reimbursement issues, and program evaluation.

Equipment:

Project partners use Polycom units and an Accord bridge, capable of conferencing with clients by ISDN or IP. A satellite receiver is available for accessing C-band educational transmissions.

Transmission:

ISDN at 128K to 384K over leased lines for video; IP on T1 or institutional WANs; POTS lines for home telehealth.

Massachusetts College of Pharmacy and Health Sciences

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

George Humphrey, PhD
Ph: 617-732-2909
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Email: george.humphrey@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-medicated 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/Project Accomplishments:

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 back-up, Internet VPN Tunnel as Backup.

UMass Memorial Medical Center

UMass Memorial Medical Center
Radiology Department
55 Lake Avenue North
Worcester, MA 01605
www.umassmemorial.org

Janet Greene
Ph: 508-334-7817
Fax: 508-856-4669
Email: greenej@ummhc.org

Network Partners:

UMass Memorial Medical Center, an academic medical center in Worcester and two community hospitals: Clinton Hospital in Clinton and Marlborough Hospital in Marlborough.

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/Project Accomplishments:

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:

UMass Memorial Medical Center: Worcester County and the larger Central Massachusetts region
Clinton Hospital: Worcester County
Marlborough Hospital: 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:

GE Healthcare PACS system.

Transmission:

TCP/IP Ethernet, OC 192 Sonet Ring.

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

Daniel C. Armijo, MHSA
Vickie Wilson
Ph: 734-302-4636/734-302-4738
Fax: 734-302-4991
Email: Dan.Armijo@Altarum.org / Vickie.Wilson@altarum.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 (MiHIN) by providing the conceptual and operational concepts critical to MiHIN implementation in future efforts following this planning process. The goal is to define the overall framework for the MiHIN and its stakeholders, set priorities, and create workable plans.

Outcomes Expected/Project Accomplishments:

Convened statewide kickoff stakeholder meeting and engaged stakeholders in formulation of initial MiHIN. In addition worked with stakeholders to create, convene, and support workgroups to develop policy frameworks and implementation plans to achieve stakeholder agreement on key areas of MiHIN governance.

Service Area:

The entire State of Michigan and the areas governed by Michigan Regional Health Informatics Organizations.

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.

Clinical Information System Replacement Project

Hurley Medical Center

Hurley Medical Center
One Hurley Plaza
Flint, MI 48503
www.hurleymc.com

Gary Townsend, Information Technology
Ph: 810-257-9642
Fax: 810-257-9003
Email: gtownse1@hurleymc.com

Network Partners:

Hurley Medical Center and Hurley Health Services.

Project Purpose:

To select a clinical information system to replace the current legacy 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, reference calls and on-site system demonstrations.

Outcomes Expected/Project Accomplishments:

The system will provide: 1) clinical decision support with 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 bar-code 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, Burn Unit, and ACS Level 1 B Accredited Bariatric Center. 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 interconnects with Hurley Medical Center and 16 off-site facilities. Remote users access the clinical systems with secure VPN sessions.

Midwest Alliance for Telehealth and Technologies Resources

Marquette General Hospital

Marquette General Hospital
Telehealth Department
420 West Magnetic Street
Marquette, MI 49855
www.mgh.org/telehealth

Sally Davis
Rose Young
Ph: 906-225-3120
Fax: 906-225-7696
Email: sdavis@mgh.org / ryoung@mgh.org

Network Partners:

Partners: Michigan State University, College of Communication Arts and Sciences, University of Kansas, Center for TeleMedicine & Telehealth; Purdue University, Regenstrief center for Healthcare Engineering.
Alliance formed October 1, 2006

Project Purpose:

MATTeR supports existing and developing telehealth networks to meet the needs of rural and underserved residents within the tri-state region of Kansas, Indiana, and Michigan. The Alliance provides technical assistance, information dissemination, evaluation and research design, and an educational consortium.

Outcomes Expected/Project Accomplishments:

Development of successful and sustainable telehealth services; efficiency in the collection, synthesis and dissemination of information; strong consistent evaluations for participating services; increased availability of educational resources to a regional audience.

Service Area:

The tri-state area of Michigan, Kansas, and Indiana

Services Provided:

Technical assistance (10/2006), information dissemination (1/2007), evaluation design (1/2007), and educational programming and resource sharing (10/2007)

Equipment:

N/A

Transmission:

N/A

Telehospice in Mid-Michigan

Michigan State University

Michigan State University
Communication Arts & Sciences, Deans Office
409 Communication Arts & Sciences
East Lansing, MI 48824-1212

Pamela Whitten, PhD
Ph: 517-432-1331
Alt. Ph: 517-355-8372
Fax: 517-355-1292
Email: 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/Project Accomplishments:

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:

Twenty-two 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.

The Application of Tele-Allied Health in Rural Counties in Southwest Lower Michigan

Western Michigan University

Western Michigan University
1903 West Michigan Ave.
Kalamazoo, MI 49008
www.wmich.edu/hhs

James A. Leja, PhD
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Email: 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/Project Accomplishments:

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 9940Video Phone (2), AMD 2500 General Exam Camera NTSC, AMD ENT scope.

Transmission:

IP, VTC Bridge, Internet, T1

Ambulatory Electronic Medical Record System – Twin Cities Metropolitan Care Systems

Fairview Health Services

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

William Showalter
Ph: 612-672-6900
Fax: 612-672-5955
E-mail: wshowal1@fairview.org

Network Partners:

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

Project Purpose:

Acquire and install an ambulatory electronic medical record application in Fairview's hospitals and clinics. Redesign 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/Project Accomplishments:

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

Service Area:

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

Services Provided:

The ambulatory electronic medical record system supports 15 primary care clinics delivering over 500,000 patient visits each year and four 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.

Tri-County Hospital

Tri-County Hospital
415 North Jefferson Street
Wadena, MN 56482
http://www.tricountyhospital.org

Maureen Ideker, RN, MBA
Cindy Uselman
Ph: 218-631-7509
Fax: 218-631-7503
Email: cindy.uselman@tricountyhospital.org

Network Partners:

University of Minnesota, Minneapolis, 1994 with previous Fairview University of MN Telemedicine Network consisting of 17 active sites; North Region Health Alliance representing a consortium of 22 rural hospitals across northwest MN and northeast ND; and SISU Medical Systems, Duluth, a consortium of 14 medical centers in northern MN.

Project Purpose:

Implement a Minnesota Telehealth Network across northern MN and eastern ND. Address the restricted access to medical specialty and healthcare professionals in rural areas. Special needs include geriatric care, chronic disease management, mental health and rehab services for underserved populations and health professional education.

Outcomes Expected/Project Accomplishments:

Increase access to medical specialists and health professionals by increasing the number of network members who provide telehealth services, 7 new rural sites each year. Quantify patient usage of telehealth services using data collection of OAT GPRA performance measures. Provide medical and health professional education.

Service Area:

MN: Wadena, Todd, Otter Tail, Polk, Kittson, Pennington, Clearwater, Roseau, Lake of the Woods, Norman, Marshall, Carlton, St. Louis, Crow, Wing, Itasca, Aitkin, Cook, Kanabec, Becker, McLeod, Dakota, Cass, Pine, Goodhue, Koochiching, Mille Lacs, Traverse. ND: Grand Forks, Traill, Cavalier, Walsh, Pembina, Ramsey, Griggs, Nelson.

Services Provided:

Dermatology, orthopedics, neurology, gastroenterology, asthma/allergy, behavioral health, cardiology, child/adult psychiatry, endocrinology, gerontology, home care/hospice, pharmacy, pulmonology, wound care, rehab services, NICU visits, oncology, dietitian, and chronic disease management such as diabetes/CHF/pain.

Equipment:

Rural sites: Document Video Visualizer, Digital Camera, Polycom Videoconferencing System, Exam Camera.
Providers: Polycom/Tandberg Videoconferencing System, Stethoscope.

Transmission:

Interoperable transmission standards will be used made up of IP videoconference capable connections—i.e., point to point enabled layer 3, quality of service managed connections.

MINNESOTA, Hennepin County RTGP FY 94-96, RTGP FY 00-02, TNGP FY 03-05

Fairview-University of Minnesota Telemedicine Network

University of Minnesota

University of Minnesota Medical School
MMC 293 Mayo, 420 Delaware Street SE
Minneapolis, MN 55455
http://fairview.org/telemedicine

Stuart M. Speedie, PhD
Ph: (612) 624-4657
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Email: speed002@umn.edu

Network Partners:

Fairview Health Svcs, (Minneapolis, MN), UMN Physicians, (Minneapolis, MN), Prairie at St. Johns (Fargo, ND), UMN Duluth Medical School (Duluth, MN), Sports and Ortho Specialists (Edina, MN). Originating Sites: Wadena, Aitkin, Crosby, Red Wing, Hibbing, Cook, Moose Lake, Big Fork, Onamia, Ne-Ia-Shing Clinic, Mora, Littlefork, Cass Lake, International Falls, Wheaton. Patients: 810. Encounters: 866.

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 and homes.

Outcomes Expected/Project Accomplishments:

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 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; more home care visits and discharges to lower levels of care.

Service Area:

Portions of 12 Minnesota counties. Covers 11 HPSAs and pHPSAs; 13 full and partial mental health HPSAs; 10 MUAs and pMUAs; one partial MUP. Counties served: Aitkin, Carlton, Cass, Crow Wing, Goodhue, Itasca, Mille Lacs, Otter Tail, Pine, St. Louis, Todd, and Wadena.

Services Provided:

Current specialties: Dermatology, orthopedic surgery, cardiology, pulmonology, neurology, gastroenterology, asthma/allergy, adult psychiatry, child psychiatry, and endocrinology. New services: adult mental health, chronic illness, pain management, and NICU visits.

Equipment:

Currently using 6 Polycom FXs and 6 Polycom Viewstations videoconferencing units, 6 handheld exam cameras, 6 digital cameras, 4 digital stethoscopes, 1 otoscope, and 5 document cameras. Planned installations: 5 Polycom Viewstation videoconferencing units, 4 digital cameras, 7 video phones.

Transmission:

One network member utilizes an ISDN connection. The remainder network members are using secure IP connections. Home telehealth is using h.324 over POTS lines.

Citizen's Memorial Hospital District

Citizens Memorial Hospital District (CMH)
1500 N. Oakland
Bolivar, MO 65613-3099
http://www.citizensmemorial.com

Valerie Noblitt RN, BC
Gary Fulbright, CFO
Ph: 417-328-6402
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Network Partners:

CMH, CMH Foundation, and Bolivar Family Health Care. The Project Infocare Network was formed in December 2002. At present, the network holds an Electronic Medical Record (EMR) for 80,000 patients. The project started on 11/02/06. It will serve an estimated 170 patients in the first year (when home units are phased in each month) through an estimated 15,300 encounters.

Project Purpose:

Project Infocare will integrate in-home telemanagement into its existing EMR network, evaluate whether telemanagement in an EMR environment will improve quality of care and outcomes, and evaluate whether active monitoring of patients by physicians using telemanagement improves quality of care and outcomes more than nurse-only monitoring.

Outcomes Expected/Project Accomplishments:

Improved Care—Outcome and Assessment Information Set (OASIS) by CMS (Medicare); improved patient compliance—data from home health units; improved access—speed of response to patient changes; improved clinical outcomes—OASIS and CMS; cost-effective service delivery—difference between average cost of episode before and after telemanagement; changes in blood glucose levels in diabetic patients.

Service Area:

The only site is Home Healthcare (HH) in CMH serving Polk, Dallas, Dade, Cedar, and Hickory Counties. HH covers a number of secondary sites.

Services Provided:

Daily monitoring of vital patient information along with daily education and medication management; adding information to the patient's EMR; increased contact between patient and nurses, physicians, and necessary health care professionals.

Equipment:

Telemanagement will occur via 40 Well-at-Home units, phased in over eight months, for a single home use of 50 days, allowing each unit to be employed six times a year.

Transmission:

Patients will convey daily data via regular phone lines. Data will be placed on EMR, which will become Available via the Wide Area Network. Physicians can also use the Internet to reach the EMR via Citrix.

MONTANA, Cascade County TNGP FY 03-05

NMHA/REACH Telehealth Network Development Project

Benefis Healthcare Foundation

NMHA
1101 26th St. South
Great Falls, MT 59405

Jack W. King
Ph: 406-455-4285
Fax: 406-455-4141
Email: 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/Project Accomplishments:

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:

Benefis Healthcare, Center for Mental Health, Sletten Cancer Institute (Cascade); Fort Belknap Service Unit, Sweet Medical Center, Sweet Memorial Nursing Home (Blaine); Big Sandy Medical Center, Missouri River Medical Center (Chouteau); Liberty County Hospital (Chester); Teton Medical Center (Teton); Pondera Medical Center (Pondera); Northern Rockies Medical Center, Blackfeet Community Hospital (Glacier); Chippewa Cree Health Center, Northern Montana Healthcare (Hill); Phillips County Hospital (Phillips); Mountainview Medical Center (Meagher), Marias Medical Center (Toole).

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 384kbps.

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

Billings Clinic Foundation

Billings Clinic Center for Clinical Translational Research
PO Box 37000
Billings, MT 59107
http://www.billingsclinic.org

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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.) to determine effect of computerized inpatient pharmacy system on these errors; c.) use of inpatient nurse case managers to reconcile medications during acute hospital stay. 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/Project Accomplishments:

1.) Medication Errors: a.) demonstrate a significant number of medication errors and discrepancies during care transition, i.e. hospital discharge; b.) inconsistencies in medications patients take at home compared to discharge medications; c.) implementation of CIS will 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 384kbps for videoconferencing, PRI ISDN for off-network videoconferencing, DSL for desktop videoconferencing.

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

Deaconess Billings Clinic Foundation

Billings Clinic
PO Box 37000
Billings, MT 59107-7000
www.billingsclinic.org

Fred E. Gunville, MD
Beth Bales
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Email: bbales@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 by focusing on 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/Project Accomplishments:

Improve the percentage of DM patients who receive HbA1c, cholesterol, nephropathy, foot, 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.

Bringing Healthcare Home

Saint Patrick Hospital & Health Foundation

St Patrick Hospital & Health Foundation
PO Box 4587
500 W. Broadway
Missoula, MT 59806
www.partnersinhomecare.org

PI - Joel Lankford, C.P.A.
Primary Contact Dianne Hansen, R.N.
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Email: hansend@partnersinhomecare.org

Network Partners:

The Foundation has teamed with Partners in Homecare effective 10/1/2006 to serve an estimated average census of 80 patients for an estimated 29,000 encounters in a year.

Project Purpose:

1. To expand the existing HomMed system to rural sites and populations;
2. Create an interoperable data collection system for home health patients in the network;
3. To create a telemonitoring network model that can be replicated in other sites;
4. To prove the cost effectiveness of home monitoring systems versus standard models of care.

Outcomes Expected/Project Accomplishments:

- Reduce incidence of acute care admissions of CHF patients;
- Improve access to technology in rural regions;
- Decreased number of home visits and Cost of Care; and
- Improvement of patient's sense of well being and control.

Service Area:

Missoula; Mineral; Granite Counties in Montana.

Services Provided:

Bringing Healthcare Home was established in October 2006 and provides the service area with 30 HomMed remote telemedicine monitoring devices and an integrated home health electronic medical record.

Equipment:

30 Honeywell HomMed telemonitoring devices to be increased to 80 as the grant progresses.

Transmission:

Plain old telephone service to patient homes.

MONTANA, Missoula County — CMP FY 05

Montana Cardiology Telemedicine Network

Saint Patrick Hospital & Health Foundation

St Patrick Hospital & Health Sciences Center
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www.saintpatrick.org

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Network Partners:

Northern Rockies Healthcare Network – est. 1995. Marcus Daly Memorial Hospital; St Joseph Hospital; Clark Fork Valley Hospital; Mineral County Hospital; Community Hospital Anaconda; Granite County Medical Center. Others in network: Teton Medical Center; Barrett Hospital; Marias Medical Center.

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;
3. To conduct a Patient Tele-consultation Demonstration as "proof of concept"; and
4. To thoroughly evaluate, report and disseminate results of the MCTN project.

Outcomes Expected/Project Accomplishments:

- Improved Quality and Efficiency of Patient Care (mortality, Guideline Care);
- Successful Patient Teleconsultation Demonstration;
- Decreased Cost of Care; and
- Provider/End-User/Beneficiary Satisfaction will also be measured.

Service Area:

Missoula; Ravalli; Lake; Mineral; Deer Lodge; Beaverhead; Granite; Sanders; Teton; Toole Counties in Montana.

Services Provided:

The MCTN was established in June 2005 and provides the service area with an ECG and Echocardiography network and cardiac electronic medical record. Toole County is also served with a cardiac telemedicine exam service. Mineral & Sanders County are to receive similar telemedicine exam services.

Equipment:

Heart Lab ECG data repository and network tool. 40+ ECG's 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.

Mansfield Health Education Center (MHEC)

St. Vincent Healthcare Foundation

St. Vincent Healthcare Foundation
1106 North 30th Street
Billings, MT 59101
www.svfoundation.org

Doris T. Barta, MHA
Ph: 406-237-3602
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Email: 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/Project Accomplishments:

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 is the 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, @ 64 Kpbs over leased T1 lines, microwave wireless, cellular and IP based transmission services.

MONTANA, Yellowstone County TRC FY 06-09

Northwest Regional Telehealth Resource Center (NRTRC)

St. Vincent Healthcare Foundation

St. Vincent Healthcare Foundation
175 North 27th, Suite 803
Billings, MT 59101
www.svfoundation.org

Doris T. Barta, MHA
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Email: doris.barta@svh-mt.org

Network Partners:

The Northwest Regional Telehealth Resource Center (NRTRC) is a region-wide (eight state) consortium of healthcare organizations and educational institutes. St. Vincent Healthcare Foundation, located in Billings, Montana, is the recipient and fiscal agent for the project and INHS in Spokane, Washington is the operations center. NRTRC promoted a "best practices" approach to telehealth service delivery in the Northwest.

Project Purpose:

To ensure that Federal and state investments in telehealth programs are effectively used through collaborative growth and opportunity development; to promote effective delivery of telehealth services through sharing of information and leveraging of developed resources across multiple telehealth systems; and to assist in the development of new telehealth programs through expertise sharing and organized technical assistance in a peer based, non-competitive, objective environment.

Outcomes Expected/Project Accomplishments:

The NRTRC will help provide improved access to healthcare by enhancing the clinical care programs available to rural communities via telehealth. These programs include access to specialists for clinical consults, ongoing care management programs to support individuals with chronic conditions, and enhanced emergency care through programs that connect emergency room specialists with providers in rural hospitals.

Service Area:

The Northwest Regional Telehealth Resource Center (NRTRC) represents 8 northwest and western states (Alaska, Hawaii, Idaho, Oregon, Montana, Utah, Washington, and Wyoming, as well as the six island groups in the U.S. Affiliated Pacific Islands). NRTRC assists healthcare organizations, networks, and providers implementing cost-effective telehealth programs serving rural and medically underserved populations.

Services Provided:

The NRTRC will collect and disseminate shared resources as well as coordinate and manage projects, activities, communications, meetings, marketing, and advocacy. NRTRC will develop cross-state expertise groups led by regional content experts and focused on specific issues including: Regulatory Issues (licensing, credentialing); Technical Issues and Interoperability; Clinical Delivery Models; Content Development and Distance Education; Evaluation; Business Models; Marketing; and Disaster Planning.

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, @64 Kbps over leased T1 lines, microwave wireless, cellular, and IP based transmission services. Segmentation of circuits for voice/video or data provided for more cost effective utilization.

NEBRASKA, Buffalo County RTGP 94-96, 97-99, 00-02, CMP FY 04, 05

Mid-Nebraska Telemedicine Network (MNTN)

Good Samaritan Hospital Foundation

Good Samaritan Hospital Foundation
PO Box 1810
Kearney, NE 68848-1810
www.gshs.org

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Lesley Bollwitt, MPA
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Email: lesliebollwitt@catholichealth.net

Network Partners:

This network was formed in 1995 and grown to 14 Nebraska project partners and 4 Kansas partners, adding 3 additional teletrauma/telepsych partners in the next year. Patients served between 1 OCT 05-30 SEP 06: 668; estimated number of patients to be served between 1 OCT 06-30 SEP 07: 675; patient encounters between 1 OCT 05-30 SEP 06: 1449; estimated number of patient encounters between 1 OCT 06-30 SEP 07: 1450.

Project Purpose/Project Accomplishments:

Expand Teletrauma from 8 to 16 sites, improve outcomes for inpatient adolescents by providing weekly family therapy sessions, provide pediatric behavior health clinic consults, provide access for mental health counseling for the deaf, provide family risk assessment for hereditary cancer to high risk patients, expand the EMS training certification, provide education, training and team meetings for child abuse teams across the state, provide Spanish interpretation.

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:

Good Samaritan Hospital, Richard Young Hospital: Buffalo & all 27 counties: Jennie M. Melham Memorial Ctr.: Custer, Logan, Thomas, Loup; Callaway District Hospital: Custer, Logan; Tri-Valley Health Systems: Furnas, Frontier; Cozad Community Hospital: Dawson, Gosper; Gothenburg Memorial Hospital: Dawson, Lincoln; Valley County Hospital: Valley, Garfield; Dundy County Hospital: Dundy, Hitchcock, Chase; Rock County Hospital: Rock, Holt; Franklin County Hospital: Franklin; Chase County Hospital: Chase, Dundy, Hayes, Perkins; Brown County Hospital: Brown, Blaine; Webster County Hospital: Webster, Brown; St. Anthony's Hospital: Holt; Kearney County Health Services: Kearney; KS: Norton County Hospital: Norton, Decatur, Phillips, Graham; Phillips County Hospital: Phillips, Norton, Smith, Rooks; Jewell County Hospital: Jewell; Smith County Memorial Hospital: Smith. Add: Tri-County Hospital: Gosper, Dawson; Phelps Memorial: Phelps, Harlan; McCook Community: Red Willow.

Services Provided:

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, Spanish interpreting.

Equipment:

Remote sites: 30 Polycom videoconferencing systems; 6 Starviews within the system. At the GSH sites, 17 Polycoms, Video Server Bridge, Accord Network Bridge, AMD Otoscopes, AMD Stethoscopes. Vendors used: Wire One & SKC.

Transmission:

T1 lines to all MNTN network hospitals and ISDN capabilities. Internet access provided via UNMC.

NEVADA, Washoe County — CMP FY 04

Digital Imaging System for Rural Nevada (DISRN)

Nevada Rural Hospital Partners Foundation

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

Robin Keith RN, BSN
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Network Partners:

Humboldt General Hospital, Banner Churchill Community Hospital, Carson Valley Medical Center, Nye Regional Medical Center, South Lyon Medical Center, Boulder City Hospital. Patients served = N/A. Patient encounters = N/A. WAN used for transmission of images formed in 2001-2002. Development of PACS capability and centralized archive occurred in the grant period—August.

Project Purpose:

The program enhances access by rural physicians to distant diagnostic support and is a dynamic example of how small, autonomous hospitals can share technology. The program enables rural hospitals to capture digital images, implement Picture Archive Computer Systems, integrate patient information with those images, and transmit them over an existing wide area network to a new shared, centralized image archive.

Outcomes Expected/Project Accomplishments:

The program originally included PACS in four hospitals. Due to increased participation and funding from network participants, six hospitals now have PACS capability. Key outcomes: 1) Reduction of cost of x-ray film by 30 percent; 2) film scan time reduced by 60 percent; 3) Images successfully transferred 99.75 percent of the time; 4) Reduction in network down time by 33 percent; and 5) Staff time spent retrieving films reduced by 30 percent.

Service Area:

Sites include Humboldt General Hospital, Banner Churchill Community Hospital, Carson Valley Medical Center, Nye Regional Medical Center, South Lyon Medical Center, Boulder City Hospital. Counties affected by PACS and/or access to archive: Clark, White Pine, Lander, Humboldt, Pershing, Douglas, Nye, Mineral, Churchill, Lincoln, Lyon.

Services Provided:

Services include digital image capture, transmission, archiving and retrieval of diagnostic images across a wide area network to a centralized, shared data archive.

Equipment:

Konica CR Digital x-ray, Compressus PACS hardware, Equallogic SAN 1, 2, 3, and 4 Dell SAN server, GE CR Digital x-ray, PACS archive server.

Transmission:

Multi-application full T1 transmission.

Biomedical Imaging Laboratory

University of Nevada, Reno

University of Nevada School of Medicine
Office of Medical Research/338
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Reno, NV 89557-0161
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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) that will support biomedical research within the School and the community of scientists at the University who have a need for high-end confocal microscopy.

Outcomes Expected/Project Accomplishments:

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 that 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.

Implementation of Oncology Patient Management System

Hackensack University Medical Center

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

Sandra Rohrbacher Lutwick
Ph: 201-996-3526
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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/Project Accomplishments:

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 HL7 interfaces.

Medical Technology Center for Infants and Children

Saint Peter's University Hospital

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Mujahid Anwar
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Email: manwar@saintpetersuh.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: Blue Light Emitting Diode Phototherapy, and the Heart Rate Variability Analysis.

Outcomes Expected/Project Accomplishments:

Outcomes Expected: 1) A Blue Light Emitting Diode Phototherapy system will be developed for the treatment of Neonatal Jaundice. 2) Heart Rate Variability Analysis will be studied as a predictor of neonatal sepsis, and as a tool to help predict neonatal outcomes. Antibiotic exposure and development of resistant organisms is a major problem in all intensive care units. For neonatal intensive care units an additional problem is the non-specific nature of signs and symptoms of infection and high morbidity and mortality for established infection. Therefore a lot of babies get worked up for nosocomial infection and get treated with antibiotics while waiting for culture results. Our aim is to incorporate Heart Rate Variability Analysis into the clinical decision making process of initiating antibiotics for suspected sepsis before culture results are available. We expect that antibiotic use will decrease with this strategy, thereby, reducing the development of resistant organisms.

Service Area:

Not Applicable

Services Provided:

Not Applicable

Equipment:

A Blue Light Emitting Diode Phototherapy System
Hero Heart Rate Variability Analysis System

Transmission:

Not Applicable

NEW MEXICO, Santa Fe County CMP FY 05

New Mexico Tele-Behavioral Health Improvement Project

New Mexico Human Services Department

New Mexico Human Services Department
HSD/BH/South Park
PO Box 2348
Santa Fe, NM 87504-2348
www.bhc.state.nm.us

Barbara E. Footer, MS, RD
Ph: 505-827-6237
Fax: 505-476-7183
Email: 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.
Expand training in the BH workforce through specialized distance education.
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/Project Accomplishments:

Telehealth equipment has been installed and connectivity established for a number of School-Based Health Centers (SBHCs). Local BH planning to address local disparities in access, quality, and outcomes of the behavioral health delivery system has been improved. Integration and efficiency of inter-agency BH data and information has begun.

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:

Polycam Video Systems, Sony TV monitors, and Cisco Routers (T1 w/VPM-Firewall).
Equipment and technology assistance has been provided to Local Collaboratives.

Transmission:

T1/DS1 lines; Checs Backbone 1MB.

NEW MEXICO, Bernallilo County RTGP FY 97-99, TNGP FY 03-05

Rural Health Telemedicine Program

University of New Mexico Health Sciences Center

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

Cate McClain, MD
Sandy Heimerl, MS, PT
Ph: 505-272-0096
Fax : 505-272-0386
Email : sheimerl@salud.unm.edu

Network Partners:

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

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/Project Accomplishments:

1) Provided developmental specialty care to young children, their families, and providers;
2) Expanded and improved the quality of information and training to providers and families; and
3) Linked providers statewide to share information/resources. Tools: Pre-Post Satisfaction Survey (Likert Scales), Cost comparison of Telehealth vs. traditional service provision; document travel cost savings.

Service Area:

Thirteen counties in rural New Mexico. Ten of the counties are full HPSAs, 11 are MUA, and 11 are mental health HPSA.

Services Provided:

Developmental clinical services (SLP, OT, PT, Psych, Peds, Nutrition, Special Education) 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 videoconferencing units, 5 Leadtek TeleEye and 8 StarView videophones; Desk top systems—2 laptops, 4 sets PVX software, microphones and cameras.

Transmission:

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

Introducing Home Telehealth in New York's 20th Congressional District

Community Health Care Services Foundation, Inc

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

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

Network Partners:

Major sites: Essex County Public Health Department, North Country Home Services, Inc., and The Visiting Nurse Association of Albany, Saratoga, Rensselaer, Inc. Operational since September 2005. Number of patients served between 1 OCT 05-30 SEP 06: 59.

Project Purpose:

Demonstrate whether the use of home telehealth: leads to better utilization of scarce home care personnel; has an impact on job satisfaction; improves access to care for patients; 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.

Outcomes Expected/Project Accomplishments:

(1) Patient satisfaction pre- and post-Likert survey instrument. (2) Staff satisfaction -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-utilization tracking tool. Survey results indicate positive training experiences and positive perceptions of telehealth among patients and staff.

Service Area:

Essex County Public Health Department: Essex County; North Country Home Services, Inc.: Essex County; and The Visiting Nurse Association of Albany, Saratoga, Rensselaer, Inc.: portions of Rensselaer County and portions of Saratoga County.

Services Provided:

Community Health Care Services Foundation, Inc. (CHC) is partnering with three home care agencies to provide remote patient monitoring and education. Home telehealth units are placed in the homes of 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 condition.

Equipment:

(14) 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.

Transmission:

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

NEW YORK, Genesee County CMP FY 05

Upstate New York Telemedicine Study

Genesee Gateway Local Development Corporation, Inc.

Genesee Gateway Local Development Corporation, Inc.
56 Harvester Ave., STE 301
Batavia, NY 14020-2201
www.gcedc.com

Kenneth L. Oakley PhD, FACHE
Sandeep Krishnan MBA
Ph: 585-344-1022
Fax: 585-345-7452
Email: koakley@r-ahec.org

Network Partners:

WNY R-AHEC, Millard Fillmore-Gates Hospital, Medina Memorial Hospital, United Memorial Hospital, Wyoming County Hospital.

Project Purpose:

To conduct a pilot study to determine the need and effectiveness of telemedicine in rural hospitals, and to implement the project providing three rural WNY spoke hospitals, Medina Memorial Hospital, United Memorial Hospital, Wyoming County Hospital, the telemedicine systems to connect to a TeleStroke hub hospital, Millard Fillmore-Gates Hospital, as a part of the NY state TeleStroke Demonstration Project to treat stroke victims locally in a timely and effective manner.

Outcomes Expected/Project Accomplishments:

1) Improved outcomes in stroke victims served by the rural hospitals, based on hospital data.
2) Increased patient and provider satisfaction from surveys.
3) Increased management of stroke patient care (and thereby, increased revenues) at the rural hospitals.
4) Increase in the skill-sets of the rural clinical staff to treat and manage the stroke victims.

Service Area:

1) Medina Memorial Hospital, Medina, NY—Orleans County
2) United Memorial Medical Center, Batavia, NY—Genessee County
3) Wyoming County Hospital, Warsaw, NY—Wyoming County

Services Provided:

Neurological and radiological services for the treatment and management of stroke victims at the rural hospital, using a telemedicine link to a NY State-designated hub for stroke services.
Implementation date: December, 2006.

Equipment:

ReachMD TeleStroke Cart, equipped with a medical grade pan-tilt-zoom camera, and a telestroke application on a laptop computer with NIH Stroke Scale over a wireless network.

Transmission:

Secure IP connection with minimum 768 kbps upload and minimum 256 kbps download speeds, over a secure wireless router and access point compatible with the 802.11a/b/g standards.

Foster Care Tracker and Assessment Tool

Integrated Community Alternatives Network, Inc.

Integrated Community Alternatives Network, Inc.
1500 Genesee Street
Utica, NY 13502
www.kidsoneida.org

J. Michael Daly, LCSW
Ph: 315-792-9039, Ext. #211
Fax: 315-792-9578
Email: 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 to assist OCDSS in returning children from foster care placements. This software product allows for elimination of paper records, hearing of information between Kids Oneida and Oneida County and closer tracking and monitoring of client and family needs.

Outcomes Expected/Project Accomplishments:

Provide increased assessment capabilities by tracking key demographic data, diagnosis information, placement histories, educational histories, and a child and family readiness assessment. This information is a shared data base for two agencies.

Service Area:

The geographic area for the program is Oneida County. Approximately 80 percent of the clients tracked in this system are currently living in foster care situations in Oneida County. Many children living outside the service area have been able to return to the County for services due to closer coordination of the foster care population.

Services Provided:

ICAN is a not for profit organization that serves children at high-risk for foster care placement. Children served exhibit a high degree of emotional, psychiatric, and behavioral disorders for children and ICAN provides 40 services addressing mental health, behavioral health, and family support services.

Equipment:

Integrated Community Alternatives Network, Inc. is currently using the existing network. ICAN has purchased a file server to store data and the software application for this project.

Transmission:

Integrated Community Alternatives Network is currently using a Fractional T1 line for transmission.

An Electronic Clinical Trial System to Reduce Drug Development Costs

Long Island Association for Millenium Center for Convergent Technologies

Millennium Center for Convergent Technologies
300 Broadhollow Road
Melville, NY 11747
www.longislandassociation.org

Robert Kelly, PhD
Michael Deering
Ph: 631-493-3002
Fax: 631-499-2194
Email: mdeering@longislandassociation.org

Network Partners:

Stony Brook University, Stony Brook University Hospital, LifeTree Technology.
This is not a clinical program.

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/Project Accomplishments:

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 percent time savings and over 99 percent 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 high-speed broadband (campus is served by NYSERNET, bulk-buying aggregator for New York's research and education community)

Montefiore Medical Center

Comprehensive Health Care Center (FQHC)
Montefiore Medical Center
111 East 210th Street
Bronx, NY 10467
www.montefiore.org

Jack Wolf, VP, CIO
Rocco Mitaratonda, CFO
Ph: 914-457-6311
Fax: 914-457-6064
Email: jwolf@montefiore.org

Network Partners:

Community Health Centers in The Bronx, CFCC (FQHC), CHCC (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/Project Accomplishments:

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 are 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 Presbyterian Hospital

New York - Presbyterian Hospital
161 Fort Washington Avenue, HIP-14
New York, NY 10032
http://www.nyp.org

Susan Stuard, MPP
Ph: 212-342-1547
Fax: 212-927-8447
Email: sss9007@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/Project Accomplishments:

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, 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.

Telehealth New York

Research Foundation, State University of New York (SUNY) at Buffalo

State University of New York (SUNY) at Buffalo
c/o David Ellis, MD
ECMC, Dept. Emergency Medicine
462 Grider Street
Buffalo, NY 14215
http://www.telehealth.buffalo.edu

David Ellis, MD, FACEP
Ph: 716-898-5347
Fax: 716-898-4432
Email: dellis@ecmc.edu

Network Partners:

Erie County Medical Center, Comprehensive Psychiatric Evaluation Program; The TLC Healthcare Network, 100 Memorial Dr., Gowanda, NY 14070 (Chautauqua & Cattaragus 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, state-wide correctional emergency telemedicine network (Y2003, >3000 patients, with 39 percent 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 (tele-trauma) through rural EMS telehealth coordination and a virtual-onsite trauma care partnership using wireless roll-abouts IP-based videoconferencing units. This will provide a flexible, scalable model for rural access and 24x7 mental health, serving children & adolescents, as well as adults.

Outcomes Expected/Project Accomplishments:

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, Ortho-Hand, Infectious Disease / HIV, Gastroenterology.
Planned Services 2007: Maxillo-Facial, Dermatology, Pediatric Emergency / Trauma, Pediatric Cardiology, Pediatric Specialties, Dental.

Equipment:

Wireless IP roll-about videoconferencing units, Polycom codecs, Dual-screen consultation systems, networking hubs, Cisco routers, PictureTel/Polycom Videoconferencing units, document cameras.

Transmission:

Full T1 connections with IP transmission network protocols, ISDN.

Demonstration of Implementation of Electronic Medical Record in Skilled Nursing Facility

The Rosalind and Joseph Gurwin Jewish Geriatric Center of Long Island

The Rosalind and Joseph Gurwin
Jewish Geriatric Center of Long Island
Department of Medicine
68 Hauppauge Road
Commack, NY 11725
www.gurwin.org

Suzanne Fields, M.D.
Ph: 631-715-2503
Fax: 631-715-2902
Email: sfields@gurwin.org

Network Partners:

St. Catherine of Siena Medical Center (Smithtown, NY), Huntington Hospital (Huntington, NY), University Hospital at SUNY Stony Brook (Stony Brook, NY). Network established in December 2005. Actual number of patients served 1 OCT 05-30 SEP 06: 0 since system installation will not begin until November 2006. Patients to be served 1 OCT 06-30 SEP 07: 860.

Project Purpose:

Develop 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.

Outcomes Expected/Project Accomplishments:

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 three acute care hospitals.

Services Provided:

Provides long term care services, assisted living, home care, ventilator dependent care, subacute care, adult day care, hospice services. Dialysis services will begin in early 2007.

Equipment:

Optimus EMR software, Hewlett Packard Laptops and computers, Palm Pilots, Pocket PCs, printers.

Transmission:

Internet, T1 lines.

NORTH CAROLINA, Durham County TNGP FY 03-05

Patient Inclusion in a Community-based Telehealth Network

Duke University Medical Center

Division of Clinical Informatics, Duke University
DUMC 2914
Durham, NC 27710
http://cfm.mc.duke.edu

David Lobach, MD, PhD
Jan M. Willis MS, MBA
Ph: 919-684-6421
Fax: 919-684-8675
Email: clinicalinformatics@mc.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 Pediatrics, Regional Pediatrics, Central Family Medicine, Durham Regional Hospital, Durham County (Health Department, Dept. of Social Services), Durham Community Health Network. Network in operation since July, 1998; Number of patients served: 17,669.

Project Purpose:

To support proactive population health management through care managers and other community workers and to facilitate communication among healthcare providers and patients. Health risk information and barriers to accessing care are collected directly from patients through free-standing kiosks using an adaptive computer interface. Healthcare services are customized to each patient and include health education, health risk reduction programs, and assistance accessing appropriate clinical services and complying with medication regimes.

Outcomes Expected/Project Accomplishments:

Decreased emergency department utilization and admissions for ambulatory care-sensitive conditions; Improved HEDIS indicators for cancer screening, immunizations, diabetes care, asthma care, Chlamydia screening , well-child visits, and post-partum care; Increased condition-specific health literacy, self-efficacy and patient satisfaction levels.

Service Area:

Durham County, North Carolina. One MUA (30 census tracks) and one HPSA.

Services Provided:

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; wireless broadband for mobile applications.

NORTH CAROLINA, Buncombe County TNGP FY 06-09

Patient Participation in a Rural Community-Based Telehealth Network

Duke University Medical Center

Division of Clinical Informatics, Duke University
DUMC 2914
Durham, NC 27710
http://cfm.mc.duke.edu/

David Lobach, MD, PhD
Jan M. Willis MS, MBA
Ph: 919-684-6421
Fax: 919-684-8675
Email: clinicalinformatics@duke.edu

Network Partners:

Major sites: Granville Medical Center, Maria Parham Medical Center, Person Memorial Hospital, 24 primary care practices, Vance-Granville District Health Department, Person County Health Department, Warren County Health Department, 4 Departments of Social Services; Number of patients served: 17,923.

Project Purpose:

To support proactive care management of medically underserved populations in four rural counties in the Northern Piedmont region of North Carolina. Medicaid claims data, billing data imported from community hospital, and clinical information collected directly from patients will be used for proactive population health management through a standards-based clinical decision support system. Healthcare services are customized to each patient and include health education, health risk reduction programs, and assistance accessing appropriate clinical services and complying with medication regimens.

Outcomes Expected/Project Accomplishments:

Decreased emergency department utilization and admissions for ambulatory care-sensitive conditions. Improved HEDIS indicators for cancer screening, immunizations, diabetes care, asthma care, Chlamydia screening, well-child visits and post-partum care.

Service Area:

Granville, Person, Vance and Warren counties. Four MUAs and four HPSAs.

Services Provided:

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. 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.

NORTH CAROLINA, Buncombe County and 16 Western NC Counties CMP 02

WNC Data Link Project

Education and Research Consortium of the Western Carolinas

Education and Research Consortium of the Western Carolinas
22 South Pack Square, Suite 500
Asheville, NC 28801
http://www.ercwc.org

Amy LeClare
Ph: 828-281-1954
Fax: 828-281-1988
Email: 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/Project Accomplishments:

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 CMP FY 02, 03, 04, 05

North Dakota Telepharmacy Project

North Dakota State University College of Pharmacy, Nursing, and Allied Sciences

NDSU College of Pharmacy, Nursing, and Allied Sciences
123 Sudro Hall
Fargo, ND 58105
http://telepharmacy.ndsu.nodak.edu

Charles D. Peterson, PharmD
Ph: 701-231-7609
Fax: 701-231-7606
Email: 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/Project Accomplishments:

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, fifty-seven 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.

OHIO, Cuyahoga County — CMP FY 02, 03, 04

NetWellness

Case Western Reserve University

Case Western Reserve University
10900 Euclid Avenue
Cleveland, Ohio 44106-4956
http://www.netwellness.org

Susan Wentz, MD, MS
Ph: 216-368-5493
Fax: 216-368-0263
Email: sww2@case.edu

Network Partners:

The Ohio State University, Columbus, Ohio and University of Cincinnati, Cincinnati, Ohio. NetWellness has been in operation since 1994. The number of web hits from September 1, 2005 through August 31, 2006 was 61,437,835 (average: 5,119,819/month), with a steady increase from 4.8 million for September, 2005 to 6.6 million in August, 2006.

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 health topics from faculty experts at the three universities. Over 450 academic medical and research professionals write articles on many of the health topics and through the site's Ask an Expert feature.

Outcomes Expected/Project Accomplishments:

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.

Service Area:

Nationwide.

Services Provided:

NetWellness provides health information via the web. This includes access to a portfolio of health resources such as an encyclopedia, directories, manuals, reviewed web links, and original content on health topics written by university 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.

Equipment:

Standard web and database servers.

Transmission:

Internet.

Tele-Health-Kids

Children's Hospital Medical Center of Akron

Children's Hospital Medical Center of Akron
1 Perkins Square
Akron, OH 44308
http://www.akronchildrens.org

Diane L. Langkamp, M.D., MPH
Ph: 330-543-8952
Fax: 330-543-6045
Email: dlangkamp@chmca.org

Network Partners:

Originating sites: Dale-Roy School, Ashland, OH; Ida Sue School, Wooster, OH. Physician sites: Children's Hospital Physician Associates—Ashland, OH; Children's Hospital Physician Associates—Wooster, OH; Pediatric Consultants, Ashland, OH; Cleveland Clinic, Wooster, OH. Akron Children's Hospital to evaluate network. Network to start February 2007.

Project Purpose:

Develop a telehealth network to improve care for acute illnesses among children with special health care needs (CSHCN) in Ashland and Wayne Counties, two rural counties in northeast Ohio. Telehealth services will be provided by the child's own primary care pediatrician while the child attends school.

Outcomes Expected/Project Accomplishments:

(1) Reduce the number of emergency department visits and reduce the number of inpatient hospital days for CSHCN. (2) Reduce school absences due to illness and reduce parent absences from work due to child illnesses. (3) Improve continuity of care with the child's primary care provider for care of acute illnesses.

Service Area:

Dale-Roy School, Children's Hospital Physician Associates—Ashland, and Pediatric Consultants will serve Ashland County. Ida Sue School, Children's Hospital Physician Associates—Wooster, and Cleveland Clinic—Wooster will serve Wooster County. Akron Children's Hospital provides services to both Ashland and Wooster Counties.

Services Provided:

Children's Hospital Physician Associates—Ashland, Children's Hospital Physician Associates—Wooster, Cleveland Clinic—Wooster, and Pediatric Consultants will provide pediatric primary care services.

Equipment:

School sites: Workstation with 17" display, video camera, Dr. Camscope otoscope, electronic stethoscope. Physician sites: Workstation with 17" display, video camera. Tel-e-atrics software.

Transmission:

Broadband LAN between schools and physician sites. Vendor used: Tel-e-atrics.

Cincinnati Children's Hospital Medical Center

Cincinnati Children's Hospital Medical Center
3333 Burnet Avenue
Cincinnati, OH 45229
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

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 learnings 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/Project Accomplishments:

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 learnings to transform care. The outcomes 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 Collaboration Network

Ohio Board of Regents

Ohio Board of Regents
30 E. Broad St., 36th Fl.
Columbus, OH 43016
http://www.regents.state.oh.us

E. Garrison Walters, Kristina D. Frost
David Barber
Ph: 614-752-9530
Fax: 614-466-5866
Email: 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, Ohio University, Walsh University, 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 sharing of information, including high-quality video conferencing.

Outcomes Expected/Project Accomplishments:

Experience with the improved ability to collaborate created by high-quality video conferencing. Shared access will be created to facilities for drug discovery research. An understanding of the relationship between telemedicine use and Medicaid costs. A multi-institutional continuing medical education program. Identification of telemedicine equipment for neonatology.

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; HD video conferencing equipment; neontalogy peripherals; gigabit switches.

Transmission:

Gigabit Ethernet.

OHIO, Franklin County CMP FY 04

Computational Approaches to Research on Cancer in Children and Others

Ohio State University Research Foundation (for the Ohio Supercomputer Center)

Ohio Supercomputer Center
1224 Kinnear Road
Columbus, OH, 43212
http://www.osc.edu

Eric A. Stahlberg
Ph: 614-292-2696
Fax: 614-292-7168
Email: eas@osc.edu

Network Partners:

Cincinnati Children's Hospital Medical Center
The Medical University of Ohio
Columbus Children's Research Institute

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-data 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:

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 Ohio Telepsychiatric Network

Southern Consortium for Children

Southern Consortium for Children
20 Circle Drive, Unit 37206
P.O. Box 956
Athens, Ohio 45701
http://www.scchildren.com

Steven C. Trout
Ph: 740-593-8293
Fax: 740-592-4170
Email: strout@frognet.net

Network Partners:

Ohio University 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 (two sites); Woodland Centers, Inc. (three sites), Hocking Valley Community Residential Center (one site), private child psychiatry practice (two sites). Formed in 1998.

Project Purpose:

To create a telepsychiatric and distance learning network by linking twelve new sites to an existing 4-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 Accomplishments:

Outcomes include: expanding existing videoconferencing network from four to sixteen sites, Internet access for all sites using one ISP, videoconferencing technology used for routine med/somatic visits, adult psychiatric caseload doubled by grant's end, reduce "no show" rates by 15 percent, greater access to distance learning. Satisfaction questionnaire and Ohio Scales will measure telepsychiatry outcomes.

Service Area:

Tri-County Mental Health and Counseling Services, Inc.: Athens/Hocking/Vinton/Washington Co.; Woodland Centers, Inc.: Gallia/Jackson/Meigs Co.; Shawnee Mental Health Center, Inc.: Adams/Lawrence/Scioto Co.; Washington County Community Mental Health Services: Washington Co.; Hocking Valley Community Residential Center: Fairfield/Pike Co. in addition to above counties.

Services Provided:

The major focus is telepsychiatry for children in year one, moving onto the adult population in years two and three. The second service priority is expanded distance learning capacity for regional behavioral health care providers. Construction of the network began in 1998; expanded in 2003.

Equipment:

At 15 sites: Polycom VSX 7000, Router - Cisco 1760, Switch - Cisco 2950, PC. At OU-COM (Athens): Main Router - Cisco 3745. At 3 sites: Polycom VSX 5000. At 3 sites: Polycom VSX 3000.

Transmission:

T1 lines to 14 sites; fiber optic transmission to one site; Time Warner business class cable connection to one site.

INTEGRIS TeleHealth

INTEGRIS Health, Inc.

INTEGRIS Health, Inc.
3366 NW Expressway, Suite 800
Oklahoma City, OK 73112-4458
www.integris-telehealth.com

Pamela G. Forducey, PhD, ABPP
Ph: 405-644-5343
Fax: 405-951-8851
Email: pam.forducey@integris-health.com

Network Partners:

INTEGRIS Health entities include: Southwest Medical Center's Stroke Center of Oklahoma, Baptist Medical Center, INTEGRIS Heart Hospital, Mental Health, Samaritan Home Health and Jim Thorpe Rehabilitation Hospital. Lindsey Municipal Hospital, Rural Public Schools of Stringtown, Boise City, Tyrone, Goodwell, Milburn, Keyes, and Felt. Evident Telehealth.

Project Purpose:

INTEGRIS TeleHealth will improve the health of the people and the communities we serve by expanding the community of medical and community-based practice through the use of telehealth. We will provide allied health teletherapy to rural school students and patients with disabilities. We will also facilitate emergent management of rural neurological and psychiatric patients as well as promoting home health telemonitoring for patients with chronic diseases.

Outcomes Expected/Project Accomplishments:

1. Increase access to quality health care services and disease management for rural residents with chronic diseases; 2. Establish a working relationship with rural EDs across western and central Oklahoma in order to increase awareness of stroke and promote evidence-based treatments;
3. Provide rural EDs assistance with telemobile assessment of psychiatric patients; and
4. Collect and disseminate clinical outcome data as well as related costs/cost savings.

Service Area:

The following counties are being served: Alfalfa, Atoka, Canadian, Cimarron, Comanche, Garfield, Garvin, Johnston, Kay, Major, Oklahoma, Texas, and Woods, with potential for other western and central Oklahoma counties that are medically underserved and have health care provider shortages.

Services Provided:

INTEGRIS Telehealth Network has been in operation since 1993 when a network between rural and metropolitan hospitals and clinics was built. We provide services in chronic disease management, wound care, mental health, neurology, home care, rehabilitation, speech pathology, physical therapy, continuing education for physicians, nurses, and allied health professionals.

Equipment:

INTEGRIS Telehealth Network has 10 Polycom or Tandberg Videoconferencing systems in the Oklahoma City metro area between 3 facilities and 8 videoconferencing systems at 8 rural facilities, approximately 140 POTS video phones in clinics and homes w/peripheral equipment, and 70 home monitoring systems for diabetes, wound care, stroke, COPD, and CHF.

Transmission:

Full ATM between INTEGRIS metro facilities and remote rural hospitals and clinics, POTS to homes, clinics, long term care facilities as well as Internet for home monitoring and medical staff forpatient education.

OSU Center for Rural Health

Oklahoma Center for Rural Health, Oklahoma State University
1111 W. 17th Street
Tulsa, Oklahoma, 74107
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

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/Project Accomplishments:

- 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.

Community Nurses Home Health and Hospice, Inc.

Community Nurses, Inc.
757 Johnsonburg Road, Suite 200
Saint Marys, Pennsylvania 15857
www.communitynurses.org

Brenda Porter, RN
Assistant Vice President of Business Devleopment
Ph: (814) 781-1415
Fax: (814) 781-6987
Email: 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/Project Accomplishments:

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 fewer hospital admissions.

Service Area:

The Community Nurses service Elk, Cameron, and McKean counties in North Central Pennsylvania. The total population is 87,000.

Services Provided:

Services provided include the monitoring of home health patients suffering from chronic diseases such as Congestive Heart Disease, Diabetes, Chronic Obstructive Pulmonary Disease, Coronary Artery Disease, and Wound Care via the video and non-video monitors.

Equipment:

The Community Nurses are presently using American TeleCare as their vendor of telehealth equipment.

Transmission:

The home telehealth program runs on an analog phone line.

Developing a Stroke Care Education Program for Rural Pennsylvania

Geisinger Clinic

Geisinger Clinic
100 N Academy Avenue
Danville, PA 17822-1334
http://www.geisinger.org

Linda Famiglio, MD
Mary Ann Blosky, MSRN, MHA
Ph: 570-214-9391
Fax: 570-214-9451
Email: MBLOSKY@geisinger.edu

Network Partners:

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/Project Accomplishments:

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 to address gaps, a partnership with each hospital using the distance education platform, which will assist in developing a model plan, and the creation of a blueprint for a stroke registry.

Service Area:

Care is provided to patients who reside in predominantly rural areas of Pennsylvania. Twenty-four 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.

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

Good Samaritan Hospital Regional Medical Center

Schuylkill Alliance for Health Care Access
1 South Second Street
Pottsville, Pennsylvania 17901
www.schuylkillhca.org

Judith A. Schweich, MBA
Ph: 570-628-5515
Fax: 570-622-3887
Email: jschweich@schuylkillhca.org

Network Partners:

There are no network partners affiliated with this program. All participants in the project are members of the Schuylkill Alliance.

Project Purpose:

To identify and address unmet health needs of the uninsured population of Schuylkill County, PA and to provide access to primary and preventative medical, pharmaceutical, dental, and behavioral services. Major goals and objectives of the project will impact the quality of life of the uninsured and the community at large by integrating the rural health safety net through an Information Technology infrastructure.

Outcomes expected/Project Accomplishments:

A target population of 3,000 to be identified and having access to public and private healthcare services by end of 4th Q; increased enrollment of uninsured residents into the program; increased efficiency, effectiveness, coordination quality of care to the enrolled population.
Full use of iReach program to enroll and track clients; information exchange with the 4 partner/providing hospitals by the end of 4th Q.

Service Area:

Schuylkill County, Pennsylvania.

Services Provided:

Linkages between uninsured clients in need of health care services and health care providers in Schuylkill County. Enrollment in public assistance programs for those who qualify. Affordable health care provided by the Alliance partners for those who do not qualify for public programs. Completion of the linkage process will be by the end of the 4th quarter of the grant.

Equipment:

Personal computers, server, back-up server and specific software developed for the project.

Transmission:

Services will be available through personal contact, telephone and Internet. Network is available to authorized providers to access client information. Information and ITT is HIPAA-compliant and backed-up for safety.

Home Nursing Agency & Visiting Nursing Association

Home Nursing Agency & Visiting Nurse Association
201 Chestnut Avenue
Altoona, PA 16603
www.homenursingagency.com

Janie Christner RN, BSN
Ph: 814-946-5411 ext. 4024
Fax: 814-941-2482
Email: jchristner@homenursingagency.com

Network Partners:

Altoona Regional Health System—operational since 2003. JC Blair Memorial Hospital, Tyrone Hospital, UPMC Bedford Hospital—early 2007. Blair Medical/Blair Orthopedic—early 2007. Tyrone Hospital—mid 2007. October 2006-September 2007—total projected patients to be served 450; projected encounters 18,000.

Project Purpose:

Develop telehealth services in three rural counties in Pennsylvania, targeting the Medicare population. Provide patient education focusing on disease management of high volume diagnoses of CHF, DM and respiratory. Reduce acute care hospitalization rate and use of emergent care for patients utilizing telehealth. Improve efficiencies of nursing staff.

Outcomes expected/Project Accomplishments:

Reduce hospitalization rates and emergency room visits, improve medication management through comparison of OASIS data collected at initiation of service and end of episode. Increase ratio of patients served per nurse. Develop integration of telehealth data into electronic medical record. Improve continuity of care across multiple health care settings.

Service Area:

Home Nursing Agency has been funded for telehealth services in the following counties: Huntingdon, Bedford, and Fulton. These counties are served by the Huntingdon, Bedford, and Chambersburg branch offices.

Services Provided:

Home Nursing Agency provides in-home services, Remote Patient Monitoring, patient education, and teaching materials to improve self-management abilities and health outcomes.

Equipment:

90 store and forward telehealth units to be utilized in the patient homes provided by the vendor VitelNet. Results will be viewed from a Web-based application in the office.

Transmission:

Information is communicated from the patient's home to the office via POTS.

Reinventing Healthcare: the Application of the Pittsburgh Regional Healthcare Initiative's Perfecting Patient Care (PPC) System to Chronic Medical Conditions

Jewish Healthcare Foundation

Jewish Healthcare Foundation
650 Smithfield Street, Suite 2400
Pittsburgh, PA 15222
www.phri.org

Tania Lyon, PhD
Margaret Priselac RN, MSN
Ph: 412-586-6715
Fax: 412-586-6701
Email: 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 purpose of the Collaborative is to 1) Improve patient care outcomes beginning with diabetics using the PPC System to implement the Chronic Care Model. 2) Develop cost-effective, dissemination tactics. This project will develop a community of learning supported by multiple technologies called the Pittsburgh Regional Learning Network.

Outcomes expected/Project Accomplishments:

1. Lower average HbA1c; 2. Documentation of self-management goal-setting; 3. Patients with BP 130/80; 4. Patients with LDL <100; 5. Dilated eye exam in past year; 6. Comprehensive foot exam in past year; 7. Microalbuminuria 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:

Education in PPC will be provided to the eight FQHCs to support the implementation of the Chronic Care Model. The first population of focus is patients with diabetes.

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 regional learning networks, formal peer-to-peer networks, PRHI Collaborative Platform including regional forums.

Magee Rehabilitation Hospital

Magee Rehabilitation Hospital
6 Franklin Plaza
Philadelphia, PA 19102
www.mageerehab.org

Mary Schmidt
Ronald W. Siggs
Ph: 215-587-3090
Fax: 215-568-3736
Email: rsiggs@mageerehab.org

Network Partners:

Vtree Corporation (a Philadelphia area health technology company).

Project Purpose:

This program is a unique rehabilitation application using simulation and virtual reality technology to improve quality of life for individuals with spinal cord injuries, brain injuries, strokes, and other illnesses which permits individuals overcoming their mobility challenges without having to leave a safe environment.

Outcomes expected/Project Accomplishments:

Program evaluation based on disabled persons' improvement in physical and cognitive functioning and social skills. Wheelchair mobility will be screened by number of impacts, time for completion and complexity of tasks. Ambulatory mobility evaluated using standardized walk tests. Perception and neglect standardized tests used as appropriate.

Service Area:

Magee Rehabilitation Hospital, 6 Franklin Plaza (16th and Race Streets), Philadelphia, PA.

Services Provided:

Magee Rehabilitation Hospital telehealth provides rehabilitation for persons with disabling injuries and illnesses such as spinal cord injury, brain injury, stroke, chronic pain, and amputation. Our goal and practice are to help persons with physical and cognitive disabilities reach their maximum level of independence.

Equipment:

"Streetscape" software package; HP computer with altered/specially designed joystick, HP.

Transmission:

Virtual interaction software designed by VTree Systems. The system is designed so that in the future it can be operated as an Internet-based system linking patients to the system from home.

Mercy Health Partners

Mercy Health Partners
746 Jefferson Avenue
Scranton, PA 18510-1624
http://www.mercyhealthpartners.com

John T. Howells-CIO
Ph: 570-348-7778
Fax: 570-348-7639
Email: 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/Project Accomplishments:

Increase in number of electronic accesses has increased 82 percent over initial estimate of 10-15 percent. Nursing clerical time has been reduced 20-30 minutes per nurse, per shift. Amount of paperwork on chart has been reduced and this information is now presented both electronically and summary on chart in a 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.

Mercy Hospital of Pittsburgh

Information Services Division
1400 Locust Street
Pittsburgh, PA 15219
www.mercylink.org

Linda Hogan, PhD
Ph: 412-232-7710
Fax: 412-232-8422
Email: 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/Project Accomplishments:

Provide physicians with ready access to patient information 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 wireless access coverage to all clinical areas and provide clinicians ready-access to computer 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:

Voice recognition technology was selected and will be implemented by the end of 2006.
Wireless infrastructure was completed in 2006. Equipment included: rack-mounted computer servers and consoles.

Transmission:

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

Millcreek Community Hospital
5515 Peach Street
Erie, PA 16509
www.millcreekcommunityhospital.com

Tim Zurn, RPh
Ph: 814-868-8144
Fax: 814-868-8199
Email: 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/Project Accomplishments:

- 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 Allliance of Business, Industry, & Tourism

Oil Region Alliance of Business, Industry, & Tourism
P.O. Box 128
Oil City, PA 16301-0128
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Ph: 814-677-3152 Ext. 115
Fax: 814-677-5206
Email: 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.

Outcomes Expected/Project Accomplishments:

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 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.

Transmission:

ISDN 128K, ATM 512K and above IP 712K and above, DSL, Broadband Cable Modem & Wireless.

Urban Ophthalmic Telehealth

Pennsylvania College of Optometry

Pennsylvania College of Optometry
8360 Old York Road
Elkins Park, PA 19027
www.pco.edu

Felix M. Barker, II, OD, MS
Ph: 215-780-1427
Fax: 215-780-1325
Email: Felix@pco.edu

Network Partners:

The Eye Institute of the Pennsylvania College of Optometry, Mount Airy Eye Clinic, Strawberry Mansion Eye Clinic.

Project Purpose:

This project used digital imaging as well as store and forward technology to link two outlying eye clinics located in urban underserved areas of Philadelphia to a major academic eye care center, The Eye Institute.

Outcomes Expected/Project Accomplishments:

Patient satisfaction surveys, indicators of improved access to and utilization care.

Service Area:

Philadelphia and Montgomery Counties in Pennsylvania.

Services Provided:

Opthalmic consultation services in underserved urban areas of Philadelphia.
Targeted services include: routine eye consultation, glaucoma and diabetic eye disease, which are endemic in this population.

Equipment:

Digital fundus cameras and video slit lamp biomicroscopes.

Transmission:

Store and forward software (IE; Image Consultant, Uniqe Media, Canton, PA). T1 between campuses.

Digital Informatics and Communications System

Penn State University

Penn State Cancer Institute
500 University Drive
Hershey, PA 17033
http://www.hmc.psu.edu/cancer/

Thomas Loughran, MD
Ph: 717-531-4034
Fax 717-531-0002
Email: tloughran@psu.edu

Network Partners:

Hershey Medical Center (HMC), Mount Nittany Medical Center (MNMC), 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/Project Accomplishments:

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.

PENNSYLVANIA, Dauphin County — CMP FY 02, 05

Physician-Scientist Initiative

Pennsylvania State University College of Medicine

Penn State University College of Medicine
500 University Drive H175
Hershey, PA 17033
http://www.hmc.psu.edu/ora

Jay Moskowitz, PhD
Kathryn J. Kaylor, MPA, CRA
Ph: 717-531-8495
Fax 717-531-0040
Email: egrants@hmc.psu.edu

Network Partners:

Penn State Milton S. Hershey Medical Center has 10 University Physician Groups across Central Pennsylvania. Care provided at those sites include primary care, advanced specialty care, and services such as laboratory work and diagnostic radiology. The sites were established approximately 12 years ago and are located in Centre, Cumberland, Dauphin, Lancaster, Lebanon, and Luzerne counties.

Project Purpose:

The purpose is 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, the project 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.

Outcomes Expected/Project Accomplishments:

The goal is to train and facilitate the research of two physician-scientists per year for 3 years. Four (4) have been hired and are actively engaged in research. The Advisory Committee continues to mentor current physician-scientists and identify new candidates for the project. Participants are encouraged to seek a joint appointment in a basic science department and participate in the graduate program.

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. Primary care clinical trials network will be established 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

Pinnacle Health System
409 South Second Street
Harrisburg, PA 17105-8700
www.pinnaclehealth.org

Carol Connor
Christopher P. Markley, Esq.
Ph: 717-231-8210
Fax 717-231-8157
Email: 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/Project Accomplishments:

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 five 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 facilites, 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 Telemedicine Program

Safe Harbor Behavioral Health

Safe Harbor Behavioral Health
1330 West 26th Street
Erie, PA 16508
http://safeharborbh.org

David Rosswog, LPC
Julie Sorrentino Kresge
Ph: 814-451-2206
Fax 814-451-2280
E-mail: Julie.Kresge@shbh.org

Network Partners:

Beacon Light Behavioral Health, Bradford, PA (headquarters) and Warren, PA (telemedicine program satellite site) was the project partner. The Safe Harbor Behavioral Health Telemedicine Program served four patients and had 22 patient encounters.

Project Purpose:

Telemedicine services were provided in Warren County, where access to child psychiatric services is limited. The two goals of the project were to: increase access to quality children's psychiatric services and evaluation for rural areas; and to successfully provide ongoing education, medical management, and support for telemedicine clinical services with more readily accessible and effective protocol development and case review.

Outcomes Expected/Project Accomplishments:

The program served 4 children in Warren, PA with mental illness. Participant utilization, types of psychiatric services provided, progress, and outcomes were tracked through completed satisfaction surveys for each telemedicine encounter. The telemedicine committee utilizes this data to monitor quality, evaluate the need 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 a MUA. Just under 10 percent 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 provides children's psychiatric evaluation, medication management, case review, specialist referrals, data collection and analysis. These services will continue with Beacon Light Behavioral Health paying for the psychiatrist's time.

Equipment:

The equipment used for the grant project: two Tandberg 550 MXP NTSC; two T550 MXP 384 kbps ISDN 768 kbps IP; and a Watchguard Firebox X1000 Firewall.

Transmission:

ISDN to mental health provider.

SUN Home Health Services

SUN Home Health Services (SHHS)
61 Duke Street, PO Box 232
Northumberland, PA 17857
www.sunhomehealth.com

Steven B. Richard
Ph: 570-473-7625
Fax: 570-473-3070
E-mail: 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. Actual number of patients served 1 OCT 05-30 SEP 06: 77. Actual number of patient encounters 1 OCT 05-30 SEP 06: 581.

Outcomes Expected/Project Accomplishments:

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.

Regional Electronic Medical Record

Susquehanna Health System

Susquehanna Health System
777 Rural Avenue
Williamsport, PA 17701
http://www.susquehannahealth.org/

Karen M. Armstrong
Ph: 570-321-3171
Fax 570-321-3199
Email: karmstrong@susquehannahealth.org

Network Partners:

The Laurel Health System – Wellsboro, PA since 1997
The Jersey Shore Hospital, Jersey Shore, PA since 2001
The Bucktail Medical Center, Renovo, PA since 2004

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/Project Accomplishments:

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 on-line resource usage, mass education of physicians on health care informatics, elimination of printed radiology films, complete transformation to digital radiography, 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, imaging, respiratory therapy, and pathology. History and physicals, discharge summaries, operative reports, consults, PACS images, scanned documents like E/R 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 using regional cable company provided fiber, Telco T1s, and frame relays, Internet VPNs and cable modem services. Band Width ranges from 56KB to 100 MB.

Integrative Medicine Informatics Feasibility Project

Thomas Jefferson University

Thomas Jefferson University Hospital
Gibbon Building, 111 S. 11th St., Suite 6215
Philadelphia, PA 19107
http://www.jeffersonhospital.org/cim/
http://jeffline.jefferson.edu/JMBCIM/

Daniel A. Monti, MD
Joel S. Edman, DSc
Ph: 215-955-2839
Fax: 215-955-2509
Email: joel.edman@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 and 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/Project Accomplishments:

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-ongoing additions to educational and research content.
Digital Repository for Integrative Medicine Documents-ongoing update and additions.

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.

The Tyrone Hospital Health Information Network

Tyrone Hospital

Tyrone Hospital
1 Hospital Drive
Tyrone, PA 16686
www.tyronehospital.org

Stephen C. Gildea
Ph: 814-684-6399
Fax: 814-684-6395
Email: 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 moth 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/Project Accomplishments:

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 percent 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.

Wayne Memorial Hospital

Wayne Memorial Hospital
601 Park Street
Honesdale, PA 18431
http://www.wmh.org

Thomas Hoffman/David Hoff
John Dennis
Ph: 570-251-6533
Fax: 570-253-8993
Email: dennis@wmh.org

Network Partners:

No network partners.

***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/Project Accomplishments:

The ultimate goal of the project is an improvement in patient safety. This shall be achieved through a reduction in medication errors by 50 percent 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 county-wide 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; (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).

Transmission:

10/100 MBIS switched LAN.

RHODE ISLAND, Providence County CMP FY 04

HIV/AIDS Comprehensive Psychosocial Support Project

Family Resources Community Action

Family Resources Community Action
245 Main Street
Woonsocket, RI 02895
www.famresri.org

Benedict F. Lessing, Jr., MSW
Ph: 401-766-0900
Fax: 401-767-4075
Email: blessing@famresri.org

Network Partners:

Thundermist Health Center
Physicians from local and Providence based hospitals
AIDS Project Rhode Island
Rhode Island Community Food Bank

Project Purpose:

Develop a holistic approach to overall maintenance and well being for persons living with HIV/AIDS by engaging clients in healthy lifestyle behaviors. The 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/Project Accomplishments:

N=162: 75 percent of clients participated in some aspect of the Agape Wellness program
44 percent of consumers engaged in exercise training, 41 percent nutrition services, 31 percent education programs,
52 percent meals, 9 percent support groups, 28 percent social activities.
Survey: 90 percent of clients (always or usually) receive the social & emotional support they need since enrollment in the Wellness programs.
62 percent visited their ID doctors 3 or more times in the past 9 months.

Service Area:

Northern Rhode Island.

Services Provided:

Personal exercise training, nutritional counseling, mental health and substance abuse counseling, food pantry, meals, educational forums, cooking classes, massage therapy, support groups, computer classes, social activities.

Equipment:

Weight training and exercise equipment; portable whirlpool; kitchen equipment.

Transmission:

Not Applicable.

Advancing Point-of-Care Technology at VNA of Care New England

Kent County Visiting Nurse Association d/b/a VNA of Care New England

VNA of Care New England
51 Health Lane
Warwick, RI 02886
www.cnehomehealth.org

Karen Beauchesne RN, MN
Ph: 401-737-6050
Fax: 401-732-6210
Email: kbeauchesne@carene.org

Network Partners:

There are no project partners for this project.

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 the 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 their care.

Outcomes Expected/Project Accomplishments:

The project met its goals by ensuring that all staff have timely access to patient data, assisting with the delivery of cost effective care, ensuring that patient needs are met in a timely and accurate manner, minimizing the chance for potential error and enhancing 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

Kent County Visiting Nurse Association d/b/a VNA of Care New England

VNA of Care New England
51 Health Lane
Warwick, RI 02886
www.cnehomehealth.org

Karen Beauchesne, RN, MN
Ph: 401-737-6050
Fax: 401-732-6210
Email: kbeauchesne@carene.org

Network Partners:

There are no project partners for this project.

Project Purpose:

Increasing Access to Home Health through Telehealth—Phase II focused on increasing the diagnoses treated with telehealth where benefits similar to those that have been proven in the CHF population were realized for both the patient and VNACNE.

Outcomes Expected/Project Accomplishments:

The project met its goals by enhancing patient care in all Rhode Island communities by providing telehealth services wherever appropriate, enhancing access to home health care by providing enhanced care remote monitoring for patients with chosen diagnoses through the use of telehealth and reducing costs for chronically ill patients.

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 health care services.

Equipment:

McKesson Health Buddy Telehealth units.

Transmission:

Transmission of patient data is through the Health Buddy appliance internal modem (33,600 bps) via POTS line. Data is transmitted and housed through a web portal that is hosted by McKesson.

Thundermist Health Center

Thundermist Health Center
450 Clinton Street
Woonsocket, RI 02895
www.thundermisthealth.org

Ernie Balasco
Ph: 401-767-4100, Ext. 3491
Fax: 401-235-6899
Email: 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/Project Accomplishments:

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. Patient portal 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)

Advanced Technology Institute (ATI)
5300 International Blvd.
North Charleston, South Carolina 29418
http://www.aticorp.org/hc.htm

Joseph E. Jones, MS, MPA
Ph: 843-760-3649
Fax: 843-207-5458
Email: joe.jones@aticorp.org

Network Partners:

CareSouth Comprehensive Health Clinics, Family Health Centers, Inc., St James-Santee Family Health Center, Margaret J Weston Community Health Centers, Healthcare Outreach, LLC., 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 Manager technologies.
2. Identify extensions to Intelligent Care Manager technology to support care management for other related chronic diseases
3. Identify and implement diabetic retinopathy diagnostic procedures that meet the needs for care delivery in CHCs.

Outcomes Expected/Project Accomplishments:

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). Special focus is on the prevention of blindness due to diabetic retinopathy

Service Area:

Nine rural and underserved counties in South Carolina: Charleston, Darlington, Georgetown, Orangeburg, Calhoun, Aiken, Florence, Bamberg, Williamsburg,

Services Provided:

Providing services in identifying CHC requirements, conducting diabetic retinopathy diagnostic procedures and implementing diabetes disease management initiatives.

Equipment:

4 IP-based Videoconference systems from Polycom connecting ATI with three (3) community health centers. 1 Topcon and 2 Canon Non-Mydriatic Retinal Fundus Cameras, Comprehensive Diabetes Management Program (CDMP) technology and associated computer workstations and/or servers. home telehealth equipment as appropriate.

Transmission:

T1 serving ATI's main location and DSL, cable modem and Frame relay serving the various community health center sites as well as other facilities.

SOUTH CAROLINA, Bamberg County CMP FY 05

Developing a Telehealth Infrastructure to Address Health Disparities Through Education and Training

Voorhees College

Voorhees College Telehealth Network
PO Box 678
Denmark, SC 29042
www.voorhees.edu

Leroy Davis, PhD
Ph: 803-703-1073
Fax: 803-703-1084
Email: ldavis@voorhees.edu

Network Partners:

Arnold School of Public Health of the University of South Carolina, Columbia, SC; Medical University of South Carolina, Charleston, SC; Family Health Centers, Inc., Orangeburg, SC.

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/Project Accomplishments:

A two-credit Healthy Living course to be offered to 50 off-campus adult students and 60 on-campus students (pre- and post- testing); Six 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 three 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); 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, Yankton County RTGP FY 94-96, RTGP FY 97-99, TNGP 03-05

Avera Rural and Frontier Disease Management Telehealth Network

Avera Health

Avera Health
610 W. 23rd Street
Yankton, SD 57078
www.avera.org

Mary DeVany
Ph: 605-322-6038
Fax: 605-322-6006
Email: 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/Project Accomplishments:

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 are 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.

SOUTH DAKOTA, Yankton County TRC 06-09

Great Plains Telehealth Resource and Assistance Center

Avera Health

Avera Health
610 W. 23rd Street
Yankton, SD 57078
www.avera.org

Mary DeVany
Ph: 605-322-6038
Fax: 605-322-6006
Email: mary.devany@mckennan.org

Network Partners:

The Great Plains Telehealth Resource and Assistance Center (TRAC) began in October of 2006 and is a partnership of Avera Health, South Dakota; The Evangelical Lutheran Good Samaritan Society, South Dakota; North Dakota State University Telepharmacy Network, North Dakota; Saint Elizabeth Health System, Nebraska; and University of Minnesota Telehealth Network, Minnesota.

Project Purpose:

Increase telehealth utilization among rural and frontier health care providers by breaking down both geographic and experiential barriers. This center will serve telehealth programs in this region and nationally by focusing on individualized coaching services; providing information, assistance and direction as requested and needed; an on-line toolbox; and a regional telehealth conference.

Outcomes Expected/Project Accomplishments:

1. Increase the knowledge of applications, practices and research findings relating to telehealth.
2. Increase the quality and quantity of standards-based information regarding the best utilization of telehealth technologies.
3. Increase the number of contacts initiated by providers.
4. Improve the skill level of key staff members to conceptualize, plan, implement, and evaluate telehealth programs.
5. Increase the number of providers that utilize telehealth technology.

Service Area:

The Great Plains TRAC serves the five states of South Dakota, North Dakota, Minnesota, Iowa and Nebraska. Assistance will also be provided to other entities in other locations as requested or needed.

Services Provided:

Services provided include: general one-on-one assistance and direction in topics such as telehealth policies/procedures, licensure, scheduling, evaluation, research, and others; on-line resource toolbox; annual regional conference; identify key regional issues; in general, help rural facilities acquire the skills/expertise to implement telehealth programs.

Equipment:

This project is primarily a collaboration project utilizing one-to-one communications (phone, email, etc.) in cooperation with on-line resources. No special equipment is anticipated.

Transmission:

No special transmission needs/specifications are required under this project.

TENNESSEE, Knox County **CMP FY 05**

High-Risk Newborn Services Project

University Health System, Inc. (dba UT Medical Center)

University Health System, Inc.
1520 Cherokee Trail, Suite 110
Knoxville, TN 37920
http://www.utmedicalcenter.org

John J. Sheridan
Ph: 865-544-6611
Fax: 865-544-6619
Email: 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 has provided for the renovation of existing facilities, expand the opportunities for existing services and purchase state-of-the-art equipment.

Outcomes Expected/Project Accomplishments:

The upgrade of equipment and renovation of the perinatal care system at UT Medical Center provides 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.

TENNESSEE, Shelby County **CMP FY 05**

Delta Health Partnership

University of Tennessee Health Science Center

University of Tennessee Health Science Center
920 Madison Avenue, Suite 434
Memphis, TN 38163
http://www.utmem.edu/telemedicine

Karen C. Fox, PhD
Sydney Gray, MA
Ph: 901-448-2611
Fax: 901-448-4324
Email: sgray@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/Project Accomplishments:

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 percent; *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, dermascopes, 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 RTGP 97-99, RTGP 00-02, TNGP 03-05

Mid-Appalachia Telehealth Project

University of Tennessee Health Science Center

University of Tennessee Health Science Center
90 Madison Avenue, Suite 434
Memphis, TN 38163
http://www.utmem.edu/telemedicine

Toy Strickland, MBA
Sydney Gray, MA
Ph: 901-448-2611
Fax: 901-448-4324
Email: sgray@.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/Project Accomplishments:

Pediatric asthmatic disease management-increase appropriate treatment with anti-inflammatory medication from typical level <70 percent to target level of >95 percent, and reduce lost school days per six weeks from typical two to <1. Diabetes disease management-reduce average HbA1C readings from typical >9 percent to <7 percent and increase patients having dilated eye exams from typical <30 percent to target of >70 percent. 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 a full county MUA; and Scott (Huntsville), low income HPSA, dental HPSA, and a 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; and practitioner and patient education; 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 T-1 lines between clinics and UTTN office (distance independent UT contract), POTS to homes and schools, ISDN to mental health provider and hospital, Internet and Internet 2 for medical staff and patient education.

TENNESSEE, Shelby County — RTGP 00-02, 03

Mid-South Telehealth Consortium

University of Tennessee Health Science Center

University of Tennessee Health Science Center
90 Madison Avenue, Suite 434
Memphis, TN 38163
http://www.utmem.edu/telemedicine

Toy Strickland, MBA
Sydney Gray, MA
Ph: 901-448-2611
Fax: 901-448-4324
Email: sgray@.utmem.edu

Network Partners:

University of Tennessee Medical Group, Inc., The Regional Medical Center, LeBonheur Children's Medical Center, Dyersburg Regional Medical Center, UTMG Jackson and Covington Family Clinic, Alliance HealthCare System, University of Tennessee at Martin Health Clinic, Tennessee Department of Health, Tennessee Department of Children Services.

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/Project Accomplishments:

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 Polycom videoconferencing systems, which include stethoscopes, otoscopes, dermascopes and document cameras. In Memphis: ACCORD bridge, satellite, server and network.

Transmission:

Full T-1 lines between clinics and Memphis (hub) with an IDSN option; Internet and Internet 2.

TENNESSEE, Shelby County — RTGP 00-02, 03, CMP FY 04

Telehealth for Diabetic Patients in Hispanic and Underserved Rural Communities

University of Tennessee Health Science Center

University of Tennessee Health Science Center
90 Madison Avenue, Suite 434
Memphis, TN 38163
http://www.utmem.edu/telemedicine

Toy Strickland, MBA
Sydney Gray, MA
Ph: 901-448-2611
Fax: 901-448-4324
Email: sgray@.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/Project Accomplishments:

Diabetes disease management: Increase number of patients who control HbA1C readings per year from <25 percent to national Healthy People target level of >90 percent, reduce average HbA1C reading from typical level of >9.0 percent to <7.0 percent. Diabetes education through audio-conferencing – Hold 12 monthly tele-support group meetings, 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 for 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.

Medical Licensure Portability to Facilitate Multi-State Telehealth Practice

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

Federation of State Medical Boards of the United States, Inc.
400 Fuller Wiser Road, Suite 300
Euless, TX 76039-3856
http://222.fsmb.org

Lisa A. Robin
Ph: 817-868-4053
Fax: 817-868-4153
Email: lrobin@fsmb.org

Network Partners:

State medical boards: Colorado, Connecticut, Idaho, Iowa, Kansas, Maine, Massachusetts, Minnesota, New Hampshire, North Dakota, Orego, Rhode Island, Vermont, and Wyoming; Four Corners Telehealth Consortium; University of Maine.

Project Purpose:

Reduce the redundancies that complicate and delay the process of obtaining medical licensure in multiple jurisdictions. Promote the utilization and expansion of telehealth services across state lines while not compromising the level of protection for patients that is provided by state licensure.

Outcomes Expected/Project Accomplishments:

Reduced amount of time and paperwork required to issue a license. Improved cooperation among state medical boards. Reduced variation in policies across states. Improved information technology capability. Reduced licensure barriers to telemedicine. Tools: User Satisfaction Surveys, Data Collection Tool, Qualitative/Quantitative Data Analysis.

Service Area:

The states of Colorado, Connecticut, Idaho, Iowa, Kansas, Maine, Massachusetts, Minnesota, New Hampshire, North Dakota, Oregon, Rhode Island, Vermont, and Wyoming.

Services Provided:

The projects will streamline the licensing process by developing and maintaining a centralized interactive system wherein information about physicians will be maintained and accessible to participating boards. Previously obtained and verified evidence of physicians' qualifications will be shared and relied upon by participating boards.

Equipment:

The two proposed regional projects will streamline the licensing process by developing and maintaining a centralized interactive data management system (CIDMS) wherein information about physicians will be securely maintained and accessible to all participating SMBs within each region.

Transmission:

Not applicable.

Harris County Hospital District

Harris County Hospital District
2525 Holly Hall
Houston, TX 77054
http://www.hchdonline.com

L. Ann Teske MS, RN
Ph: 713-873-3640
Fax: 713-873-2899
Email: lenore_teske@hchd.tmc.edu

Network Partners:

University of Texas Health & Science Center at Houston Medical School; Baytown Community Health Center; El Centro de Corazon Health Center since September 1, 2005. Actual number of patients served 1 OCT 05-30 SEP 06: 87.

Project Purpose:

To provide patients seen patients seen in primary care clinics with access to specialist/diagnostic expertise using digital cameras and telemedicine equipment.

Outcomes Expected/Project Accomplishments:

- Scheduled 87 patients; 64 percent appointment compliance. Telepsychiatry: has seen 25 patients; 57 percent
- appointment compliance. Tele-dermatology: has scheduled 41 patients; 76 percent compliance. 92 percent of
- patients surveyed graded us excellent/good for telemedicine services. 100 percent of patients would use our
- services again.

Service Area:

Baytown Community Health Cetner: Harris County; El Centro de Corazon Health Center: Harris County.

Services Provided:

Tele-psychiatry, Tele-dermatology.

Equipment:

Digital still cameras and memory cards. The vendor was CDW.

Transmission:

We are using full T1 lines.

TEXAS, Starr and Bexar County TNGP FY 03-05

Diabetes Risk Reduction via Community-Based Telemedicine (DiRReCT)

University of Texas Health Science Center at San Antonio

University of Texas Health Science Center in San Antonio
7703 Floyd Curl Drive
San Antonio, TX 78229-3900
www.uthscsa.edu

Daniel E. Hale, MD
Amy L. Riojas, LMSW
Ph: 210-567-5283
Fax: 210-567-0492
Email: 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/Project Accomplishments:

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 band width.

TEXAS, Galveston County CMP FY 05

The Texas Telehealth Disparities Network

University of Texas Medical Branch Center to Eliminate Health Disparities

UTMB Center to Eliminate Health Disparities
301 University Boulevard
Galveston, TX 77555-0129
www.utmb.edu/cehd

Barbara E. Breier, PhD
Ph: 409-772-8861
Fax: 409-772-5064
Email: bbreier@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).

Outcomes Expected/Project Accomplishments:

Community assessment outcomes identifying health conditions or delivery system components and acceptance of telehealth solutions. Established telehealth delivery pilot projects aimed at reducing site-specific health disparities identified by community collaborations.

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:

Project at UTHCT site to provide specialist consultations to rural clinic from UT-Tyler medical center clinicians. Development of clinical data repository collaborative effort in Galveston County. Initiation of telepsychiatry consult clinic in Cameron County.

Equipment:

At UTHCT site equipment is Polycom IP based videoconferencing between UTHCT and a TCart at the rural site in Overton, Texas.

Transmission:

OC-3 at 20MBps from UTMB out to subsites. Subsites have full T1 capabilities and ISDN to pilot project applications in communities.

Association for Utah Community Health (AUCH)

Association for Utah Community Health (AUCH)
860 East 4500 South (Suite 206)
Salt Lake City, UT 84107
www.auch.org

Vivian Garcia
Ph: 801-974-5522 x 4603
Fax: 801-974-5563
Email: telehealth@auch.org

Network Partners:

Members of then Association for Utah Community Health (AUCH) include 11 community, migrant, and homeless center organizations (FQHCs) operating 24 comprehensive, primary health care delivery sites throughout the state of Utah. Additional members included Planned Parenthood of Utah, a Title X funded reproductive health organization and the Indian Walk-In Center, a Title V funded urban Indian health organization. Six organizations operate in urban environment and seven operate in rural/frontier areas. Additional network partners include the Utah Telehealth Network, Northwest Regional Telehealth Network, Retina Associates of Utah, Wire One Technology, Inc., and Utah Imaging, LLC.

Project Purpose:

The AUCH Telehealth Program will improve delivery of and access to specialty care by supplying telehealth equipment and resources to all association members. A videoconferencing network will be implemented to increase participation in distance learning activities including training and technical assistance. Additionally, the telehealth program will support an expansion of on-line resources and digital tools to enhance training/technical assistance and peer-to-peer interaction to strengthen existing health center operations. These enhanced technologies will improve the delivery and access to quality specialty care, reduce geographical barriers to rural patients and health care providers, enhance distance learning opportunities and improve peer to peer interaction.

Outcomes Expected/Project Accomplishments:

The AUCH telehealth program will be evaluated using the following criteria: (a) completion of tasks, (b) tracking and measurement of equipment utilization, (c) clients-served statistics, (d) identification of resources for expansion of the telehealth program, and (e) client satisfaction and follow up statistics.

Service Area:

The service area for the AUCH Telehealth Program will correspond to the service areas for each of its member sites. Those sites' service areas include the counties of Box Elder, Cache, Rich, Weber, Salt Lake, Utah, Carbon, Emery, Iron, Washington, San Juan, and Wayne.

Services Provided:

Services to be provided include the implementation of telehealth projects including: diabetes care and management, ophthalmology, radiology, videoconferencing, and website enhancement.

Equipment:

Current and planned AUCH telehealth projects use: Kowa fundus retinal camera and software, Polycom videoconferencing equipment, and AMRAD CR teleradiology equipment and software.

Transmission:

The AUCH Telehealth Program will utilize current health center connectivity (T1, DSL) whenever possible. AUCH will assist health centers in expanding their bandwidth, if needed, and will assist in modifying current firewall, router, and other equipment to accommodate necessary IP traffic.

Weber State University HOPE Project
3901 University Circle
Ogden, UT, 84408-3901
www.weber.edu/chp

Craig Gundy, PhD
Ph: 801-626-7127
Fax: 801-626-7683
Email: 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, since August of 2002. Patients served is not applicable.

Project Purpose:

The HOPE project will address the critical shortage of health professionals in Utah and contiguous states. WSU will increase rural outreach education, allowing students to practice as health professionals in their communities. The project will also address Critical Incident Stress Management (CISM), availability of these services, needs, and solutions.

Outcomes Expected/Project Accomplishments:

Recruitment contacts have been made with 7010 potential students. Twenty two additional rural Paramedic students have been able to graduate because of this program. Data have been collected to determine the need for a Critical Incident Stress Training Institute. Distance technology including podcasts, IP Video, and on-line testing support have been developed and are in use.

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 provides: 1) Recruitment in Utah and Southern Wyoming for health care programs; 2) Course/Program delivery via IP Video technology (Paramedic, EMT, and Clinical Lab Science); 3) Development of a Simulation Lab for students; and 4) Establishment and support of on-line and distance courses, including computer and testing support.

Equipment:

Remote sites have nine PolyCom VSX 7000S video conferencing systems; Broadcast Sites have two Tandberg MX 3000 video conferencing systems.

Transmission:

Ethernet to dedicated fiber channel with tie into layer 2 switch to Utah's backbone. Chi Tester runs Cold Fusion MX and an SQL database using 3 Windows servers, 2003 Enterprise Edition.

Intermountain Healthcare

IHC Health Services
3930 Parkway Boulevard
Salt Lake City, UT 84120
www.intermountainhealthcare.org

Molly J. Fielding, MBA, CHC
Ph: 801-442-1504
Fax: 801-442-1132
Email: 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.

Outcomes Expected/Project Accomplishments:

Decrease the length of time patients must wait for an interpreter by at least 50 percent and decrease the overall costs of providing interpretation services by 20 percent. 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.

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 a 19"LCD.

Transmission:

Intermountain has DS3 connections from the main hospitals to the central hub that has a DS3 connection to the Internet.

UTAH, Salt Lake County CMP 04

Utah Telehealth Network Comprehensive Telehealth Services

University of Utah

Utah Telehealth Network
585 Komas Drive, Suite 204
Salt Lake City, UT 84108
www.utahtelehealth.net

Marta Petersen, MD
Deb LaMarche
Ph: 801-587-6190
Fax: 801-585-7083
Email: deb.lamarche@utahtelehealth.net

Network Partners:

Spencer S. Eccles Health Sciences Library, Utah Diabetes Center, Intermountain Spinal Cord Injury Program, Bear Lake Community Health Center, UTN sites including Utah Navajo Health System, Montezuma Creek and Monument Valley; San Juan Hospital, Monticello; Gunnison Valley Hospital; Beaver Valley Hospital; South Davis Community Hospital.

Project Purpose:

- Upgrade network infrastructure to support expanding telehealth activity.
- Implement telehealth services for diabetes management, diabetic retinopathy, spinal cord injury patients.
- Expand continuing education modalities and offerings.
- Implement a process to provide access by rural hospitals to centralized patient-related IT resources.

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/Project Accomplishments:

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 & T1 frame relay; DS3s, ISDN PRI; DSL.

VERMONT, Chittenden County — CMP FY 02, 04

Pediatric Teletrauma Project

The University of Vermont (UVM)

University of Vermont College of Medicine
89 Beaumont Avenue
Burlington, VT 05405
www.fahc.org/telemedicine

William Charash, MD, PD
Terry Rabinowitz, MD
Ph: 802-847-2112
Fax: 802-847-3090
Email: Terry.rabinowitz@vtmednet.org

Network Partners:

The teletrauma portion of the program has been operational since 1999. 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 added 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. 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/Project Accomplishments:

Compare the impact of teletrauma upon survival, complications, length of stay and injury severity of the teletrauma patients 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:

Sites funded by the grant project: Northwestern Regional Medical Center, Franklin County and Copley Hospital, Lamoille County, VT. Our overall program services 4 counties in Vermont and three non-HPSA or rural counties in northeastern New York. All but one of these areas have designated partial HPSAs and partial MUAs.

Services Provided:

This project provides teleconsults for trauma/emergency (24/7) and pediatric critical care. Other program services include 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 MGC100 MCU at hub.

Transmission:

ISDN 3-BRI up to 384 kbps. 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.telemed.virginia.edu

Karen S. Rheuban, MD
Richard J. Settimo
Ph. 434-924-5470
Fax: 434-924-5747
Email: 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 of the Commonwealth of Virginia. The hospitals identified are located in Central Virginia and serve a population of 260,000. The hospitals also serve patients from surrounding counties which are medically underserved (Page, Bath, Highland, and Alleghany).

Outcomes Expected/Project Accomplishments:

Outcomes: Increased utilization of specialty services; increased referrals by regional providers; decreased patient transfers.
Accomplishments: Increased professional and patient education presentations. The three remote hospitals are now included in the Regional Emergency Preparedness network.

Service Area:

Seven counties in central and western Virginia with an estimated population of 260,000. The counties served are 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:

Broadband T-1, IP, ATM, ISDN using our own VTC Bridge and commercial companies. Testing wireless.

Inland Northwest Health Services

Inland Northwest Health Services
601 West First Avenue, Suite 200
Spokane, WA 99201
www.inhs.org
www.nwtelehealth.org

Jan Constable RN, BSN
Ph: 509-448-4520
Fax: 509-443-6226
Email: jlconstable@msn.com

Network Partners:

Formed in 1997, the Northwest Telehealth network is host to 67 participating sites. The TeleER project in existence for several years, was funded to expand participation to both urban trauma facilities in Spokane (Sacred Heart Medical Center and Deaconess Medical Center), a regional air medical transport communications 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 providers.
2) Provide easy-to-use, fixed conferencing equipment in rural emergency departments.
3) Increase utilization by providing access to wound care, pediatric emergency, and physician intensivists.
4) Incorporate availability of shared EMR and imaging with video consultations.

Outcomes Expected/Project Accomplishments:

1) Improved outcomes through timely access to specialists paired with utilization of patient conditions.
2) To improved coordination of care prior to transport.
3) Demonstrate the value of shared electronic medical record data to the clinical consultation process over telehealth.

Service Area:

Serving 67 sites within Washington and Idaho, including 23 counties.
TeleER project sites include 7 HPSA/MUAs.

Services Provided:

Northwest TeleHealth has been operational since 1997 and provides services in mental health, diabetic education, neurology, emergency services, dermatology, wound care, employee assistance programs, telepharmacy, distance learning, practitioner, and patient education, support groups, satellite downlinks.

Equipment:

Polycom video conferencing systems, Polycom MCU, AMD Telemedicine General Exam Cameras, wireless headsets.

Transmission:

Full T1 and broadband connections between telehealth network sites, ISDN and IP off-network.

WASHINGTON, Spokane County — CMP FY 04

Northwest Telehealth—Telepharmacy

Inland Northwest Health Services

Inland Northwest Health Services
601 West First Avenue
Spokane, WA 99201
www.inhs.org
www.nwtelehealth.org

Renee LaRocca, BSME, MBA, MEM
Ph: 509-232-8110
Fax: 509-232-8355
Email: laroccr@inhs.org

Network Partners:

Major sites: Sacred Heart Medical Center, Spokane, WA; rural sites—hospitals in Othello, Anacortes, Omak, Chelan, Grand Coulee, Quincy, Davenport, Chewelah, Pullman, and Walla Walla, WA. TelePharmacy program operational since 2004. No direct services to patients. Number of hospital pharmacy orders processed OCT through SEP 06 approximately 60,000.

Project Purpose:

Implement a Telepharmacy system for rural hospitals, including critical access hospitals that do not currently have 24-hour pharmacy coverage. A large urban hospital located in Spokane, Washington, oversees rural hospital pharmacy operations and medication administration under contract with the rural hospitals. INHS provides the videoconference network and electronic medical records.

Outcomes Expected/Project Accomplishments:

Sustainable TelePharmacy model has been established. Rural communities without hospital pharmacy services now have 24/7 coverage by experienced hospital pharmacists. Medical errors are prevented. Access to health care in these communities is improved. Pharmacy practices in rural hospitals are improved.

Service Area:

Sites: Sacred Heart Medical Center, Spokane, WA; rural sites—hospitals in Othello, Anacortes, Omak, Chelan, Grand Coulee, Quincy, Davenport, Chewelah, Pullman, and Walla Walla.
Counties: Adams, Island, Okanogan, Chelan, Grant, Douglas, Lincoln, Stevens, Whitman, and Walla Walla.

Services Provided:

Pharmacy services are the only services this program provides. The services include management and oversight of pharmacy operations, review of medication orders, and authorization of administration of medication. The services are provided to rural hospitals by an urban hospital. No direct to patients services are provided.

Equipment:

At least one of the following per hospital (some have more than one): Polycom videoconferencing systems; Pyxis Automated Dispensing Devices; Pyxis Connect data transmission services.

Transmission:

Fractional T1 lines between all participating sites.

Native People for Cancer Control Telehealth Network (NPCCTN)

University of Washington

Center for Clinical and Epidemiological Research
1730 Minor Avenue, Suite 1760
Seattle, WA 98101
www.uwccer.org

Dedra Buchwald, M.D.
Cara Towle
Ph: 206-744-6920
Fax: 206-543-3830
Email: ctowle@u.washington.edu

Network Partners:

Project partners: Seattle Cancer Care Alliance, Alaska Federal Health Care Network, Nisqually Tribe, Skokomish Tribe, Squaxin Island Tribe, Shoalwater Bay Tribe, Chehalis Tribe, Quinault Tribe. UW Telehealth Network operational since the mid-1990's; NPCCTN Partners to be added 1/07. Anticipated # of patients to be served annually: 100-200. Anticipated # of patient encounters: 50-200 via vtc.

Project Purpose:

Expert physicians and 3 Native faculty from Seattle Cancer Care Alliance partners will provide post-diagnosis cancer care services to Native children and adults, including consultations, support and/or training on follow up care, pain and psychological problems, and end-of-life issues for cancer patients & survivors. The NPCCTN also supports provider/patient education.

Outcomes Expected/Project Accomplishments:

Establishment of collaborative and sustainable network of tele-oncology services to promote better post -diagnosis cancer care for American Indians and Alaska Natives, improve support services for cancer sufferers, survivors and families, and increase awareness of telehealth as a viable tool for efficient delivery of cancer care. Various self-report measures and utilization measures will be implemented.

Service Area:

University of Washington and the Seattle Cancer Care Alliance (King County), Alaska Federal Health Care Network (Anchorage Borough and beyond)), Nisqually Tribe (Thurston County), Skokomish Tribe (Mason County), Squaxin Island Tribe (Mason County), Shoalwater Bay Tribe (Pacific County), Chehalis Tribe (Gray's Harbor County), Quinault Tribe (Gray's Harbor County).

Services Provided:

UW Telehealth Network services include: telepsychiatry, teleradiology, tele-echocardiography services, and numerous educational services such as conferences supporting the WWAMI program, numerous UW Grand Rounds series, Basic Emergency Nurse Training series, Psychiatry trainings, Regional Heart Center trainings, multidisciplinary case conferences and tumor boards, Geriatric Health series.

Equipment:

Hub sites (UW and SCCA) will use existing video teleconferencing facilities to link with the new tribal sites (each to be equipped with a Polycom VSX 7000) and existing AFHCAN sites.

Transmission:

Full T1 lines between hub sites and tribal sites within Washington; use of Internet2 to connect with AFHCAN bridge, with services to be transported across the AFHCAN network to remote sites.

Bedside Medication Management (MAK) System

Yakima Valley Memorial Hospital

Yakima Valley Memorial Hospital-Information Systems
2811 Tieton Drive
Yakima, WA 98902
http://www.yakimamemorialhospital.org

James Aberle
James Aberle
Ph: 509-575-8681
Fax: 509-574-5800
Email: 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/Project Accomplishments:

Reduce medication administration errors by 50 percent. Reduce medication administration cycle time by 50 percent. Reduce the cost of medication errors through the reduction of adverse drug reactions by 50 percent. Reduce the time to communicate patient medication status at shift change by 50 percent. Reduce the number of delays between dispensing and administering medications by 50 percent.

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, metal 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 MBS switched Ethernet LAN

Physician Education, Community Outreach Program to Prevent Diversion of Prescription Drugs

Appalachian Pain Foundation

Appalachian Pain Foundation
PO Box 3312
Charleston, WV 25333
www.PainCentral.com

Skip Lineberg, Executive Director
Ph: 304-342-6970
Fax: 304-342-6973
Email: Skip@MapleCreative.com

Network Partners:

American Osteopathic Medicine Association, West Virginia University, West Virginia Hospital Association, WVHA—Health Education Foundation.

Project Purpose:

To develop a curriculum for pain management courses to be offered in medical centers throughout the region. APF is also developing educational initiatives, management forums, informational websites and is planning meetings with 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/Project Accomplishments:

Grow membership to self-sustaining levels; validate APF as a regional resource for appropriate and outcome supported pain management; represent to legislative leaders and policy-makers the importance of reasonable assessment and management of chronic pain; create a board of advisors; conduct education seminars (via Webcast) and confer continuing education credits for such activities.

Service Area:

Primary service area includes West Virginia and the Appalachian region.

Services Provided:

The services provided in this project include education; information and referral; administration of an informational website; planning, organizing, and managing events.

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

Robert C. Byrd Center for Rural Health
Joan C. Edwards School of Medicine
1600 Medical Center Drive, Suite 1400
Huntington, WV 25701
http://crh.marshall.edu/

Jennifer Plymale, MA
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Email: Elkins34@marshall.edu

Network Partners:

Walter Reed Army Medical Center, Tug River Health (381 encounters), Lincoln Primary Care Center (30 encounters), JW Endicott MD, Mason County Health Department (759 encounters), Pleasant Valley Hospital, Larry J Harless Community Center (50 encounters), 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/Project Accomplishments:

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 County Health Department: Mason County, Lincoln Primary Care Center: Lincoln County, Larry J. Harless Community Center: Mingo County and Tug River Health Associates: McDowell County

Services Provided:

The services in this project are the development and deployment of a comprehensive chronic disease and colorectal cancer screening program; 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 (April 2007).

Equipment:

V-Tel Galaxy Class video conferencing; H.323 video conferencing is available with a roll-about Polycom ViewStation FX unit, and 384 KB/sISDN-based video conferencing

Transmission:

Dedicated T-1 lines, Internet Protocols (IP)

West Virginia Community Mental Telehealth Project

West Virginia University, Mountaineer Doctor TeleVision (MDTV)

West Virginia University, MDTV
PO Box 9081
Morgantown, WV 26506-9081
http://wvthenet.hsc.wvu.edu

JoAnn Hornsby, MD
Christopher Budig
Phone: 304-293-6945
Fax: 304-293-8565
Email: cbudig@hsc.wvu.edu

Network Partners:

Network formed December 2003 for the following sites: Appalachian Community Health Center, East Ridge Health Systems, FMRS Mental Health Council, Healthways, Logan-Mingo Mental Health, Northwood Health Systems, Prestera Center, Seneca Mental Health, Southern Highlands Mental Health Center, Valley Healthcare, Westbrook Health Services.

Project Purpose:

Provide telemedicine services to the 14 major rural community mental healthcare centers (CMHC) that 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 as well as allow members of the community health education programs through MDTV.

Outcomes Expected/Project Accomplishments:

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.

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:

Tandberg 880 ISDN-IP Codec; 1 Tandberg 6000 codec, 3 Tandberg 2500 codec, 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 kbps bandwidth.

La Crosse Medical Health Science Consortium

La Crosse Medical Health Science Consortium
1300 Badger Street, Suite 3065
La Crosse, WI, 54601
www.uwlax.edu/lmhsc

Joanne Sandvick
Ph: 608-785-5150
Fax: 608-785-5154
Email: sandvick.joan@uwlax.edu

Network Partners:

Gundersen Lutheran Medical System, Western Technical College, Viterbo University, Franciscan Healthcare, 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, Moundview Memorial Hospital, Krohn Clinic, Mile Bluff Clinic, Tri-County Memorial, Boscobel Area Health Care.

Project Purpose:

Develop distance education partnerships among the Consortium's educational institutions, rural hospitals, and clinics. Focus is on delivery through interactive two-way video and Web-based health programs for health professions education and professional development.

Outcomes Expected/Project Accomplishments:

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

Marshfield Clinic TeleHealth Network
1000 N. Oak Avenue
Marshfield WI 54449
http://www.marshfieldclinic.org/telehealth

Nina M. Antoniotti, RN, MBA, Ph.D.
Ph: 715-389-3694
Fax: 715-387-5225
Email: 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/Project Accomplishments:

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 percent of the population lives below the poverty level. 15 percent are disabled, 9.6 percent 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 kbps over proprietary lines, IP video at 384 kbps over proprietary lines, ISDN video at 384 kbps over leased lines.

Marshfield Clinic TeleHealth Network

Marshfield Clinic TeleHealth Network
1000 N. Oak Avenue
Marshfield WI 54449
http://www.marshfieldclinic.org/telehealth

Nina M. Antoniotti, RN, MBA, Ph.D.
Ph: 715-389-3694
Fax: 75-387-5240
Email: antoniotti.nina@marshfieldclinic.org

Network Partners:

22 Marshfield Clinic Rural Health Centers (1998-2007), Indianhead Community Action Agency (10 Head Start Classrooms—start date Jan 2007), Great Lakes Intertribal Council (2 Indian Health Centers—start date Jan 2007), 2 SNFs (2000-2004), 1 School, 1 Jail (2000). Approximately 3000 encounters in 2006 and 15 percent increase expected each year through 2010.

Project Purpose:

Provide preventative dental and health services, case management, and public health services to address the needs of people with chronic conditions such as Diabetes in a variety of settings including rural health clinics, Head Start classrooms, and Native American health centers. Distance education will be provided for health care professionals, patients, and families as well as clinical services.

Outcomes Expected/Project Accomplishments:

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 access to specialty services in remote based and disparate populations with unmet health needs.

Service Area:

Marshfield Clinic Centers: Marshfield (Wood), Ladysmith (Rusk), Park Falls (Price), Minocqua (Oneida), Phillips (Price), Radisson (Sawyer), Chippewa Falls (Chippewa), Rice Lake (Barron), Wausau (Marathon), Eau Claire (Eau Claire), Menomonie (Menomonie), WI Rapids (Portage); County Jail, Phillips, WI (Price); Marshfield Clinic Research Foundation, Marshfield, WI, (Wood). CESA 11 Dental Clinic, Hayward, WI (Sawyer), Flambeau Hospital, Park Falls, WI (Price), Satterwhite Dental Center, Phillips , WI (Price). Indianhead Community Action Agency (Sawyer, Rusk, Barron, Clark, Wood, Portage); Peter Christensen Indian Health Center (Vilas); Sokoagon Indian Health Center (Forest).

Services Provided:

Dermatology, Psychiatry, Child Psychiatry, Psychotherapy, Oncology, Cardiology, Speech Pathology, Orthopedics, Pathology, Pharmacy, Physical Therapy, Nutrition—Diabetes Mgt., Nutrition—all others, Diabetes Management (RN), Endocrinology, Neurology, Pain Management, ENT, Pulmonary Medicine, Plastic Surgery, Long Term Care, School Telehealth, Cancer, Prostate, Diabetes, and Chronic Pain Support Group, Research Oncology, Infectious Diseases, Occupational Medicine, Wound Therapy, Anticoagulation Management, Nurse Triage, and Diabetes Management.

Equipment:

Primarily a Polycom network for patient sites and VCON products on the PC for providers. AMD patient peripherals with the exception of patient exam cameras—use commercially available high-end video camcorders. Standard TV monitors and video switchers in exam rooms. Video bridge—ACCORD.

Transmission:

IP video at 512 kbps over proprietary lines, IP video at 384 kbps over proprietary lines, ISDN video at 384 kbps over leased lines.

Memorial Hospital of Laramie County dba Cheyenne Regional Medical Center

Cheyenne Regional Medical Center
214 E.23rd Street
Cheyenne,WY 82001
www.crmcwy.org

Dana K. Barnett
Ph: 307-633-6083
Fax: 307-633-3575
Email: dana.barnett@crmcwy.org

Network Partners:

Platte County Memorial Hospital, Wheatland, WY; Community Hospital, Torrington, WY; Ivinson 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/Project Accomplishments:

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, and public InterNet.

WYOMING, Laramie County — CMP FY 04

Wyoming Network for Telehealth (WyNETTE)

Wyoming Department of Health

Community & Rural Health Division
Office of Telemedicine/Telehealth
6101 Yellowstone Rd., Suite 420
Cheyenne WY 82001
http://wdh.state.wy.us/telemed
www.wyomingtelehealth.org

Rex Gatenbein, Ph.D.
Ph: 307-638-4515
Fax: 307-638-4612
Email: rex@uwyo.edu

Network Partners:

Center for Rural Health Research and Education, University of Wyoming, Institute for Rural Health, Idaho State University, VHA, Wyoming: Southeastern Wyoming Telehealth Network, Cheyenne Regional Medical Center; Northwest Regional Telehealth Resource Center; and other community partners and locations to be determined

Project Purpose:

Improve access to and quality of Wyoming's health care through the application of technology. Use a three-pronged approach: (a) increase care opportunities through telemedicine; (b) increase the number, types, and skills of health professionals through distance delivery of health care education; and (c) increase access to information to support direct care and the administration of care through informatics.

Outcomes Expected/Project Accomplishments:

Cultural change through increased use of telemedicine, distance education, and informatics among health-care providers in Wyoming. Gather encounter data from initial pilots, as well as evaluate access to services and quality of a care through recipient and provider surveys. Monitor representative sites for client health status and quality of care, implicit/explicit review of processes and outcomes.

Service Area:

The entire State of Wyoming (23 counties) is served by this project. 18 of 23 counties are designated or contain service areas designated as HPSAs. 3 counties are designated MUAs as well. All 23 counties are designated as mental health PSAs. Pilot project areas represent a variety of geographic and demographic locations. Charter Member, Northwest Regional Telehealth Resource Center.

Services Provided:

Web portal provides telehealth information and resources. Provide access for all hospitals and clinics in the state (37) to on-line, evidence-based medical library; real time primary care follow-up; telemental health; home health monitoring. Anticipated services include videoconference and Web-based continuing education, store and forward applications, and legal and policy resources and information.

Equipment:

Includes 8 Polycom VSX 3000 units; (1) Tandberg Intern, (4) 1700 MXP, and (2) 1500 MX units; 1 Dell Web server; 4 Dell PCs.

Transmission:

Includes Internet, telephone lines (POTS), and commercial grade DSL services. 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
Gbps	Gigabits per second
HF	High frequency
HPSA	Health Professional(s) Shortage Area
IP	Internet Protocol
ISDN	Integrated Services Digital Network
K	Kilo
Kbps	Kilobits per second
LAN	Local Area Network
MAN	Metropolitan Area Network
MB	Megabyte
Mbps	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 electrical signal that varies constantly in voltage, unlike a digital signal which varies between two constant values (typically 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)

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 networks. 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 (Mbps) 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 kilobits/second (Kbps) channels and one clear 16 kbps 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 Megbits/sec (T3); voice, data, and/or video communications at rates greater than 1.544 Megabits/sec (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 during 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 link 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. 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 Kbps for DS0, 1.544 Mbps for DS1, and 45 Mbps 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.

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 Mbps 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 Mbps 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 Mbps.

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 Mbps (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 (Gbps)

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=1536Kbit/s, H0=384Kbit/s and H12= 1920Kbit/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 that are 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 (Kbps)

A measure of bandwidth and rate of data flow in digital transmission. One Kbps 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 (Mbps)

A measure of bandwidth and rate of data flow in digital transmission. One Mbps 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,
    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,
    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;
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, or
    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 Kbs. 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 multiport 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 which 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 (Gbs) of data.

Peripheral

Any device that is attached to a computer externally. Scanners, mouse pointers, printers, keyboards, and monitors are all examples of peripherals. Scales, blood pressure cuffs, spyrometers, 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 communicating 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; or 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 that is designated in North America as having a 23B+D channels, in which all circuit-switched B channels operate at 64 kb/s, and 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, or possibly 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. Also known as the process by which one transfers 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 Mbps. 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 Mbps. 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 has video teleconference capability, is usually configured as a small desktop unit, designed for one operator, and is a single, integrated unit.

Video teleconference (ing) (VTC)
A teleconference that includes video communications, specifically 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 inter-networks 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. The world is designed by the computer and viewed through a special headset that responds to head movements while a glove responds to hand movements. For example, while in a virtual room a person may move their 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:

1. ACCdotCom, Glossary of telecommunications and internetworking terms, http://www.accsystems.com/glossary.htm, Accessed March 16, 2004.

2. American College of Physicians, Telemedicine glossary, http://www.acponline.org/computer/telemedicine/glossary.htm, Accessed March 16, 2004.

3. American National Standard for Telecommunications, Telecom glossary 2000, http://www.atis.org/tg2k/, Accessed March 23, 2004.

4. TelehealthNet, Telehealth and e-health glossary, http://telehealth.net/glossary.html, Accessed March 16, 2004.

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 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	Key Data	Results Reporting	Computerized Provider Order Entry	Electronic Integrated Medical Record	Reporting and Population Health Management	Scheduling Management	Electronic Billing	
AK	**Alaska Native Tribal Health Consortium**												
	Continued Advancement of Telehealth Capacity in Alaska	•	•			•	•		•	•			This project supports development of an Alaska RHIO
	The Summative Telemedicine Evaluation Project												N/A
	Alaska Psychiatric Institute (API)												
	API TeleBehavioral Health Project	•	•									•	No.
AL	**University of South Alabama**												
	Center for Strategic Health Innovation (CSHI) RMEDE/ BioTrac Project								•	•			Patient-centric data exchange platform capability.
	Center for Strategic Health Innovation (CSHI) Traditional Telemedicine	•	•	•									No.
AR	**University of Arkansas for Medical Sciences**												
	South Arkansas Integrated Telehealth Oncology Program	•	•	•	•	•	•	•	•	•	•	•	No.
	Telehealth for KIDS (Kids in Delta Schools)	•	•	•									No, but Arkansas is in planning stages of statewide telemedicine consortium that will expand to include several EMR pilot sites
AZ	**Arizona Board of Regents, University of Arizona**												
	Arizona Diabetes Virtual Center for Excellence (ADVICE)	•	•	•									No.
	Institute for Advanced Telemedicine and Telehealth (THealth)		•	•									No.
	Maricopa County, Arizona												
	Correctional Health Services Telemedicine Initiative	•	•	•									No.
CA	**Familia Unida Living with Multiple Sclerosis**												
	Telehealth Grant												N/A
	California Telemedicine and eHealth Center												
	Western Regional Telehealth Resource Center												N/A
	Multi-Dimensional Imaging, Inc.												
	Telemedicine for Improved Health Care and Education	•				•	•	•			•	•	No.
	Northern Sierra Rural Health Network												
	Telehealth Network Grant Program	•	•	•									No.
	San Joaquin County Health Care Services												
	Automated Drug Dispensing Medication Administration System					•		•					No.

Components of 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	Key Data	Results Reporting	Computerized Provider Order Entry	Electronic Integrated Medical Record	Reporting and Population Health Management	Scheduling Management	Electronic Billing	
CO	**Avista Adventist Hospital**												
	Clinical Integration Through Health Informatics					•	•	•	•	•	•	•	Yes: health disparities and planned care consortium.
	University of Colorado Health Sciences Center												
	Native Telehealth Outreach and Technical Assistance Program			•									N/A
DC	**American National Red Cross**												
	Congressionally Mandated Telehealth Grants												N/A
	Center for Telehealth and E-Health Law												
	National Telehealth Resource Center												N/A
	Foundation For eHealth Initiative												
	Connecting Communities for Better Health Program					•	•	•	•	•	•	•	Yes.
	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 (CORHIO)								•				Yes.
	HealthBridge, OH					•	•	•	•	•	•	•	Yes.
	Indiana Health Information Exchange					•	•						
	Maryland/DC Collaborative for Healthcare Information Technology, MD												No.
	Massachusetts Health Data Consortium (MA-SHARE), MA					•		•					Yes.
	National Institute for Medical Informatics, WI					•		•					Wisconsin Health Information Exchange
	Santa Barbara County Care Data Exchange, CA					•	•						Yes.
	St. Joseph's Hospital Foundation (WHATCOM HIE), WA					•	•	•	•	•	•	•	Yes.
	Taconic Educational Research Fund, NY					•	•	•			•	•	Yes.
FL	**BayCare Health System**												
	Electronic Medication and Clinical Services Ordering System	•					•	•	•				No.
	Florida Cancer Research Cooperative, University of South Florida												
	Clinical Trial Patient/Physician Information & Education Program												N/A
	University of Florida College of Dentistry (UFCD)												
	University of Florida College of Dentistry (UFCD)		•	•				•					No.

Components of 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	Key Data	Results Reporting	Computerized Provider Order Entry	Electronic Integrated Medical Record	Reporting and Population Health Management	Scheduling Management	Electronic Billing	
GA	**Ware County Health Department**												
	Rural Health Telemedicine Grant Program	•	•	•									No.
	Ware County Health Department												
	Southeast Telehealth Network Program	•	•	•									No.
HI	**Hawaii Primary Care Association (HPCA)**												
	The Hawai'i CHC Telehealth Network Project	•	•			•		•	•	•	•	•	Yes.
	The Queen's Medical Center												
	Hawaii Neuroscience Telehealth Network	•	•			•	•	•	•				No.
IA	**Iowa Chronic Care Consortium**												
	Iowa Medicaid Population Disease Management Demonstration	•				•	•			•			No.
	Mercy Foundation												
	Midwest Rural Telemedicine Consortium	•	•	•									No.
ID	**Clearwater Valley Hospital and Clinics, Inc.**												
	Clearwater Valley Hospital: Electronic Medical Records					•	•	•	•			•	Yes/shared info between primary care clinics and hospitals
	Idaho State University, Institute of Rural Health												
	Telehealth Idaho	•	•	•	•	•	•	•	•	•	•	•	Yes.
	North Idaho Rural Health Consortium (NIRHC)												
	Expanding Telehealth to North Idaho Districts (EXTEND)	•	•	•		•	•	•	•		•	•	Yes. Working with regional and local RHIOs.
	Public Hospital Cooperative, Inc.												
	Cooperative Telehealth Network	•	•	•									No.
IL	**Illinois Department of Human Services**												
	Illinois Developmental Disabilities Telehealth Network and Services: A Program Dedicated to Optimizing Health and Support of Community Living	•	•	•									Yes. Community Agency Enhancement
	The National Council of State Boards of Nursing												
	Moving Toward Portability: Uniform Core Licensure Standards for Nursing												N/A
	Saint John's Hospital												
	Neonatal Telehealth Project in Rural Illinois Located at the Perinatal Center		•										
	Southern Illinois University School of Medicine												
	Downstate Regional Telehealth Project	•	•	•	•	•	•	•	•	•	•	•	No.

Components of 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	Key Data	Results Reporting	Computerized Provider Order Entry	Electronic Integrated Medical Record	Reporting and Population Health Management	Scheduling Management	Electronic Billing	
IN	**James Whitcomb Riley Hospital for Children**												
	Riley Connections	•	•	•									No.
	Health & Hospital Corporation of Marion County												
	Congressionally-Mandated Telehealth Grants	•				•	•						Yes. Local Health Information Exchange Organization.
KS	**University of Kansas Medical Center**												
	Sustainability and Cost Benefit Evaluation of the Kansas Telehealth Network	•	•	•									No.
	Telehealth Access and Cost Benefit in Kansas	•	•	•							•	•	No.
KY	**The James B. Haggin Memorial Hospital**												
	PACS (Picture Archiving and Communication System)					•	•						No.
	Marcum & Wallace Memorial Hospital												
	Teleradiology Enhancement Project	•					•						Yes/radiology procedures and reports access to physicians and radiologists.
	New Horizons Health Systems, Inc.												
	Information Technology Development and Improvement					•	•	•	•	•	•	•	No, but planned for future.
	University of Kentucky Research Foundation—Kentucky TeleCare												
	Improving Health Outcomes for Children in Rural Kentucky Schools	•	•	•	•	•	•	•	•		•	•	Yes. Diabetes collaborative study, Heart Disease collaborative study
MA	**Massachusetts College of Pharmacy and Health Sciences**												
	Worcester Campus Distance Learning Initiative		•	•	•								No.
	UMass Memorial Medical Center												
	PACS Teleradiology Project	•				•	•						Yes. Radiological images and reports (in future).
ME	**Eastern Maine Healthcare Systems**												
	Improving Rural Maine's Critical Access to Emergency & Chronic Disease Care Through Telehealth/Monitoring	•		•					•				Yes/Maine InfoNet in development, EMHS Together Project with shared EMR
	Regional Medical Center at Lubec												
	Northeast Telehealth Resource Center												N/A
	Regional Medical Center at Lubec												
	Maine Nursing Home Telehealth Network	•	•	•			•						No.

Components of 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	Key Data	Results Reporting	Computerized Provider Order Entry	Electronic Integrated Medical Record	Reporting and Population Health Management	Scheduling Management	Electronic Billing	
MI	**Altarum Institute**												
	Concepts for a Michigan Health Information Network (MiHIN)												No, but planned for the future.
	Hurley Medical Center												
	Clinical Information System Replacement Project					•	•	•	•		•		No.
	Marquette General Hospital												
	Midwest Alliance for Telehealth and Technologies Resources		•	•									No.
	Michigan State University												
	Telehospice in Mid-Michigan	•	•										No.
	Western Michigan University												
	The Application of Tele-Allied Health in Rural Counties in Southwest Lower Michigan		•	•	•								No.
MN	**Fairview Health Services**												
	Ambulatory Electronic Medical Record System – Twin Cities Metropolitan Care Systems					•	•	•	•	•	•	•	Yes/Local record sharing with hospitals and independent physician practices.
	University of Minnesota												
	Fairview – University of Minnesota Telemedicine Network	•							•		•		Yes, Sisunet.
	Tri-County Hospital, Inc.												
	Telehealth Network Grant Program	•	•	•							•		Yes. SISU Medical Systems
MO	**Citizen's Memorial Hospital District**												
	Project Infocare: In-Home Telemanagement	•				•	•	•	•	•	•	•	No.
MT	**Benefis Healthcare Foundation**												
	NMHA/REACH Telehealth Network Development Project	•	•	•									No.
	Billings Clinic Foundation												
	Effect of an Integrated CIS on Inpatient and post-Discharge Medication Administration Errors and Chronic Disease Management							•	•				No.
	Deaconess Billings Clinic Foundation												
	Revolutionizing Diabetes Care at Billings Clinic: A Model for Chronic Disease Care					•	•		•	•			Yes/diabetes collaborative research study.
	Saint Patrick Hospital & Health Foundation												
	Montana Cardiology Telemedicine Network	•		•			•		•				No.
	Saint Patrick Hospital & Health Foundation												
	Bringing Healthcare Home	•		•			•		•				No

Components of 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	Key Data	Results Reporting	Computerized Provider Order Entry	Electronic Integrated Medical Record	Reporting and Population Health Management	Scheduling Management	Electronic Billing	
MT	**Saint Vincent Healthcare Foundation**												
	Mansfield Health Education Center (MHEC)		•	•									No.
	Saint Vincent Healthcare Foundation												
	Northwest Regional Telehealth Resource Center		•										No, but members engaged in RHIOs in specific states
NC	**Duke University Medical Center**												
	Patient Inclusion in a Community-Based Telehealth Network					•			•	•			Yes. Collaborative research study with exchange between primary care providers, care managers and government agencies.
	Patient Participation in a Rural Community-Based Telehealth Network					•			•	•			Yes. Collaborative research study with exchange between primary care providers, care managers and government agencies.
	Educational and Research Consortium of Western Carolinas												
	Western North Carolina Data Link Project					•	•		•				Yes. Electronic exchange of patient demographics, lab results, microbiology results, medications, radiology reports, discharge summaries and histories & physicals between 16 independent hospitals.
ND	**North Dakota State University College of Pharmacy, Nursing, and Allied Sciences**												
	North Dakota Telepharmacy Project	•											No.
NE	**Good Samaritan Hospital Foundation**												
	Mid-Nebraska Telemedicine Network(MNTN)	•	•	•		•	•	•	•	•	•	•	No.
NJ	**Hackensack University Medical Center**												
	Implementation of Oncology Patient Management System					•			•				No.
	Saint Peter's University Hospital												
	Medical Technology Center for Infants and Children												N/A
NM	**New Mexico Human Services Department**												
	New Mexico Tele-Behavioral Health Improvement Project	•		•									No.
	The University of New Mexico Health Sciences Center												
	Rural Health Telemedicine Program	•	•	•		•					•		No.
NV	**Nevada Rural Hospital Partners Foundation**												
	Digital Imaging System for Rural Nevada						•						No.
	University of Nevada, Reno												
	Biomedical Imaging Laboratory												N/A

Components of 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	Key Data	Results Reporting	Computerized Provider Order Entry	Electronic Integrated Medical Record	Reporting and Population Health Management	Scheduling Management	Electronic Billing	
NY	**Community Health Care Services Foundation, Inc.**												
	Introducing Home Telehealth in New York's 20th Congressional District	•											No.
	Genesee Gateway Local Development Corporation, Inc.												
	Upstate New York Telemedicine Study	•				•	•			•			No.
	Integrated Community Alternatives Network, Inc.												
	Foster Care Tracker and Assessment Tool	•				•							No.
	Long Island Association for Millennium Center for Convergent Technologies												
	An Electronic Clinical Trial System to Reduce Drug Development Costs					•				•			Yes. Project partners use available existing communications.
	Montefiore Medical Center												
	Electronic Medical Records Expansion	•				•	•	•	•	•	•	•	No, but in progress.
	New York Presbyterian Hospital												
	Systems Technology Interfacing Teaching and Community Hospitals (STITCH)												Yes. RHIO among 4 hospital sites and 14 ambulatory care clinics.
	Research Foundation, State University of New York (SUNY) at Buffalo												
	Telehealth New York	•	•			•	•			•			Yes. Western New York Health e-Link includes e-prescribing, April 2007.
	The Rosalind and Joseph Gurwin Jewish Geriatric Center of Long Island												
	Demonstration of Implementation of Electronic Medical Record in Skilled Nursing Facility					•	•	•	•				No, but currently in development.
OH	**Case Western Reserve University**												
	NetWellness												N/A
	Children's Hospital Medical Center of Akron												
	Tele-Health-Kids	•											No.
	Cincinnati Children's Hospital Medical Center												
	Pursuing Perfection—Transforming Health Care Delivery		•			•	•				•		No.
	Ohio Board of Regents												
	Medical Collaboration Network	•	•	•	•								No.
	Ohio State University Research Foundation (for the Ohio Supercomputer Center)												
	Computational Approaches to Research on Cancer in Children and Others					•			•				No.
	Southern Consortium for Children												
	Southern Ohio Telepsychiatric Network	•		•									No.

Components of 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	Key Data	Results Reporting	Computerized Provider Order Entry	Electronic Integrated Medical Record	Reporting and Population Health Management	Scheduling Management	Electronic Billing	
OK	**INTEGRIS Health, Inc.**												
	INTEGRIS TeleHealth	•	•	•	•	•	•	•	•				No.
	OSU Center for Rural Health												
	Rural Oklahoma Telemedicine Service Expansion	•		•									No, though we do have plans to develop.
PA	**Community Nurses Home Health and Hospice, Inc.**												
	Home Telehealth	•				•	•	•	•	•	•	•	No.
	Geisinger Clinic												
	Developing a Stoke Care Educational Program for Rural Pennsylvania	•		•					•				Yes. Working with an AHRQ grant to develop.
	Good Samaritan Hospital Regional Medical Center												
	Schuylkill Alliance for Health Care Access												N/A
	Home Nursing Agency & Visiting Nurse Association												
	Telehealth Network Grant	•											No.
	Jewish Healthcare Foundation												
	Reinventing Healthcare: The Application of the Pittsburgh Regional Healthcare Initiative's Perfecting Patient Care (PPC) System to Chronic Medical Conditions		•	•					•	•			No.
	Magee Rehabilitation Hospital												
	Virtual Reality Technology	·											No.
	Mercy Health Partners												
	Using Information Technology to Enhance Patient Safety					·	·		·				Yes—Available to physicians & clinicians in office or home.
	Mercy Hospital of Pittsburgh												
	Mobile Clinician Project					•							No.
	Millcreek Community Hospital												
	Millcreek Health System Informatics Project					•	•	•	•	•	•	•	Yes.
	Oil Region Alliance of Business, Industry, & Tourism												
	The Venango Center for Healthcare Careers (VCHC)		•										No.
	Pennsylvania College of Optometry												
	Urban Ophthalmic Telehealth	•	•			•							No.
	Penn State University												
	Digital Informatics and Communications System	•		•									No.
	Pennsylvania State University College of Medicine												
	Physician-Scientist Initiative		•	•	•								Clinical Trials Network
	Pinnacle Health System												
	Reducing Variability to Deliver Safe Care					•	•	•	•	•	•	•	Yes. Dauphin County Health Collaborative.

Components of 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	Key Data	Results Reporting	Computerized Provider Order Entry	Electronic Integrated Medical Record	Reporting and Population Health Management	Scheduling Management	Electronic Billing	
PA	**Safe Harbor Behavioral Health**												
	Safe Harbor Behavioral Health Telemedicine Program	•											No.
	SUN Home Health Services												
	SUN Home Health Services Network	•											No.
	Susquehanna Health System												
	Regional Electronic Medical Record					•	•	•	•	•	•	•	No.
	Thomas Jefferson University												
	Integrative Medicine Informatics Feasibility Project		•										No.
	Tyrone Hospital												
	The Tyrone Hospital Health Information Network					•	•	•	•				No.
	Wayne Memorial Hospital												
	Improving Medication and Patient Safety								•	•	•	•	No.
RI	**Family Resources Community Action**												
	HIV/AIDS Comprehensive Psychosocial Support Project	•											No.
	Kent County Visiting Nurse Association d/b/a VNA of Care New England												
	Advancing Point-of-Care Technology at VNA of Care New England					•			•		•	•	No.
	Increasing Access to Teleheatlh—Phase II	•											No.
	Thundermist Health Center												
	Thundermist Health Center Electronic Health Record					•	•	•	•	•	•		Yes. RI RHIO, RIHCA Data Warehouse, HRSA HD Collaboratives, RI DOH Diabetes Control Program.
SC	**Advanced Technology Institute (ATI)**												
	Healthcare and Emergency Awareness Response for Telehealth (HEART) Phase II						•				•		No.
	Voorhees College												
	Developing a Telehealth Infrastructure to Address Health Disparities Through Education and Training		•		•								No.
SD	**Avera Health**												
	Avera Rural and Frontier Disease Management Telehealth Network	•	•	•									No.
	Great Plains Telehealth Resource and Assistance Center (TRAC)		•										No.
TN	**University Health System, Inc.**												
	High-Risk Newborn Services Project	•		•									No.
	University of Tennessee Health Science Center												
	Delta Health Partnership	•	•	•		•							Yes.
	Mid-Appalachia Telehealth Project	•	•	•									Yes.
	Mid-South Telehealth Consortium	•	•	•									Yes.
	Telehealth for Diabetic Patients in Hispanic and Underserved Rural Communities		•	•									Yes.

Components of Project

ST	Grantee	Clinical Telemedicine Services	Distance Learning: Professional Development – Non-Credit	Distance Learning: Professional Development – Credit (e.g. CME)	Distance Learning: Academic – Degree Granting	Information Systems/Electronic Health Records (**See Category Definitions Below): Key Data	Results Reporting	Computerized Provider Order Entry	Electronic Integrated Medical Record	Reporting and Population Health Management	Scheduling Management	Electronic Billing	Health Information Exchange Network / Other (please specify)
TX	**Federation of State Medical Boards of the United States, Inc.**												
	Medical Licensure Portability to Facilitate Multi-State Telehealth Practice												N/A
	Harris County Hospital District												
	Specialty Access Through Telemedicine (SA++)	•											No.
	University of Texas Health Science Center at San Antonio												
	Diabetes Risk Reduction via Community Based Telemedicine (DiRReCT)	•		•		•				•			No.
	University of Texas Medical Branch Center To Eliminate Health Disparities												
	The Texas Telehealth Disparities Network	•		•		•			•	•			Yes.
UT	**Association for Utah Community Health (AUCH)**												
	Association for Utah Community Health Telehealth Program	•	•										No.
	Dr. Ezekiel R. Dumke College of Health Professions												
	Health Opportunity Professional Exploration (HOPE)			•	•								
	Intermountain Healthcare												
	HRSA Telemedicine Pilot Program for Interpreting Services for the Deaf	•											Yes. Intermountain Healthcare is a fully integrated delivery system, which includes doctors, hospitals, clinics, and a health plan.
	University of Utah												
	Utah Telehealth Network Comprehensive Teleheatlh Services	•	•	•	•	•	•					•	No.
VA	**University of Virginia**												
	Southwest Virginia Alliance for Telemedicine	•	•	•									Yes. For patient education, diabetes, smoking cessation, obesity, cancer, nutrition.
VT	**The University of Vermont (UVM)**												
	Pediatric Teletrauma Project	•	•										Yes. Currently partnering with Vermont Information Technology Leaders.
WA	**Inland Northwest Health Services**												
	Northwest Telehealth--TeleER	•	•			•	•	•	•	•	•	•	Yes (RHIO).
	Northwest Telehealth--Telepharmacy	•											Yes (RHIO).
	Yakima Valley Memorial Hospital												
	Bedside Medication Management (MAR) System								•				No.
	University of Washington												
	Native People for Cancer Control Telehealth Network (NPCCTN)	•	•	•		•	•						No.

Components of 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	Key Data	Results Reporting	Computerized Provider Order Entry	Electronic Integrated Medical Record	Reporting and Population Health Management	Scheduling Management	Electronic Billing	
WI	**La Crosse Medical Health Science Consortium**												
	Virtual Population Health Centers in the Rural Midwest	•		•									Yes. Diabetes collaborative research study.
	Marshfield Clinic Telehealth Network												
	Marshfield Clinic Telehealth Network	•				•	•	•	•	•	•	•	Yes. Provides EMR to other organizations that support outreach, telepathology, and other clinical applications.
	Marshfield Clinic Telehealth Network												
	Marshfield Clinic Telehealth Network	•				•	•	•	•	•	•	•	Yes. Provides EMR to other organizations that support outreach, telepathology, and other clinical applications.
WV	**Appalachian Pain Foundation**												
	Physician Education, Community Outreach Program to Prevent Diversion of Prescription Drugs		•	•									No.
	Robert C. Byrd Center for Rural Health												
	Marshall University Southern West Virginia Rural Outreach Project	•	•	•		•							Yes, participating in development of network.
	West Virginia University, Mountaineer Doctor TeleVision (MDTV)												
	West Virginia Community Mental Telehealth Project	•	•	•									No.
WY	**Memorial Hospital of Laramie County dba Cheyenne Regional Medical Center**												
	Regional Expansion of Telehealth and Distance Learning	•	•	•									No.
	Wyoming Department of Health												
	Wyoming Network for Telehealth (WyNETTE)	•	•	•									Yes. Tumor board beginning with participation in Montana group.

**** Electronic Health Records Definitions**

Key Data	**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.**
Results Reporting	**Includes Laboratory, Microbiology, Pathology, Radiology Reports, and Consults.**
Computerized Provider Order Entry	**Includes availability of Electronic Prescribing, Laboratory, Microbiology, Pathology, Radiology, Nursing, Supplies, Consults, and Ancillary.**
Electronic Integrated Medical Record	**Defined as the extent to which a single record integrates data from different sources within an institution for each patient.**
Reporting and Population Health Management	**Includes Patient Safety and Quality Reporting (*Routine reporting of key quality indicators to clinicians, External accountability reporting, and Ad hoc reporting*), Public Health Reporting (*Reportable diseases and Immunization*), De-Identifying Data, and Disease Registries.**
Scheduling Management	**Includes Appointments, Admissions, Surgery/procedure scheduling.**
Electronic Billing	**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**																										
	Continued Advancement of Telehealth Capacity in Alaska			P/3		P/3		I/1, P/3																			Audiology: I/1, P/3
	The Summative Telemedicine Evaluation Project																										N/A
	Alaska Psychiatric Institute (API)																										
	API TeleBehavioral Health Project										I/7, P/4																
AL	**University of South Alabama**																										
	Center for Strategic Health Innovation (CSHI) RMEDE/BioTrac Project				I/78																		I/78				
	Center for Strategic Health Innovation (CSHI) Traditional Telemedicine										I/2																HIV/AIDS I/2

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)
AR	**University of Arkansas for Medical Sciences**																										
	South Arkansas Integrated Telehealth Oncology Program			I/23	I/23	I	I/23		P/1		I/23, P/1	I/15	I/23	I/23	I/23			I/15	I/23, P/1		I/33		P/20		I/23		
	Telehealth for KIDS (Kids in Delta Schools)		P/2		P/2			P/2			P/2		P/2					P/2	P/2								
AZ	**Arizona Board of Regents, University of Arizona**																										
	Arizona Diabetes Virtual Center for Excellence (ADVICE)				I/5								I/3														Ophthalmology: I/1 Podiatry: I/2
	Institute for Advanced Telemedicine and Telehealth (THealth)																										N/A
	Maricopa County																										
	Correctional Health Services Telemedicine Initiative	I/7	I/7			I/7		I/7	I/7		I/2								P/9			PT, I/1				I/8	
CA	**California Telemedicine and eHealth Center**																										
	Western Regional Telehealth Resource Center																										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	**Familia Unida Living with Multiple Sclerosis**																										
	Telehealth Grant																										N/A
	Multi-Dimensional Imaging, Inc.																										
	Telemedicine for Improved Health Care and Education																				I/6						Behavioral Medicine: P/6
	Northern Sierra Rural Health Network																										
	Telehealth Network Grant Program					P/6					P/5, I/29		P/5, I/29														
	San Joaquin County Health Care Services																										
	Automated Drug Dispensing Medication Administration System																		P/2							P/2	Nursing Stations: P/10
CO	**Avista Adventist Hospital**																										
	Clinical Integration Through Health Informatics	P/9, I/3	P/9, I/3		P/9, I/3						P/3		P/9, I/3	P/2		P/2		P/4	P/3		P/1	P/2				P/1	Acute Hospital: P/1; Dental: P/1

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)
CO	**University of Colorado Health Sciences Center**																										
	Native Telehealth Outreach and Technical Assistance Program																										N/A
DC	**American National Red Cross**																										
	Congressionally Mandated Telehealth Grants																										N/A
	Center for Telehealth and E-Health Law																										
	National Telehealth Resource Center																										N/A
	Foundation For eHealth Initiative																										
	Connecting Communities for Better Health Program																										N/A
FL	**Bay Care Health Systems**																										
	Electronic Medication and Clinical Services Ordering Subsystem			P/9	P/9						P/4			P/6	P/6	P/6			P/9		I/9				P/9	I/6, P/1	N/A
	Florida Cancer Research Cooperative, University of South Florida																										
	Clinical Trial Patient/Physician Information and Education Program																										N/A
	University of Florida College of Dentistry (UFCD)																										
	University of Florida College of Dentistry (UFCD)																										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)
GA	**Ware County Health Department**																										
	Rural Health Telemedicine Grant Program	I/2	I/1			P/1			I/6					I/1													HIV/AIDS: I/5, P/1 Genetics: I/2
	Southeast Telehealth Network Program	I/1	I/1						I/5					I/1													I/1 Adult Sickle Cell I/2 Genetics
HI	**Hawai'i Primary Care Association (HPCA)**																										
	The Hawai'i CHC Telehealth Network Project					I/3																					
	The Queen's Medical Center																										
	Hawaii Neuroscience Telehealth Network																									P/2	Emergency Neurology P/2
IA	**Iowa Chronic Care Consortium**																										
	Iowa Medicaid Population Disease Management Demonstration			I/6																							Depression screening/referral

Major Services

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IA	**Mercy Foundation**																										
	Midwest Rural Telemedicine Consortium			I/3		I/1, P/3					P/4										I/1, P/2		I/1				Nephrology: I/3, P/3
ID	**Clearwater Valley Hospital and Clinics, Inc.**																										
	Clearwater Valley Hospital: Electronic Medical Records																										N/A
	Idaho State University, Institute of Rural Health																										
	Telehealth Idaho										I/4								I/3, P/1								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								I/3		I/5	OT, PT: I/6					Pathology: I/6

Major Services

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ID	**Public Hospital Cooperative, Inc.**																										
	Cooperative Telehealth Network (CTN)										P/14										P/14							
IL	**Illinois Department of Human Services**																										
	Illinois Developmental Disabilities Telehealth Network and Services: A Program Dedicated to Optimizing Health and Support of Community Living				P/4						P/4																
	The National Council of State Boards of Nursing																										
	Moving Toward Portability: Uniform Core Licensure Standards for Nursing																										N/A
	Saint John's Hospital																										
	Neonatal Telehealth Project in Rural Illinois Located at the Perinatal Center											P/10															
	Southern Illinois University School of Medicine																										
	Downstate Illinois Regional Telehealth Project			I/1		I/3					I/4				I/2			P/2			I/7		I/10				Neurology: I/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)
IN	**James Whitcomb Riley Hospital for Children**																										
	Riley Connections			I/1	I/1	I/1, P/2	I/1		P/1		I/3, P/1	I/2			P/1	P/1		I/4, P/2		I/1	I/1	p/2			I/3	P/1	Urology: I/3 Neurology: I/1
	Health & Hospital Corporation of Marion County																										
	Congressionally-Mandated Teleheatlh Grants																				I/7						
KS	**University of Kansas Medical Center**																										
	Sustainability and Cost Benefit Evaluation of the Kansas Telehealth Network			I/2	I/3						I/7				I/2	P/1	I/2	I/6				PT I/2 SLP I/1					Wound Care: I/1
	Telehealth Access and Cost Benefit in Kansas			I/2, P/1	I/2		I/2, P/2				I/9, P/3				I/2, P/1		I/2, P/1	I/7, P/5				PT 1/2 SLP I/1		I/2			

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)
KY	**The James B. Haggin Memorial Hospital**																										
	PACS (Picture Archiving and Communication System)																										N/A
	Marcum & Wallace Memorial Hospital																										
	Teleradiology Enhancement Project																				P/3						
	New Horizons Health Systems, Inc.																										
	Information Technology Development and Improvement																										N/A
	University of Kentucky Research Foundation—Kentucky TeleCare																										
	Improving Health Outcomes for Children in Rural Kentucky Schools		I/5	I/4	I/5	I/13	I/3	I/1	I/1		I/14	I/2	I/6		I/3		I/2	I/4			I/2			I/1	I/15		
MA	**Massachusetts College of Pharmacy and Health Sciences**																										
	Worcester Campus Distance Learning Initiative																										N/A
	UMass Memorial Medical Center																										
	PACS Teleradiology Project																				I/6, P/6						

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)
ME	**Eastern Maine Healthcare Systems**																										
	Improving Rural Maine's Critical Access to Emergency & Chronic Disease Care Through Telehealth/Monitoring				P/2						P/4															P/4, I/3	
	Regional Medical Center at Lubec																										
	Maine Nursing Home Telehealth Network	P/5, I/6	P/5, I/6			P/6, I/0					P/5, I/1						P/5, I/6			P/5, I/0		OT: P/6, I/6					Wound Care P/6, I/6
	Northeast Telehealth Resource Center																										N/A
MI	**Altarum Institute**																										
	Concepts for a Michigan Health Information Network (MiHIN)																										N/A
	Hurley Medical Center																										
	Clinical Information System Replacement Project																										N/A
	Marquette General Hospital																										
	Midwest Alliance for Telehealth and Technologies Resources																										N/A
	Michigan State University																										
	Telehospice in Mid-Michigan																P/18						P/18				Palliative Care: P/18 Bereavement Care: P/18 Caregivers support: P/18

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)
MI	**Western Michigan University**																										
	The Application of Tele-Allied Health in Rural Counties in Southwest Lower Michigan																										N/A
MN	**Fairview Health Services**																										
	Ambulatory Electronic Medical Record System – Twin Cities Metropolitan Care Systems																										N/A
	Tri-County Hospital																										
	Telehealth Network Grant Program					P/1					P/1		P/1		P/1	P/1											Wound Care: P/1 Gastroenterology: P/1 Community Behavioral Health Hospital: P/1
	University of Minnesota																										
	Fairview – University of Minnesota Telemedicine Network	I/1, P/2			P/14	I/10, P/14	P/3				I/3, P/6					I/1, P/3	P/1			P/2				I/1, P/3			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
MO	**Citizen's Memorial Hospital District**																										
	Project Infocare: In-Home Telemanagement			I/1	I/1									I/1	I/1	I/1	I/1		I/1	I/1		I/1 PT, OT, SLP	I/1		I/1		WOUND CARE-I/1

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)
MT	**Benefis Healthcare Foundation**																										
	NMHA/REACH Telehealth Network Development Project			P/10							I/4								I/1		I/12		I/76				Wound Care P/5
	Billings Clinic Foundation																										
	Effect of an Integrated CIS on Inpatient and Post-Discharge Medication Administration Errors and Chronic Disease Management																										N/A
	Deaconess Billings Clinic Foundation																										
	Revolutionizing Diabetes Care at Billings Clinic: A Model for Chronic Disease Care																										N/A
	Saint Patrick Hospital & Health Foundation																										
	Montana Cardiology Telemedicine Network			I/16																							
	Saint Patrick Hospital & Health Foundation																										
	Bringing Healthcare Home				P/30															P/30			P/30				

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)
MT	**Saint Vincent Healthcare Foundation**																										
	Mansfield Health Education Center (MHEC)																										N/A
	Northwest Regional Telehealth Resource Center																										N/A
NC	**Duke University Medical Center**																										
	Patient Inclusion in a Community Based Telehealth Network																										N/A
	Patient Participation in a Rural Community-Based Telehealth Network																										N/A
	Educational and Research Consortium of Western Carolinas																										
	Western North Carolina Data Link Project																										N/A
ND	**North Dakota State University College of Pharmacy, Nursing, and Allied Sciences**																										
	North Dakota Telepharmacy Project																		I/57								
NE	**Good Samaritan Hospital Foundation**																										
	Mid-Nebraska Telemedicine Network (MNTN)			I/18	I/18			I/18	I/18		P/3, I/18		I/18		I/18	I/18					I/18	SLP & OT: I/18				P/4, I/12	Wound Care: I/18 Geriatrics: I/18

Major Services

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NJ	**Hackensack University Medical Center**																										
	Implementation of Oncology Patient Management System																										N/A
	Saint Peter's University Hospital																										
	Medical Technology Center for Infants and Children																										N/A
NM	**New Mexico Human Services Department**																										
	New Mexico Tele-Behavioral Health Improvement Project										P/5																
	The University of New Mexico Health Science Center																										
	Rural Health Telemedicine Program										I/4		I/1					I/3				I/5, SL, PT, OT					
NV	**Nevada Rural Hospital Partners Foundation**																										
	Digital Imaging System for Rural Nevada (DISRN)																										N/A
	University of Nevada, Reno																										
	Biomedical Imaging Laboratory																										N/A

Major Services

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NY	**Community Health Care Services Foundation, Inc.**																										
	Introducing Home Telehealth in New York's 20th Congressional District																						I/3				
	Genesee Gateway Local Development Corporation, Inc.																										
	Upstate New York Telemedicine Study																										Neurological and Radiological Consultations for Stroke Treatment I/3
	Integrated Community Alternatives Network, Inc.																										
	Foster Care Tracker and Assessment Tool										I/2																
	Long Island Association for Millennium Center for Convergent Technologies																										
	An Electronic Clinical Trial System to Reduce Drug Development Costs																										N/A
	Montefiore Medical Center																										
	Electronic Medical Records Expansion	I/2	I/2			I/2												I/2									

Major Services

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NY	**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/10			I/10		I/1					I/10									I/53	Gastroenterology: I/10
	The Rosalind and Joseph Gurwin Jewish Geriatric Center of Long Island																										
	Demonstration of Implementation of Electronic Medical Record in Skilled Nursing Facility																										N/A
OH	**Case Western Reserve University**																										
	NetWellness																										Consumer Health Information
	Children's Hospital Medical Center of Akron																										
	Tele-Health-Kids		P/6															P/6									
	Cincinnati Children's Hospital Medical Center																										
	Pursuing Perfection—Transforming Health Care Delivery																										N/A

Major Services

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OH	**Ohio Board of Regents**																										
	Medical Collaboration Network											P/2															
	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																										
	Southern Ohio Telepsychiatric Network										I/8, P/5																
OK	**INTEGRIS Health, Inc.**																										
	INTEGRIS Rural Telemedicine Project			I/4	I/4						P/2										I/10	A/PT/SLP I/8	I/4				Wounds Care: I/2 Neurology: P/3
	OSU Center for Rural Health																										
	Rural Oklahoma Telemedicine Service Expansion			I/8							I/6					I/3					I/9	PT: I/1					General Health (consults): I/4 Burn Wound Care: I/1

Major Services

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PA	**Community Nurses Home Health and Hospice, Inc.**																										
	Home Telehealth			I/2	I/2						I/2									I/2							Wound Care P/2
	Geisinger Clinic																										
	Developing a Stoke Care Education Program for Rural Pennsylvania																										24 hour service line to Geisinger neurologist on call
	Good Samaritan Hospital Regional Medical Center																										
	Schuylkill Alliance for Health Care Access																										N/A
	Home Nursing Agency & Visiting Nurse Association																										
	Telehealth Network Grant																						P/3				Disease-specific patient education (CHF, DM, COPD) I-3
	Jewish Healthcare Foundation																										
	Reinventing Healthcare: the Application of the Pittsburgh Regional Healthcare Initiative's Perfecting Patient Care (PPC) System to Chronic Medical Conditions																										N/A

Major Services

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PA	**Magee Rehabilitation Hospital**																										
	Virtual Reality Technology																					OT: P/1 PT: P/1 PM: P/1					
	Mercy Health Partners																										
	Using Information Technology to Enhance Patient Safety																										N/A
	Mercy Hospital of Pittsburgh																										
	Mobile Clinician Project																										N/A
	Millcreek Community Hospital																										
	Millcreek Health System Informatics Project																										N/A
	Oil Region Alliance of Business, Industry, & Tourism																										
	The Venango Center for Healthcare Careers (VCHC)																										N/A
	Pennsylvania College of Optometry																										
	Urban Ophthalmic Telehealth																										Eye Care: I/3
	Penn State University																										
	Digital Informatics and Communications System														I/3												
	Pennsylvania State University College of Medicine																										
	Physician-Scientist Initiative																										N/A

Major Services

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PA	**Pinnacle Health System**																										
	Reducing Variability to Deliver Safe Care																										N/A
	Safe Harbor Behavioral Health																										
	Safe Harbor Behavioral Health Telemedicine Program											I/1															
	SUN Home Health Services																										
	SUN Home Health Services Network			I/9	I/9						I/1												I/9				
	Susquehanna Health System																										
	Regional Electronic Medical Record																										N/A
	Thomas Jefferson University																										
	Integrative Medicine Informatics Feasibility Project																										N/A
	Tyrone Hospital																										
	The Tyrone Hospital Health Information Network																										N/A
	Wayne Memorial Hospital																										
	Improving Medication and Patient Safety																										N/A
RI	**Family Resources Community Action**																										
	HIV/AIDS Comprehensive Psychosocial Support Project																										HIV/AIDS: I/1

Major Services

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RI	**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
SC	**Advanced Technology Institute (ATI)**																										
	Healthcare and Emergency Awareness Response for Telehealth (HEART) Phase II				I/4																						Ophthalmology I/3
	Voorhees College																										
	Developing a Telehealth Infrastructure to Address Health Disparities though Education and Training																										N/A

Major Services

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SD	**Avera Health**																										
	Avera Rural and Frontier Disease Management Telehealth Network			I/3	I/2	I/2					P/1																
	Great Plains Telehealth Resource and Assistance Center (TRAC)																										N/A
TN	**University Health System, Inc.**																										
	High-Risk Newborn Services Project													I/1				I/1									

Major Services

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TN	**University of Tennessee Health Science Center**																										
	Delta Health Partnership	I/3, P/4			I/3, P/4	I/3, P/4		I/3, P/4	I/3, P/4		I/3, P/4		I/3, P/4					I/3, P/4									
	Mid-Appalachia Teleheatlh Project				I/6																					I/2	
	Mid-South Telehealth Consortium	I/5			I/5	I/5		I/5	I/5		I/5		I/5					I/5							I/1		Neurology: I/5
	Telehealth for Diabetic Patients in Hispanic and Underserved Rural Communities																										N/A
TX	**Federation of State Medical Boards of the United States, Inc.**																										
	Medical Licensure Portability to Facilitate Multi-State Telehealth Practice																										N/A
	Harris County Hospital District																										
	Specialty Access Through Telemedicine (SA++)					I/2					I/2																

Major Services

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TX	**University of Texas Health Science Center at San Antonio (UTHSCSA)**																										
	Diabetes Risk Reduction via Community Based Telemedicine (DiRReCT)												I/9					I/9									
	University of Texas Medical Branch Center to Eliminate Health Disparities																										
	The Texas Telehealth Disparities Network			P/1	P/2				P/1		P/1				P/1												Primary Care P/2 Disease and/or access issues to be addressed in pilot projects have not yet been defined.

Major Services

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UT	**Association for Utah Community Health (AUCH)**																										
	Association for Utah Community Health Telehealth Program				I/16																I/5						
	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					I/1		I/3	I/4		I/10	PM:P/1					Neurology: I/6, P/2 Burn: I/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)
	University of Virginia																										
VA	*Southwest Virginia Alliance for Telemedicine*			P/3	P/3	P/3	P/3	P/3	P/3		P/3	P/3	P/3	P/3	P/3	P/3	P/3	P/3		P/3	I/3			I/3	P/3	P/3	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 Opthalmology: P/3 Retinopathy: I/3 TCV: P/3 Transplant: P/3 Toxicology: P/3 Urology: P/3
	The University of Vermont (UVM)																										
VT	*Pediatric Teletrauma Project*																									I/2	

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)
WA	**Inland Northwest Health Services**																										
	Northwest Telehealth—TeleER									I/1								I/2								i/15	Wound Care: I/1
	Northwest Teleheatlh—Telepharmacy																		I/10, P/13								
	University of Washington																										
	Native People for Cancer Control Telehealth Network (NPCCTN)							P/1+			P/7+				P/7+		P/7+	P/7+									End-of-Life issues specific to AIANs – P/7+
	Yakima Valley Memorial Hospital																										
	Bedside Medication Management (MAR) System																										N/A
WI	**La Crosse Medical Health Science Consortium**																										
	Virtual Population Health Centers in the Rural Midwest																										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)
WI	**Marshfield Clinic Telehealth Network**																										
	Marshfield Clinic Telehealth Network	•	•	•	•	•	•	•	•		•		•	•	•	•	•	•	•	•	•		•				Wound Therapy, Occupational Medicine, Medical Genetics, Palliative Care, Neurology, Dentistry, Geriatrics, Home Health
	Marshfield Clinic Telehealth Network 2006	I/17, P/2		I/17, P/2	I/5, P/2	I/2, P/4	I/5, P/4	I/17, P/2	I/17, P/2		I/17, P/4		I/17, P/2		I/2, P/4	I/3, P/4	I/4, P/2	I/1, P/10	I/4, P/10	I/17, P/2	I/35				I/17, P/2	I/1, P/1	Wound Care I/17, P/2
WV	**Appalachian Pain Foundation**																										
	Physician Education, Community Outreach Program to Prevent Diversion of Prescription Drugs																										N/A
	Robert C. Byrd Center for Rural Health																										
	Marshall University Southern West Virginia Rural Outreach Project																	P/1			I/2						

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)
WV	**West Virginia University, Mountaineer Doctor Television (MDTV)**																										
	West Virginia Community Mental Telehealth Project										I/41																
WY	**Memorial Hospital of Laramie County dba Cheyenne Regional Medical Center**																										
	Regional Expansion of Telehealth and Distance Learning			P/5																			P/2				Wound Care: P/2 Surgery Follow-Up: P/1
	Wyoming Department of Health																										
	Wyoming Network for Telehealth (WyNETTE)				I/23						I/10					P/8, I/4		P/2		P/1			I/23				HIV/AIDS P/5 Wound Care-I

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

State	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**	•	•	Health Advantage Medicaid of Arkansas Medicaid of Texas AMCO Prudential Co of America Arkansas Blue Shield Qualchoice First Source United Healthcare Texnet Wadley Regional, Coresource Cigna Blue Advantage Aetna Tricare Premiercare Hlth Systems, Novasys Select Municipal Health Benefit Healthlink, Choicecare,		
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	
	Maricopa County, Arizona					N/A
CA	**California Telemedicine and eHealth Center**					N/A
	Familia Unida Living with Multiple Sclerosis					N/A
	Multi-Dimensional Imaging, Inc.					N/A
	Northern Sierra Rural Health Network	•	•	Blue Cross of California Blue Cross Healthy Families	Far Northern Regional Center	County Mental Health CMSP
	San Joaquin County Health Care Services					N/A
CO	**Avista Adventist Hospital**					N/A
	University of Colorado Health Sciences Center					N/A
DC	**American National Red Cross**					N/A
	Center for Telehealth and E-Health Law					N/A
	Foundation For eHealth Initiative					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	**Ware County Health Department**					N/A

Sources of Reimbursement

State	Organization	Medicare	Medicaid	Private Payor (Please Specify)	Other Contract (Please Specify)	Other Source
HI	**Hawai'i Primary Care Association (HPCA)**	•		HMSA AlohaCare Quest		
	The Queen's Medical Center					N/A
IA	**Iowa Chronic Care Consortium**					State of Iowa
IA	**Mercy Foundation**	•	•	Blue Cross/Blue Shield Midlands Choice Medipass American Republic Coventry Mail Handlers Corporate Systems Admin		
ID	**Clearwater Valley Hospital and Clinics, Inc.**					N/A
	Idaho State University, Institute of Rural Health		•			
	North Idaho Rural Health Consortium (NIRHC)		•			
	Public Hospital Cooperative, Inc.	•	•	Self-Pay Commercial		
IL	**Illinois Department of Human Services**					N/A
	The National Council of State Boards of Nursing					N/A
	Saint John's Hospital	•	•			
	Southern Illinois University School of Medicine		•	Multiple private Insurers	Veteran's Hospital, Mental Health Hospital	Contract
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	•	•	All Commercial Payors through legislative mandate	Kentucky Department of Juvenile Justice Federal Prison Contract State Prison Contract Privately-run State Prison Contract	N/A

Sources of Reimbursement

State	Organization	Medicare	Medicaid	Private Payor (Please Specify)	Other Contract (Please Specify)	Other Source
MA	Massachusetts College of Pharmacy and Health Sciences					N/A
	UMass Memorial Medical Center					N/A
ME	Eastern Maine Healthcare Systems	•	•	CIGNA/ETNA		
	Regional Medical Center at Lubec					N/A
MI	Altarum Institute					N/A
	Hurley Medical Center					N/A
	Marquette General Hospital					N/A
	Michigan State University					N/A
	Western Michigan University					N/A
MN	Fairview Health Services					N/A
	Tri-County Hospital	•	•	Blue Cross/Blue Shield of MN & Blue Plus Health Partners Medica & Medica Choice Preferred One Workers Compensation Select Care Ucare of MN		
	University of Minnesota	•	•	Blue Cross/Blue Shield of MN Health Partners Medica Preferred One Workers Compensation Select Care Ucare of Minnesota		
MO	Citizen's Memorial Hospital District					N/A
MT	Benefis Healthcare Foundation					N/A
	Billings Clinic Foundation					N/A
	Deaconess Billings Clinic Foundation					N/A
	Saint Patrick Hospital & Health Foundation					N/A
	Saint Vincent Healthcare Foundation	•	•	Blue Cross/Blue Shield of Montana/EBMS Paid by other insurances on case by case basis		Patient self pay
NC	Duke University Medical Center					N/A
	Educational and Research Consortium of Western Carolinas					N/A
ND	North Dakota State University College of Pharmacy, Nursing, and Allied Sciences					N/A

Sources of Reimbursement

State	Organization	Medicare	Medicaid	Private Payor (Please Specify)	Other Contract (Please Specify)	Other Source
NE	**Good Samaritan Hospital Foundation**	•	•	Blue Cross/Blue Shield Mega Health State Farm Tri-Care American Republic Standard Life United Healthcare Physicians Mutual Avera Health Continental Life CBCA AARP Midlands Choice American Family State Mutual Equitable Life NY Life Cappe Union Bankers Aetna US Healthcare Tri-Care for Life Star Mark Federated Insurance Assurant GE Life & Annuity Principal Mutual of Omaha		
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		•			
NV	**Nevada Rural Hospital Partners Foundation**					N/A
	University of Nevada, Reno					Recharge from user fees
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, HIP, AETNA		N/A
	New York Presbyterian Hospital					N/A
	Research Foundation, State University of New York (SUNY) at Buffalo	•	•		NYS Dept. of Corrections Federal Bureau of Prisons	
	The Rosalind and Joseph Gurwin Jewish Geriatric Center of Long Island					N/A

Sources of Reimbursement

State	Organization	Medicare	Medicaid	Private Payor (Please Specify)	Other Contract (Please Specify)	Other Source
OH	Case Western Reserve University					N/A
	Children's Hospital Medical Center of Akron					N/A
	Cincinnati Children's Hospital Medical Center					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.		•		Fee for Service Contracts for Tele-speech services	
	OSU Center for Rural Health	•	•	Blue Cross/Blue Shield		
PA	Community Nurses Home Health and Hospice, Inc.					N/A
	Geisinger Clinic					N/A
	Good Samaritan Hospital Regional Medical Center					N/A
	Home Nursing Agency & Visiting Nurse Association					N/A
	Jewish Healthcare Foundation					N/A
	Magee Rehabilitation Hospital	•	•		Aetna, Cigna, etc.	Workers' Comp.
	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
	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
	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	•				N/A
	Thundermist Health Center	•	•	Blue Cross, Blue Shield of RI United Health Care Neighborhood Health Plan of RI		
SC	Advanced Technology Institute (ATI)	•	•			

Sources of Reimbursement

State	Organization	Medicare	Medicaid	Private Payor (Please Specify)	Other Contract (Please Specify)	Other Source
SC	Voorhees College					N/A
SD	Avera Health	•	•	Uncertain		
TN	University Health System, Inc.					N/A
	University of Tennessee Health Science Center	•	•			
TX	Federation of State Medical Boards of the United States, Inc.					N/A
	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.	
UT	Association for Utah Community Health					N/A
	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 Brethrren Healthcare Resources Group Klockner-Pentaplast John Alden Financial National Benefits Plan Southeastern Container Sunnyside Home Sysco Corp.	Department of Corrections.	Anthem Blue Cross/Blue Shield.
VT	The University of Vermont (UVM)					N/A
WA	Inland Northwest Health Services	•	•	Asuris Premera L&I Uniform Medical Plan PHCO	Contracts with hospitals receiving telepharmacy services	
	University of Washington	•	•	Plan to approach numerous payors as part of grant activities		Plan to approach IHS
	Yakima Valley Memorial Hospital					N/A

Sources of Reimbursement

State	Organization	Medicare	Medicaid	Private Payor (Please Specify)	Other Contract (Please Specify)	Other Source
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 Benefits Ins. Medicare Veterans Administration Cigna Operating Engineers Corp Benefits Services of America NCHPP Wausau Insurance		
WV	**Appalachian Pain Foundation**					N/A
	Robert C. Byrd Center for Rural Health					N/A
	West Virginia University, Mountaineer Doctor TeleVision (MDTV)	•	•	Blue Cross/Blue Shield		
WY	**Memorial Hospital of Laramie County dba Cheyenne Regional Medical Center**	•				
	Wyoming Department of Health					N/A

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, Federally Funded or Federally Qualified Community Health Center, Other Clinics, Correctional Institution, Home Care/Home Monitoring, Hospital, Hospice, Licensed Skilled Nursing Facility, Other Skilled Nursing Facility, 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

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings													
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
AK	**Alaska Native Tribal Health Consortium**																
	Continued Advancement of Telehealth Capacity in Alaska	25	3 POP: 7,373				3			1				20			1 Indian Health Center
	The Summative Telemedicine Evaluation Project																
	Alaska Psychiatric Institute (API)																
	API TeleBehavioral Health Project	11	9 POP: 14,093		5	4			1					1			Native Regional Health Corporations, Behavioral Health Providers (State of Alaska Only), Tribal Clinics.
AL	**University of South Alabama**																
	Center for Strategic Health Innovation (CSHI) RMEDE/BioTrac Project																N/A
	Center for Strategic Health Innovation (CSHI) Traditional Telemedicine	14	6 POP: 130,000						10				2			2	

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings													
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
AR	**University of Arkansas for Medical Sciences**																
	South Arkansas Integrated Telehealth Oncology Program	140 State OAT 12	OAT GRANT SITES ONLY: 8 PC HPSA: 3 Mental: 11 Dental: 4 MUA/200,000		1	2				8			1				12 of the 140 statewide sites are specific for oncology
	Telehealth for KIDS (Kids in Delta Schools)	24	OAT Sites: 24 PC HPSA: 1 Dental/Mental: 1 MUA/12,580		1			P/20 Homes					1		2		
AZ	**Arizona Board of Regents,, University of Arizona**																
	Arizona Diabetes Virtual Center for Excellence (ADVICE)	12	5 POP: 53,385		1	1		2	3						3	1	1-Mobile Clinic
	Institute for Advanced Telemedicine and Telehealth (THealth)																N/A
	Maricopa County, Arizona																
	Correctional Health Services Telemedicine Initiative	10					9										1 Administration Office
CA	**California Telemedicine and eHealth Center**																
	Western Regional Telehealth Resource Center																N/A

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings														
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
CA	**Familia Unida Living with Multiple Sclerosis**																
	Telehealth Grant																N/A
	Multi-Dimensional Imaging, Inc.																
	Telemedicine for Improved Health Care and Education	6															6-Telemedicine Mobile services are taken offsite to service Non-health institutions
	Northern Sierra Rural Health Network																
	Telehealth Network Grant Program	33	39 HPSAs 20 MUAs POP: 283,208		10	10			13				4	3			
	San Joaquin County Health Care Services																
	Automated Drug Dispensing Medication Administration System	12	HPSA: 33 MUA: 1 POP: 632,760			11			1				P/1				
CO	**Avista Adventist Hospital**																
	Clinical Integration Through Health Informatics																N/A

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings														
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
CO	**University of Colorado Health Sciences Center**																
	Native Telehealth Outreach and Technical Assistance Program																N/A
DC	**American National Red Cross**																
	Congressionally Mandated Telehealth Grants																N/A
	Center for Telehealth and E-Health Law																
	National Telehealth Resource Center																N/A
	Foundation for eHealth Initiative																
	Connecting Communities for Better Health Program																N/A
FL	**BayCare Health System**																
	Electronic medication and Clinical Services Ordering Subsystem	9	1 POP: 2,276,000							9							
	Florida Cancer Research Cooperative, University of South Florida																
	Clinical Trial Patient/Physician Information & Education Program																N/A

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings														
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
FL	**University of Florida College of Dentistry (UFCD)**																
	University of Florida College of Dentistry (UFCD)	5	80 POP: 4,000,000														1(P) dental clinic 4 dental clinics
GA	**Ware County Health Department**																
	Rural Health Telemedicine Grant Program	3							1				2				
	Southeast Telehealth Network Program																N/A
HI	**Hawai'i Primary Care Association (HPCA)**																
	The Hawai'i CHC Telehealth Network Project	18	HPCA = 12 MUA = 4 MUP = 13 POP: 1,257,608		18												
	The Queen's Medical Center																
	Hawaii Neuroscience Telehealth Network	3	HPSA/MUA: 1 POP: 160,000						3								
IA	**Iowa Chronic Care Consortium**																
	Iowa Medicaid Population Disease Management Demonstration	>200	56 POP: 3,057,530					>200									
	Mercy Foundation																
	Midwest Rural Telemedicine Consortium	30	HPSA: 11 MUA: 12 POP: 640,000			1			25		1						3-Administrative/ Educational

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings													
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
ID	**Clearwater Valley Hospital and Clinics, Inc.**																
	Clearwater Valley Hospital: Electronic Medical Records																N/A
	Idaho State University																
	Telehealth Idaho	24	36 HPSAs – POP: 330,424 30 DPSAs – POP: 342,114 44 MPSAs – POP: 1,341,131 28 MUAs – POP: 258,795						17					2			Dental-1 State Assns-4
	North Idaho Rural Health Consortium (NIRHC)																
	Expanding Telehealth to North Idaho Districts (EXTEND)	28	5 POP: 186,000			1			5					20			1-Behavioral Health 1-Pathology
	Public Hospital Cooperative, Inc.																
	Cooperative Telehealth Network (CTN)	14	HPSA: 13 (mental health) POP: 150,000		1				13		9						

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings														
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
IL	**Illinois Department of Human Services**																
	Illinois Developmental Disabilities Telehealth Network and Services: A Program Dedicated to Optimizing Health and Support of Community Living	4	4 POP: 184,903													4	
	The National Council of State Boards of Nursing																
	Moving Toward Portability: Uniform Core Licensure Standards for Nursing																N/A
	Saint John's Hospital																
	Neonatal Telehealth Project in Rural Illinois Located at the Perinatal Center																N/A
	Southern Illinois University School of Medicine																
	Downstate Regional Telehealth Project	16	HPSA: 5 POP: 123,000	2			1	1 Agency 10 Homes	1					1			
IN	**James Whitcomb Riley Hospital for Children**																
	Riley Connections	4	MUA: 3 POP: 614,785						4								

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings													
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
IN	**Health & Hospital Corporation of Marion County**																
	Congressionally-Mandated Telehealth Grants	5	12 POP: 104,479			4			1								
KS	**University of Kansas Medical Center**																
	Sustainability and Cost Benefit Evaluation of the Kansas Telehealth Network	12	7 POP: 233,775			1			4		1		1	1			1 State Hospital 3 AHECs
	Telehealth Access and Cost Benefit in Kansas	13	10/9 POP: 267,772			1			3				1	1			1 State Hospital 3 AHECs 2 Ed. Coop (80 Schools) 1 Early Childhood Intervention Ctr.
KY	**The James B. Haggin Memorial Hospital**																
	PACS (Picture Archiving and Communication System)																N/A
	Marcum & Wallace Memorial Hospital																
	Teleradiology Enhancement Project	3	HPSA: 6 MUA: 7 POP: 78,000							3							

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings														
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
KY	**New Horizons Health Systems, Inc.**																
	Information Technology Development and Improvement																N/A
	University of Kentucky Research Foundation—Kentucky TeleCare																
	Improving Health Outcomes for Children in Rural Kentucky Schools	40	33 POP: 120,000		4	4	6		9				1	2	13	1	
MA	**Massachusetts College of Pharmacy and Health Sciences**																
	Worcester Campus Distance Learning Initiative																N/A
	UMass Memorial Medical Center																
	PACS Teleradiology Project	12	26 POP: 255,000			1			5					3			3 imaging sites
ME	**Eastern Maine Healthcare Systems**																
	Improving Rural Maine's Critical Access to Emergency & Chronic Disease Care Through Telehealth/Monitoring	16	HPSA: 3 POP: 500,000					5/2000	11								

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings														
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
ME	**Regional Medical Center at Lubec**																
	Maine Nursing Home Telehealth Network	12	57 POP: 213,970			3			2		6			1			
	Northeast Telehealth Resource Center																N/A
MI	**Altarum Institute**																
	Concepts for a Michigan Health Information Network (MiHIN)																N/A
	Hurley Medical Center																
	Clinical Information System Replacement Project																N/A
	Marquette General Hospital																
	Midwest Alliance for Telehealth and Technologies Resources																N/A
	Michigan State University																
	Telehospice in Mid-Michigan	22	2 POP: 282,030						20/2								
	Western Michigan University																
	The Application of Tele-Allied Health in Rural Counties in Southwest Lower Michigan																N/A

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings														
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
MN	**Fairview Health Services**																
	Ambulatory Electronic Medical Record System—Twin Cities Metropolitan Care Systems																N/A
	Tri-County Hospital																
	Telehealth Network Grant Program	37	HPSA: 14 pHPSA: 9 MUA: 21 pMUA: 10 Mental Health HPSA: 37 Dental Health HPSA: 26 POP: 650,000			4		(P) Year 2-3	31		1						1 Community Behavioral Health Hospital; Involving 39 MN and 8 ND Counties with 7 American Indian Reservations
	University of Minnesota																
	Fairview – University of Minnesota Telemedicine Network	14	25 POP: 575,000			2		2	11				1				1 Indian Reservation Clinic
MO	**Citizen's Memorial Hospital District**																
	Project Infocare: In-Home Telemanagement	8	5/4, 1 dental POP: 80,000	4 homes			1	1/4		1						1	

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings													
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
MT	**Benefis Healthcare Foundation**																
	NMHA/REACH Telehealth Network Development Project	15	9 POP:I133,646		1	1		1/94	1			1					10 Critical Access Hospital/SNF attached
	Billings Clinic Foundation																
	Effect of an Integrated CIS on Inpatient and Post-Discharge Medication Administration Errors and Chronic Disease Management																N/A
	Deaconess Billings Clinic Foundation																
	Revolutionizing Diabetes Care at Billings Clinic: A Model for Chronic Disease Care																N/A
	Saint Patrick Hospital & Health Foundation																
	Bringing Healthcare Home	30	4 POP: 10,732					1/30									
	Montana Cardiology Telemedicine Network	16	11 POP: 66,061						11					5			

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings													
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
MT	**St. Vincent Healthcare Foundation**																
	Mansfield Health Education Center (MHEC)																N/A
	Northwest Regional Telehealth Resource Center																N/A
NC	**Duke University Medical Center**																
	Patient Inclusion in a Community-Based Telehealth Network																N/A
	Patient Participation in a Rural Community-Based Telehealth Network																N/A
	Educational and Research Consortium of Western Carolinas																
	Western North Carolina Data Link Project	16	10 POP: 750,000						16								N/A
ND	**North Dakota State University College of Pharmacy, Nursing, and Allied Sciences**																
	North Dakota Telepharmacy Project	57	29 POP: 40,000						13								Retail Pharmacies 44

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings														
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
NE	**Good Samaritan Hospital Foundation**																
	Mid-Nebraska Telemedicine Network (MNTN)	20	20 POP: 187,471						20								
NJ	**Hackensack University Medical Center**																
	Implementation of Oncology Patient Management System																N/A
	Saint Peter's University Hospital																
	Medical Technology Center for Infants and Children																N/A
NM	**New Mexico Human Services Department**																
	New Mexico Tele-Behavioral Health Improvement Project	5	5 POP: 173,150											5			
	University of New Mexico Health Sciences Center																
	Rural Health Telemedicine Program	12	10 HPSA 11 MUA POP: 663,505		1	1											10 Early Intervention Agencies
NV	**Nevada Rural Hospital Partners Foundation**																
	Digital Imaging System for Rural Nevada (DISRN)																N/A

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings														
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
NV	**University of Nevada, Reno**																
	Biomedical Imaging Laboratory																N/A
NY	**Community Health Care Services Foundation, Inc.**																
	Introducing Home Telehealth in New York's 20th Congressional District	3	HPSA: 26 POP: 114,572					3/59									N/A
	Genesee County Local Development Corporation, Inc.																
	Upstate New York Telemedicine Study	3	HPSA: 3 POP: 110,209						3								
	Integrated Community Alternatives Network Inc.																
	Foster Care Tracker and Assessment Tool	2	1 POP: 500			2											
	Long Island Association for Millennium Center for Convergent Technologies																
	An Electronic Clinical Trial System to Reduce Drug Development Costs																N/A
	Montefiore Medical Center																
	Electronic Medical Records Expansion	2	2 POP: 120,000						2								

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings														
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
NY	**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	55	16 Full HPSA 6 MUA POP: 267,029				53		2								
OH	**The Rosalind and Joseph Gurwin Jewish Geriatric Center of Long Island**																
	Demonstration of Implementation of Electronic Medical Record in Skilled Nursing Facility																N/A
	Case Western Reserve University																
	NetWellness																N/A

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings													
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
OH	**Children's Hospital Medical Center of Akron**																
	Tele-Health-Kids	7	HPSA: 1 (partial) POP: 168,000						1					4	2		
	Cincinnati Children's Hospital Medical Center																
	Pursuing Perfection—Transforming Health Care Delivery																N/A
	Ohio Board of Regents																
	Medical Collaboration Network	6								6							Approximately 100 Colleges and Universities across Ohio in addition to their medical schools and associated teaching hospitals.
	Ohio State University Research Foundation (for the Ohio Supercomputer Center)																
	Computational Approaches to Research on Cancer in Children and Others																N/A

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings													
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
OH	**Southern Consortium for Children**																
	Southern Ohio Telepsychiatric Network	16	HPSA:16 MUAs: 12 POP: 420,957			13	1							1			1 Ohio Univ. College of Osteopathic Medicine/SCC VC Facilities
OK	**INTEGRIS Health, Inc.**																
	INTEGRIS Rural Telemedicine Project	258	MUA: 5 PT. MUA: 5 HPSA: 8 PT. HPSA: 2 POP: 1,095,634					4 Agencies 234 Homes	10		2		1		7		
	OSU Center for Rural Health																
	Rural Oklahoma Telemedicine Service Expansion	30	10 POP: 600,000			4			26								
	Community Nurses Home Health and Hospice, Inc.																
	Home Telehealth	182	HPSA: 4 POP: 87,000					2 Agencies 182 Homes									
PA	**Geisinger Clinic**																
	Developing a Stroke Care Educational Program for Rural Pennsylvania	12	0 POP: 1,523,932						5				6			One Mobile Unit	

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings														
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
PA	**Good Samaritan Hospital Regional Medical Center**																
	Schuylkill Alliance for Health Care Access																N/A
	Home Nursing Agency & Visiting Nurse Association																
	Telehealth Network Grant	3	HPSA: 94 MUA: 42 POP: 109,831					3/400									
	Jewish Healthcare Foundation																
	Reinventing Healthcare: the Application of the Pittsburgh Regional Healthcare Initiative's Perfecting Patient Care (PPC) System to Chronic Medical Conditions																N/A
	Magee Rehabilitation Hospital																
	Virtual Reality Technology	1						1/(P) Projected future application									
	Mercy Health Partners																
	Using Information Technology to Enhance Patient Safety																N/A
	Mercy Hospital of Pittsburgh																
	Mobile Clinician Project																N/A

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings														
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
PA	**Millcreek Community Hospital**																
	Millcreek Health System Informatics Project																N/A
	Oil Region Alliance of Business, Industry & Tourism																
	The Venango Center for Healthcare Careers (VCHC)																N/A
	Pennsylvania College of Optometry																
	Urban Ophthalmic Telehealth	3	None			3											
	Penn State University																
	Digital Informatics and Communications System	3	N/A						3								
	Pennsylvania State University College of Medicine																
	Physician-Scientist Initiative																N/A
	Pinnacle Health System																
	Reducing Variability to Deliver Safe Care																N/A
	Safe Harbor Behavioral Health																
	Safe Harbor Behavioral Health Telemedicine Program	1	1 POP: 40,000			1											

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings														
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
PA	**SUN Home Health Services**																
	SUN Home Health Services Network	9	Not Applicable					9/77									
	Susquehanna Health System																
	Regional Electronic Medical Record																N/A
	Thomas Jefferson University																
	Integrative Medicine Informatics Feasibility Project																N/A
	Tyrone Hospital																
	Integrative Medicine Informatics Feasibility Project																N/A
	Wayne Memorial Hospital																
	Improving Medication and Patient Safety																N/A
RI	**Family Resources Community Action**																
	HIV/AIDS Comprehensive Psychosocial Support Project	1														1	
	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	1						1 Agency 78 Homes									

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings														
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
RI	**Thundermist Health Center**																	
	Thundermist Health Center Electronic Health Record																	
SC	**Advanced Technology Institute (ATI)**																	
	Healthcare and Emergency Awareness Response for Telehealth (HEART) Phase II	5	4 POP: 193,000		5													
	Voorhees College																	
	Developing a Telehealth Infrastructure to Address Health Disparities Through Education and Training																	N/A
SD	**Avera Health**																	
	Avera Rural and Frontier Disease Management Telehealth Network	35	21 POP: 280,000 (31-Mental Health)		1 CHC			1 Agency 12 Homes	15					4			2 (ARHI, Southwest Mental Health)
	Great Plains Telehealth and Resource Center (TRAC)																	N/A

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings														
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
TN	**University Health System, Inc**																	
	High-Risk Newborn Services Project	1	1 POP: 450,000						1									
	University of Tennessee Health Science Center																	
	Delta Health Partnership	7	5 POP: 200,000			4			1									University-2
	Mid-Appalachia Telehealth Project	131	3 POP: 80,000					2 Agency 115 Homes	3				2	1	4			
	Mid-South Telehealth Consortium	5	3 POP: 32,000			3			2									
	Telehealth for Diabetic Patients in Hispanic and Underserved Rural Communities																	N/A
TX	**Federation of State Medical Boards of the United States, Inc.**																	
	Medical Licensure Portability to Facilitate Multi-State Telehealth Practice																	N/A
	Harris County Hospital District																	
	Specialty Access Through Telmedicine (SA++)	2	HPSA: 4 MUA: 2 POP: 106,575		1	1												

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings													
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
TX	**University of Texas Health Science Center at San Antonio**																
	Diabetes Risk Reduction via Community Based Telemedicine (DiRReCT)	9	4 POP: 54,000												9		
	University of Texas Medical Branch Center to Eliminate Health Disparities																
	The Texas Telehealth Disparities Network	3	Galveston Co.: PMSA 12 CSA 79 (POP: 250,000) Cameron Co.: MSA 6 HPSA & MUA (POP: 365,000) Smith Co.: MSA 24 (POP: 174,706)						1			1 P		1			
UT	**Association for Utah Community Health (AUCH)**																
	Association for Utah Community Health Telehealth Program	16	HPSA: 36 MUA: 15 POP: 960,000		16												

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings														
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
UT	**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	10							10								
	University of Utah																
	Utah Telehealth Network Comprehensive Telehealth Services	16	10 POP: 180,000		4	1	1		8				2				
VA	**University of Virginia**																
	Southwest Virginia Alliance for Telemedicine	3	None POP: 260,000						3								
VT	**The University of Vermont (UVM)**																
	Pediatric Teletrauma Project	2	25 POP: 46,694						2								

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings													
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
WA	**Inland Northwest Health Services**																
	Northwest Telehealth--TeleER	15	HPSA: 12 MUA: 201 POP: 108,000						14								
	Northwest Telehealth--Telepharmacy	10	HPSA: 9 POP: 492,000						10								
	University of Washington																
	Native People for Cancer Control Telehealth Network	7+	HPSA: 9 MUA: 6 Eligible Service Population: 180,917		6+				1								
	Yakima Valley Memorial Hospital																
	Bedside Medication Management (MAR) System																N/A
WI	**La Crosse Medical Health Science Consortium**																
	Virtual Population Health Centers in the Rural Midwest																N/A

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings													
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
WI	**Marshfield Clinic Telehealth Network**																
	Marshfield Clinic Telehealth Network	29	22 POP: 1,036,035			16	1	2	1		2			1			4 Dental Clinics 2 Food Safety Labs
	Marshfield Clinic Telehealth Network 2006	39	22 POP: 1,036,035			19 P-2	1		1		2				1		4 Dental Clinics 10 Head Start Classrooms-P
WV	**Appalachian Pain Foundation**																
	Physician Education, Community Outreach Program to Prevent Diversion of Prescription Drugs																N/A
	Robert C. Byrd Center for Rural Health																
	Marshall University Southern West Virginia Rural Outreach Project	8	18 HPSAs, 16 MUAs POP: 602,882		2				1				1		1	1	1 Preventive Health Mobile Medical Unit (P)/ 1 Pediatric Mobile Medical Unite
	West Virginia University, Mountaineer Doctor TeleVision (MDTV)																
	West Virginia Community Mental Telehealth Project	41	23 HPSAs, 26 MUAs/ 41,070			41											

Program Settings

State	Program(s) Name	Number of Sites	# of HPSAs/MUAs / Approximate Population	Settings														
				Assisted Living Facility	Federally Funded or Federally Qualified Community Health Center	Other Clinics	Correctional Institution	Home Care/Home Monitoring (# of agencies in network/# of homes served)	Hospital	Hospice	Licensed Skilled Nursing Facility	Other Skilled Nursing Facilities	Public Health Department	Physician Office	Schools	Non-health Institution (housing complex, workplace, community center)	Other Settings (Please Specify)
WY	**Memorial Hospital of Laramie County dba Cheyenne Regional Medical Center**																
	Regional Expansion of Telehealth and Distance Learning		5 POP: 35,700						5								
	Wyoming Department of Health																
	Wyoming Network for Telehealth (WyNETTE)	63	18 POP: 250,000		2	8		23	28				2				

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

State	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**						
	Continued Advancement of Telehealth Capacity in Alaska	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	
	The Summative Telemedicine Evaluation Project			Electronic mail and solicitation of survey responses for Evaluation project			
	Alaska Psychiatric Institute (API)						
	API TeleBehavioral Health Project		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	**University of South Alabama**						
	Center for Strategic Health Innovation (CSHI) RMEDE/BioTrac Project			Claims Management Physician information portal Training/demos		Required for most applications via web	Biomonitoring via Plain Old Telephone System (POTS)
	Center for Strategic Health Innovation (CSHI) Traditional Telemedicine		Education Programs/Consults			Medical Consults/Education Programs	
AR	**University of Arkansas for Medical Sciences**						
	South Arkansas Integrated Telehealth Oncology Program	Radiology	T1 lines for compressed video transmission	Continuing education for health care professionals	Angel Eye to view neonates at UAMS from parents' home/work/ community	Transmit real-time voice/video to all sites	
	Telehealth for KIDS (Kids in Delta Schools)	Home Telemonitoring	T1 Lines for compressed video transmission	Continuing education for health care professionals		Transmit real-time voice/video to all sites	

Technology and Transmission

State	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 (ADVICE)	Opthalmology	H.323 Video for Telenutrition, Telepodiatry & Interactive Telehealth	Web Site & Streaming Video archives of diabetes education sessions	Used in Amado, AZ for Telenutrition, Telepodiatry to connect mobile clinic and for Diabetes Education to Sapori School	All connections are broadband at T1 rates	
	Institute for Advanced Telemedicine and Telehealth (THealth)		H.323—education	Web Site & Video Streaming of educational sessions		All connections are broadband at T1 rates for education and training	
	Maricopa County, Arizona						
	Correctional Health Services Telemedicine Initiative		IP for clinical services and for education over T1 terrestrial lines			Videoconference transmissions for inter-clinic meetings and for education. Additionally, there are plans to implement Pharmacy connection	
CA	**California Telemedicine and eHealth Center**						
	Western Regional Telehealth Resource Center						N/A
	Familia Unida Living with Multiple Sclerosis						
	Telehealth Grant			Client counseling using Web	Laptops for better dissemination of clients served		

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
CA	**Multi-Dimensional Imaging, Inc.**						
	Telemedicine for Improved Health Care and Education	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 tele-health consultations with graphic patient image transfer and health education	T1 based land-link to complete connection between satellite, spoke and hub for tele-health consultations and graphic patient education	
	Northern Sierra Rural Health Network						
	Telehealth Network Grant Program	Planned Dermatology	IP for clinical services and for education over T1 lines to rural sites			ISDN for video consults and education. T1 for IP video for consults and education	
	San Joaquin County Health Care Services						
	Automated Drug Dispensing Medication Administration System		IP for CPOE, Nursing and Pharmacy services over hospital backbone	Pharmacy formulary and drug information look-up	Siemens WAPs with handheld devices in reading patient wristbands and medication labels		
CO	**Avista Adventist Hospital**						
	Clinical Integration Through Health Informatics		Remote Desktop Protocol and Virtual Private Network	e-faxing prescriptions to pharmacies	Laptops in clinics		
	University of Colorado Health Sciences Center						
	Native Telehealth Outreach & Technical Assistance Program			Distance Education for CME			CHA (Community Health Advocate) Communications, Project Dissemination

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
DC	**American National Red Cross**						
	Congressionally Mandated Telehealth Grants						N/A
	Center for Telehealth and E-Health Law						
	National Telehealth Resource center						N/A
	Foundation For eHealth Initiative						
	Connecting Communities for Better Health Program						N/A
	CareSpark, TN	Claims data (planned Q1-2007)); decision support tools (planned Q1-2007). De-identified data for population health studies (planned Q4-2007)	Clinical records, patient demographics, (planned Q1-2007)	User access (provider, planned Q3-2007, patient planned Q1 2008	Home health monitoring (planned Q3 2008)		
	Colorado Health Information Exchange, CO (CORHIO)					Record Locator Service with Laboratory data over VPN (Oct. 2007)	
	HealthBridge, OH	PACS, teleradiology, HISs, LIS, Fetal heart monitoring lab orders	IP Connections for hospitals, labs, radiology centers and users	All access web based		10mb connections to 20 hospitals and 5 physician groups. 130 physician office groups connected by cable modem and DSL	
	Indiana Health Information Exchange, IN	X	X	X		X	
	Maryland/DC Collaborative for Healthcare Information Technology, MD						N/A
	Massachusetts Health Data Consortium (MA-SHARE), MA		Server-to-server communication and data net exchange	Secure web-based access		Server-to-server communication and data net exchange	N/A

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
DC	*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 world wide web	Some users may use to access world wide web	
	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	Between sites, client, and LAN to LAN VPN	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		Transmission rates vary by facility using the application, i.e., DSL to T3 capacity	
FL	**BayCare Health System**						
	Electronic Medication and Clinical Services Ordering Subsystem	Radiology		Physicians have access to patients' results, dictated reports, and financial information on the web through BayCare MD	Within each hospital site. Wireless laptops for ER registration; physicians use handheld devices for patient lists and lab/radiology results		
	Florida Cancer Research Cooperative, University of South Florida						
	Clinical Trial Patient/Physician Information and Education Program	Store of patient profiles for later review and consultation	Extranet call center connectivity	Distribution of clinical trial information			

Technology and Transmission

State	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)**						
	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 for consultation. Digital Radiography: For transmitting, 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 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 and Hialeah) and Ds3/T3 to Jax from Gainesville. Teledentistry Consultation: T1 (1.5mps) access to some clinics (St. Petersburg and Hialeah) and DS3/T3 to Jax from Gainesville. Digital Radiography: Broadband access speed within dental science building is 10/100/1000 mps.	
GA	**Ware County Health Department**						
	Rural Health Telemedicine Grant Program					Broadband LAN to connect telemedicine and telehealth sites for clinical consultations and distance learning	
	Southeast Telehealth Network Project		All Technology used set to recognize IP-Network made up of direct point to point T1 lines to link sites				
HI	**Hawai'i Primary Care Association**						
	The Hawai'i CHC Telehealth Network Project	Telederm	ISDN/T1 Video Conferencing	Telderm		ISDN/T1 Video Conferencing	

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
HI	**The Queen's Medical Center**						
	Hawaii Neuroscience Telehealth Network		IP real-time video for neurologic examination and review of head CT scans	ASP web server for managing video connectivity	Wireless video camera and wireless MESH LAN within rural emergency departments	Broadband terrestrial lines for IP video	
IA	**Iowa Chronic Care Consortium**						
	Iowa Medicaid Population Disease Management Demonstration			Patient data reports for care management			POTS for AVR system and care management
	Mercy Foundation						
	Midwest Rural Telemedicine Consortium					ISDN-PRI Interactive telemedicine sessions, education and administrative services	
ID	**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	
	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 telecommunications mental health, EHR
	North Idaho Rural Health Consortium (NIRHC)						
	Expanding Telehealth to North Idaho Districts (EXTEND)	Radiology	Pharmacy Education Mental health	Pathology	Electronic Medical Record	Rehab (OT/PT)	
	Public Hospital Cooperative, Inc.						
	Cooperative Telehealth Network (CTN)		IP for clinical services and for education over T1 terrestrial lines to rural towns				

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
IL	**Illinois Department of Human Services**						
	Illinois Developmental Disabilities Telehealth Network and Services A Program Dedicated to Optimizing Health and Support of Community Living		IP for clinical services and for education over T1 terrestrial lines to rural towns				
	The National Council of State Boards of Nursing						
	Moving Toward Portability: Uniform Core Licensure Standards for Nursing						N/A
	Saint John's Hospital						
	Neonatal Telehealth Project in Rural Illinois Located at the Perinatal Center		The transmission will occur over ISP and T1 connections using IP addresses				
	Southern Illinois University School of Medicine						
	Downstate Regional Telehealth Project		Videoconferencing, Instant Messaging, Educational, Clinical & Administrative services over T1 terrestrial lines connected to state backbone	Departmental web page, scheduling, e-mailing, document delivery	Internal computer access only	T1 lines, 512 DSL, 512 cable modem for clinical, educational, and administrative	CD-ROM; videotapes bioterrorism preparedness
IN	**James Whitcomb Riley Hospital for Children**						
	Riley Connections	FTP Server used to transfer echoes, sleep studies, and eegs		Internet used to connect to one spoke hospital for continuing medical education			T-1 connections between Riley and 3 spoke hospitals for live specialty consultations
	Health & Hospital Corporation of Marion County						
	Congressionally-Mandated Telehealth Grants	Picture Archive Communication System (PACS)	IP throughout hospital and clinics	Clinics use Web access to PACS		Broadband throughout hospital and clinics	

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
KS	**University of Kansas Medical Center**						
	Sustainability and Cost Benefit Evaluation of the Kansas Telehealth Network	Pediatric Echo	IP for clinical services and for education over Kan-ED	Community and patient educational programs		ISDN	
	Telehealth Access and Cost Benefit in Kansas	Pediatric Echo	IP for clinical services and for education over Kan-ED	Community and patient educational programs		ISDN	
KY	**The James B. Haggin Memorial Hospital**						
	PACS (Picture Archiving and Communication System)	Imaging	PACS transmission via TCP/IP	Proprietary Web Application		DSL, Fractional T-1 for data transmission	
	Marcum & Wallace Memorial Hospital						
	Teleradiology Enhancement Project	Radiology	T1 Line between Lourdes, Marcum & Wallace Memorial Hospital and Radiologist sites for transmission/ archival of radiology procedures	Internet/Web access for physician to review procedures/ reports			
	New Horizons Health Systems, Inc.						
	Information Technology Development and Improvement						N/A
	University of Kentucky Research Foundation—Kentucky TeleCare						
	Improving Health Outcomes for Children in Rural Kentucky Schools	Radiology/Echo transfer	IP for clinical services, and for education over T1 terrestrial lines to rural towns				ISDN and POTS for some correctional facilities

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
MA	**Massachusetts College of Pharmacy and Health Sciences**						
	Worcester Campus Distance Learning Initiative		For distance education between campuses	For distance education between campuses	For connection to campus networks	For distance education between campuses	
	UMass Memorial Medical Center						
	PACS Teleradiology Project	Radiology	Radiology	Radiology		Radiology	
ME	**Eastern Maine Healthcare Systems**						
	Improving Rural Maine's Critical Access to Emergency & Chronic Disease Care Through Telehealth/Monitoring	POTS to homes	IP connection for clinical services and for education over T1 terrestrial lines to rural areas			ISDN Connection to rural areas with little or no bandwidth	
	Regional Medical Center at Lubec						
	Maine Nursing Home Telehealth Network						ISDN for video-conferencing for clinical, educational, and administrative services
	Northeast Telehealth Resource Center			For client agency access to information on project services and to telehealth educational resources and protocols	C-band satellite downlink for educational program access		ISDN for project management and for service conferences and trainings with TRC client organizations
MI	**Altarum Institute**						
	Concepts for a Michigan Health Information Network (MiHIN)						N/A
	Hurley Medical Center						
	Clinical Information System Replacement Project		IP for clinical services	Web browser access for remote users of the clinical system; remote users connect using secure VPN access		WAN-remote facilities connected by T1s on a SONET	

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
MI	**Marquette General Hospital**						
	Midwest Alliance for Telehealth and Technologies Resources		IP for educational programs and administrative meetings				
	Michigan State University						
	Telehospice in Mid-Michigan						POTS-based video phones for hospice patient and nurse communication
	Western Michigan University						
	The Application of Tele-Allied Health in Rural Counties in Southwest Lower Michigan		Allied Health Consults				
MN	**Fairview Health Services**						
	Ambulatory Electronic Medical Record System – Twin Cities Metropolitan Care Systems		Epic System on PCs with W2003 Citrix Servers, IBM AIX Servers, CACHE DBMS, Hitachi SAN	Physician Internet Portal used to access Epic Electronic Medical Record System		WAN with T1 and OS3 transmission systems	
	Tri-County Hospital						
	Telehealth Network Grant Program		Secure IP protocol with quality of service for clinical consults			T1, DSL, and DS3	
	University of Minnesota						
	Fairview – University of Minnesota Telemedicine Network	Dermatology	Secure IP protocol with quality of service for clinical consults	Secure web site for dermatology and orthopedics		ISDN/2 sites for conducting consults	
MO	**Citizen's Memorial Hospital District**						
	Project Infocare: In-Home Telemanagement	PACS—Digital Radiology	IP Protocols used for transmission of info from public telephone to EMR	Citrix Secure Gateway over public internet for providing viewing of info in EMR	Employed to facilitate access to info within WAN	WAN wide-area network connecting provider and facilities	Public telephone used to transmit data from patient's home to EMR

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
MT	**Benefis Healthcare Foundation**						
	NMHA/REACH Telehealth Network Development Project		IP for clinical services and for education over T1 terrestrial lines to rural towns				
	Billings Clinic Foundation						
	Effect of an Integrated CIS on Inpatient and Post-Discharge Medication Administration Errors and Chronic Disease Management				Physicians use laptops to manage patients		
	Deaconess Billings Clinic Foundation						
	Revolutionizing Diabetes Care at Billings Clinic: A Model for Chronic Disease Care						N/A
	Saint Patrick Hospital & Health Foundation						
	Montana Cardiology Telemedicine Network	Storing of ECG & Echo images	IP for clinical services over T1 terrestrial lines to rural towns	Cardiology consults			
	Bringing Healthcare Home	Storing of vital signs in EMR	IP for clinical services over POTS to rural towns				
	Saint Vincent Healthcare Foundation						
	Mansfield Health Education Center (MHEC)			Connection for Marketing and Educational Services and Telemedicine			
	Northwest Regional Telehealth Resource Center	Various members of the NRTRC use these transmission protocols for network service	Various members of the NRTRC use these transmission protocols for network service	Various members of the NRTRC use these transmission protocols for network service	Various members of the NRTRC use these transmission protocols for network service	Various members of the NRTRC use these transmission protocols for network service	Various members of the NRTRC use these transmission protocols for network service

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
NC	**Duke University Medical Center**						
	Patient Inclusion in a Community Based Telehealth Network		Health information and notification; system synchronization	Health information and notification	Health information and system synchronization	Health information and system synchronization	
	Patient Participation in a Rural Community-Based Telehealth Network		Health information and notification; system synchronization	Health information and notification	Health information and system synchronization	Health information and system synchronization	
	Educational and Research Consortium of Western Carolinas						
	Western North Carolina Data Link Project		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	
ND	**North Dakota State University College of Pharmacy, Nursing, and Allied Sciences**						
	North Dakota Telepharmacy Project			Prescription Services to patients in rural areas			
NE	**Good Samaritan Hospital Foundation**						
	Mid-Nebraska Telemedicine Network (MNTN)	Radiology	IP for clinical services and education over T1 terrestrial lines to rural towns			Within the hospital for the mobile telemedicine cart for Spanish interpretive services	ISDN for Education and some clinical services
NJ	**Hackensack University Medical Center**						
	Implementation of Oncology Patient Management System	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	
	Saint Peter's University Hospital						
	Medical Technology Center for Infants and Children						N/A

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
NM	**New Mexico Human Services Department**						
	New Mexico Tele-Behavioral Health Improvement Project		For 3 sites: T1 DS1 lines; for 2 sites Checs Backbone 1 MB for psychiatric services				
	Universities of New Mexico Health Science Center						
	Rural Health Telemedicine Program		IP for distance education to rural branch universities and colleges	Teleconferencing Distance Education CME training modules converted to CME Trainings over the internet		ISDN for HIPAA compliant clinical encounters from each clinic	POTS for videophone transmission to rural sites and patient homes
NV	**Nevada Rural Hospital Partners Foundation**						
	Digital Imaging System for Rural Nevada (DISRN)	Radiology	IP and DICOM for transmission and storage of radiology images	Web access to images		T1 for transmission of images	
	University of Nevada, Reno						
	Biomedical Imaging Laboratory						N/A
NY	**Community Health Care Services Foundation, Inc.**						
	Introducing Home Telehealth in New York's 20th Congressional District			Patient data retrieved via the Internet			POTS lines in homes
	Genesee Gateway Local Development Corporation, Inc.						
	Upstate New York Telemedicine Study		Secure IP for clinical services		802.11 a/b/g for mobility within the ED to treat stroke victims	T-1 connection for videoconferencing and transmittal of radiological data	

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
NY	**Integrated Community Alternatives Network, Inc.**						
	Foster Care Tracker and Assessment Tool		IP for Foster Care and Assessments	Fractional T1 for mental health services and information transmission			
	Long Island Association for Millennium Center for Convergent Technologies						
	An Electronic Clinical Trial System to Reduce Drug Development Costs		IP for communication between SB Computer Science, SBUH and LifeTree	Trial data entered via secure Website		Broadband for communication between SBUH and LifeTree	
	Montefiore Medical Center						
	Electronic Medical Records Expansion		Clinical, Billings, Registration	Brose health related sites	Within facility	Connected Provider Network	
	New York Presbyterian Hospital						
	Systems Technology Interfacing Teaching and Community Hospitals (STITCH)		IP for clinical services exchange to other sites			Exchange of clinical data	
	Research Foundation of State University of New York (SUNY) at Buffalo						
	Telehealth New York	Teledermatology, State-wide Hospital Preparedness Information Network	IP for clinical services and for education over T1 terrestrial lines to rural towns	Distance learning	Roll about telemedicine units	Broadband ISDN 384 kb/sec videoconferencing for clinical services and education	
	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				

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
OH	**Case Western Reserve University**						
	NetWellness		Consumer Health Information	Consumer Health Information			
	Children's Hospital Medical Center of Akron						
	Tele-Health-Kids	Uses input from digital camera and electronic stethoscope for clinical assessments	IP for clinical services			Broadband LAN	Real-time close-up video and additional history obtained by physician via conference interaction or telephone
	Cincinnati Children's Hospital Medical Center						
	Pursuing Perfection—Transforming Health Care Delivery	Radiology and Surgical Services		Patients/parents access the portals through the Medical Center Website			
	Ohio Board of Regents						
	Medical Collaboration Network		H.323 videoconferencing w/ H.264 Codec; HD videoconferencing	Continuing Medical Education web site shared by 7 medical schools; Web interface to drug discovery software		Gigabit Ethernet links from OC-48 backbone to hospital, college, and university sites	
	Ohio State University Research Foundation (for the Ohio Supercomputer Center)						
	Computational Approaches to Research on Cancer in Children and Others		Utilize secure transport protocols for clinical data	De-identified information access	De-identified information access	De-identified information access	

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
OH	**Southern Consortium for Children**						
	Southern Ohio Telepsychiatric Network		IP for clinical services and for education over T1 terrestrial lines to rural towns	Streaming video website for CEUs; Teenline website (crisis hotline)		Connect physician office to rural MH clinic for telepsychiatry	Fiber Optic connects one MH facility for clinical services & education. Cable connects one MH facility for clinical services & education
OK	**INTEGRIS Health, Inc.**						
	INTEGRIS Rural Telemedicine Project	Wound Care & Radiology	IP for clinical services and for education over ATM				POTS using videophones and home monitoring for disease management
	OSU Center for Rural Health						
	Rural Oklahoma Telemedicine Service Expansion		IP for clinical services and CME over T1 terrestrial lines to rural areas				
PA	**Community Nurses Home Health and Hospice, Inc.**						
	Home Telehealth					Telehealth visits	
	Geisinger Clinic						
	Developing a Stoke Care Educational Program for Rural Pennsylvania		Used for website www.ruralstroke.com	Website and email	Developing a Stroke Care Education Program for Rural PA		
	Good Samaritan Hospital Regional Medical Center						
	Schuylkill Alliance for Health Care Access		HIPPA-compliant registration system and client information storage program	iReach program is web-based and information is backed up with Alliance server			

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
PA	**Home Nursing Agency & Visiting Nurse Association**						
	Telehealth Network Grant	Daily Transmission over POTS dialup of patient, vital signs, and health questions					
	Jewish Healthcare Foundation						
	Reinventing Healthcare: the Application of the Pittsburgh Regional Healthcare Initiative's Perfecting Patient Care (PPC) System to Chronic Medical Conditions			Utilizing e-mail network connecting all sites for regional learning and peer-to-peer coaching. Planned for 2006: Web-based methodology learning modules			
	Magee Rehabilitation Hospital						
	Virtual Reality Technology			Future use of Magee software system by patients at home			
	Mercy Health Partners						
	Using Information Technology to Enhance Patient Safety			For remote access for physicians	At bedside for nursing documentation	Ethernet 100mb for local provider access	
	Mercy Hospital of Pittsburgh						
	Mobile Clinician Project				Wireless (IEEE 802.11b, g standard)		
	Millcreek Community Hospital						
	Millcreek Health System Informatics Project		Hospital information system networking infrastructure	Remote access by physicians/ authorized users			

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
PA	**Oil Region Alliance of Business, Industry, & Tourism**						
	The Venango Center for Healthcare Careers (VCHC)			Distance Learning Communication		Teleconference, Delivery of Education	
	Pennsylvania College of Optometry						
	Urban Ophthalmic Telehealth	Eye Care	Eye Care	Eye Care		Eye Care	
	Penn State University						
	Digital Informatics and Communications System	Lectures, CME	Videoconferencing, medical consent, telemedicine	Clinical Trials Network, Physician and patient education, intranet			T1/T3 links between sites for videoconferencing
	Pennsylvania State University College of Medicine						
	Physician-Scientist Initiative	Lectures, CME	Videoconferencing Medical consent. Telemedicine	Clinical trials network Physician and patient education. Intranet	Satellite to connect clinics to provide teleconsultations in frontier communities		
	Pinnacle Health System						
	Reducing Variability to Deliver Safe Care			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 Increase number of wireless access points to provide wireless connectivity through all facilities		
	Safe Harbor Behavioral Health						
	Safe Harbor Behavioral Health Telemedicine Program		ISDN line—clinical and educational services	ISDN line—secured child psychiatric services			

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
PA	**SUN Home Health Services**						
	SUN Home Health Services Network	Web Server-Medical Records, Patient Care Training and Community Education	Web Server/Database Server-Medical Records, Visit Entry, Patient & Community Education	Web & E-mail 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	
	Susquehanna Health System						
	Regional Electronic Medical Record		IP for interfaces between Electronic Medical Record and ancillary clinical systems	Physician access to Electronic Medical Record via secure Web portal	Wireless notebooks used by physicians and clinicians for documentation into Electronic medical record	Inter-site network backbone comprised of redundant ATM w/T1	
	Thomas Jefferson University						
	Integrative Medicine Informatics Feasibility Project			Web Based Distance Learning and Digital Archive			
	Tyrone Hospital						
	The Tyrone Hospital Health Information Network		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		
	Wayne Memorial Hospital						
	Improving Medication and Patient Safety				Wireless tech for portable nurses stations for barcoding		

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
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						Information is transferred via a 56K modem built into the notebook computer, which connects via remote access to the server via an analog phone line.
	Increasing Access to Telehealth—Phase II			Transmission of patient data is through the Health Buddy appliance internal modem (33,600) via POTS line. Data is transmitted and housed through a web portal that is hosted by McKesson.			
	Thundermist Health Center						
	Thundermist Health Center Electronic Health Record	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

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
SC	**Advanced Technology Institute (ATI)**						
	Healthcare and Emergency Awareness Response for Telehealth (HEART) Phase II	Ophthalmology	IP for transmission of retinal images between CHC and ophthalmologist. IP for access care to diabetes care management data				DSL for transmission of retinal images between CHC and ophthalmologist
	Voorhees College						
	Developing a Telehealth Infrastructure to Address Health Disparities Through Education and Training					1 Full T1 line at the main site for static VPN with remote sites for education and training	
SD	**Avera Health**						
	Avera Rural and Frontier Disease Management Telehealth Network	For Home Monitoring using POTS	In-Network only at QOS			Broadband ISDN for clinical encounters, Education and Administrative events	
	Great Plains Telehealth Resource and Assistance Center						N/A
TN	**University Health System, Inc.**						
	High-Risk Newborn Services Project						N/A
	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	Companion Care diabetes monitoring equipment	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	

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
TN	*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	Companion Care diabetes monitoring equipment	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	**Federation of State Medical Boards of the United States, Inc.**						
	Medical Licensure Portability to Facilitate Multi-State Telehealth Practice						N/A
	Harris County Hospital District						
	Specialty Access Through Telemedicine (SA++)	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
	University of Texas Health Science Center at San Antonio (UTHSCSA)						
	Diabetes Risk Reduction via Community Based Telemedicine (DiRReCT)			IP for clinical services and for education over T1 terrestrial lines to rural towns			

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
TX	**University of Texas Medical Branch Center to Eliminate Health Disparities**						
	The Texas Telehealth Disparities Network		IP for clinical services and for education over T1 lines to rural site in Smith and Cameron counties.				
UT	**Association for Utah Community Health (AUCH)**						
	Association for Utah Community Health Telehealth Program	Tele-Opthalmology for Diabetic Retinopathy	IP Videoconferencing	Website/ Distance Learning			T-1 Line for Internet/ Videoconferencing
	Dr. Ezekiel R. Dumke College of Health Professions						
	Health Opportunities Professional Exploration (HOPE)		IP for teaching Paramedic courses and for web-based testing	WWW for teaching Paramedic courses and for web-based testing		Broadband video bridge equipment for teaching paramedic courses	
	Intermountain Healthcare						
	HRSA Telemedicine Pilot Program for Interpreting Services for the Deaf		H.323 video protocols	Transmission of video from Intermountain to LanguageLine via the Internet		Video interpreting transmissions—Transmission line rate—512 kbps for high quality video transmission	
	University of Utah						
	Utah Telehealth Network Comprehensive Telehealth Services	Radiology, cardiology, pharmacy	Videoconferencing including patient care visits, radiology, pharmacy, cardiology, VPNs	Web archives of continuing education programming			ISDN Videoconferencing for some patient care (prison) and some educational activities

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
VA	**University of Virginia**						
	Southwest Virginia Alliance for Telemedicine	Pediatric Cardiology Reads, Diabetic Retinopathy, Radiology, Dermatology	Clinical consults and Distance Education programs, Outreach to Military in Iraq and families in US	Clinical Consults and Education	Clinical Consults	Clinical Consults, Education (State, Nationwide, and International)	
VT	**The University of Vermont (UVM)**						
	Pediatric Teletrauma Project						ISDN Teletrauma, Pediatric Critical Care
WA	**Inland Northwest Health Services**						
	Northwest Telehealth--TeleER		IP for clinical services, education and EMR, over T1 terrestrial lines to rural towns			IP for clinical services, education and EMR, over T1 terrestrial lines to rural towns	
	Northwest Telehealth--Telepharmacy					Fractional T1 lines connecting hospitals participating in telepharmacy program	
	University of Washington						
	Native People for Cancer Control Telehealth Network	Lance Armstrong Survivorship Center services.	Internet2 transport for clinical services and for education to AFHCAN hub.	Possible education using Web.		T1/ISDN for clinical services and education to rural tribal health centers and clinics.	
	Yakima Valley Memorial Hospital						
	Bedside Medication Management (MAR) System		TCP/IP Local Area Network 100/1000 Base T and F		802.11 b/g; Bluetooth		

Technology and Transmission

State	Program(s) Name	Store and Forward	Internet Protocols (IP)	Internet/World Wide Web	Wireless Technology	Broadband Transmission	Other Transmission
WI	**La Crosse Medical Health Science Consortium**						
	Virtual Population Health Centers in the Rural Midwest	DVDs and streamlining	Terrific Tuesdays Class—"Developmental Principles Through the Lifespan"	Online program for Nurse Educators for Tomorrow. Online and clinical at rural sites for Radiography on Line			
	Marshfield Clinic Telehealth Network						
	Marshfield Clinic Telehealth Network	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
	Marshfield Clinic Telehealth Network 2006	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
WV	**Appalachian Pain Foundation**						
	Physician Education, Community Outreach Program to Prevent Diversion of Prescription Drugs		IP for education and public outreach over T1 terrestrial lines; videoconferencing and distance education	Pain Management Web site—information, referral, and education		Videoconferencing and distance education	
	Robert C. Byrd Center for Rural Health						
	Marshall University Southern West Virginia Rural Outreach Project	Health Records from Mobile Units; Radiology; Streaming Video Education for Health Outreach; Imagery for Virtual Colonoscopy project	T1 terrestrial lines to 3 sites; T3 lines to 1 site for Health Education and Meetings	Evaluated possibility of web-based EHR		H.323 connectivity for video conferencing & delivery of education and services	Streaming Video Education for Health Outreach

Technology and Transmission

State	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 T1 terrestrial lines to rural towns				
WY	**Memorial Hospital of Laramie County dba Cheyenne Regional 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						
	Wyoming Network for Telehealth (WyNETTE)		IP for clinical services, resource access, and distance education to rural communities	Web site for information on telehealth projects, policy statements, and sources of support		Videoconferencing via H.232 for telepsychiatry and limited primary care	Telephone service for home health monitoring

Technology and Transmission

Definitions:

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.
Internet Protocol	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.
World Wide Web	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.
Broadband	For purposed 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 Megbits/sec (T3); voice, data, and/or video communications at rates greater than 1.544 Megabits/sec (T-1), but has been Federally defined as data transmission each way, of 200 kilobits/second or more.
Broadband LAN	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.
Broadband ISDN	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

State	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated within Emergency Planning
AK	**Alaska Native Tribal Health Consortium**					N/A
	Alaska Psychiatric Institute (API)	Mark W. Doughty, Safety Officer 2800 Providence Drive Anchorage, AK 99508-4677 Ph: 907-269-7819 Fax: 907-269-7251 http://www.hss.state.ak.us/dbh/API	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.	
AL	**University of South Alabama**	Carl Taylor 307 N. University Blvd., HSB 1100 Mobile, AL 36688 Ph: 251-461-1812 Fax: 251-46—1809 http://www.cshi.southalabama.edu	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 641 attendees; 74 hospitals; 11 public health areas. Delivered organized specific ICS and planning sessions for hospitals, community health centers, and public health organizations.	Statewide	CSHI 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 states 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
AR	**University of Arkansas for Medical Sciences**	Ann Bynum 1123 South University ST 400 Little Rock, AR 72204 Ph: 501-686-2595 Fax: 501-686-2585 http://rpweb.uams.edu/btportal/	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 2005 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

Homeland Security

State	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated within Emergency Planning
AZ	**Arizona Board of Regents, University of Arizona**	Richard McNeely PO Box 245032 Tucson, AZ 85724 Ph: 520-626-7343 Fax: 520-626-2145 www.telemedicine.arizona.edu	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.
	Maricopa County, Arizona					N/A
CA	**California Telemedicine and eHealth Center**					N/A
	Familia Unida Living with Multiple Sclerosis					N/A
	Multi-Dimensional Imaging, Inc.					N/A
	Northern Sierra Rural Health Network	Jim Perkins, DrPH Northern Sierra Rural Health Network 138 New Mohawk Road #100 Nevada City, CA 95959 Ph: 530-470-9091 Fax: 530-470-9094 jim@nsrhn.org	1. We are working with our rural clinics to help them develop emergency response plans. 2. We provide no-cost emergency preparedness and response training to clinics, public health agencies and rural hospitals. Many of these programs are provided by videoconferencing. We also conduct table top preparedness exercises	30	1. NSRHN, along with 14 other clinic consortia across California, receives HRSA funding through the California Primary Care Association to help our clinics develop emergency response plans and facilitate their participation in local planning activities and local and state-wide exercises. 2. NSRHN is a center for the California Preparedness Education Network (Cal-PEN), a program of the California Area Health Education Center Program.	California Primary Care Association California Area Health Education Center Program

Homeland Security

State	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated within 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 http://www.sjgeneralhospital.com	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.)
CO	**Avista Adventist Hospital**					N/A
	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 Sheriff's Office State Emergency Preparedness State Homeland Security UASI	Internal of UCHSC Various Departments
DC	**American National Red Cross**					N/A
	Center for Telehealth and E-Health Law					N/A

Homeland Security

State	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated within Emergency Planning
DC	**Foundation for eHealth Initiative**	Janet M. Marchibroda Chief Executive Foundation for eHealth Initiative 818 Connecticut Ave, Suite 500 Washington, DC 20006 Phone: 202-429-5553 Fax: 202-624-3266 E-mail: janet.marchibroda@ehealthinitiative.org	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.	15	The results of the Foundation for eHealth Initiative's annual survey, the learnings of funded communities, the rapidly growing coaliltion 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.	
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	**Ware County Health Department**					N/A
HI	**Hawai'i Primary Care Association**					N/A
	The Queen's Medical Center					N/A
IA	**Iowa Chronic Care Consortium**					N/A
	Mercy Foundation					N/A

Homeland Security

State	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated within Emergency Planning
ID	**Clearwater Valley Hospital and Clinics, Inc.**	Pam McBride 301 Cedar St. Orofino, ID 83544 Ph: 208-289-5509 Fax: 208-289-2437 www.clearwatervalleyhospital.com	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
	Idaho State University, Institute of Rural Health	Dr. B. Hudnall Stamm, PhD 921 So. 8th Ave., Stop 8174 Pocatello, ID 83209 Ph: 208 282-4436 Fax: 208 282-4074 http://www.isu.edu/irhhttp://telida.isu.edu Dr. Neill Piland, DrPH 921 So. 8th Ave., Stop 8174 Pocatello, ID 83209 Ph: 208-282-4436 Fax: 208-282-4074 http://www.isu.edu/irh http://www.isu.edu/irh	Representation on the State Bioterrorism Preparedness & 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. Statewide network for distributing bioterrorism continuing education training. Distance delivery will include virtual tabletop exercise and drill, simulations, live-event webconferencing (interactive and non-interactive), Webcasts (on-demand), archived Webcasts, Virtual Grand Rounds, workshops, seminars, audioconferences, CD-ROM.	11 44	Representation on the State Bioterrorism Preparedness & Response Advisory Committee 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.	Principal Investigator for National Child Traumatic Stress Network Center for Rural, Frontier, and Tribal Health; Co-Principal Investigator/Co-Project Director for Bioterrorism Training and Curriculum Development Program Grant for Idaho. 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 NGO's responses to natural disasters in 2004-2005 (South Asian Tsunami, Hurricane Katrina, etc.) providing aid worker materials. See telida.isu.edu for access to materials. Principal Investigator for Idaho Bioterrorism Awareness and Preparedness (IBAPP)

Homeland Security

State	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated within Emergency Planning
ID	**North Idaho Rural Health Consortium (NIRHC)**					N/A
	Public Hospital Cooperative, Inc.					N/A
IL	**Illinois Department of Human Services**					N/A
	The National Council of State Boards of Nursing	Kristin A. Hellquist, MS 111 East Wacker Drive #2900 Chicago, IL 60601 Ph: 312-525-3665 Fax: 312-279-1032 khellquist@ncsbn.org	NCSBN educates member boards of nursing on the Nurse Licensure Compact which enhances nurse licensure portability, reduces regulatory borders, and increases access to safe and effective health care.		NCSBN participates in assisting this area as it relates to facilitating the verification of nurse licensure	
	Saint John's Hospital					N/A
	Southern Illinois University School of Medicine	Deborah E. Seale SIU Telehealth Networks & Programs 913 N. Rutledge St., Ste 1253 P.O. Box 19682 Springfield, Illinois 62794-9682 Ph: 217-545-7830 Fax: 217-545-7839 http://www.siumed.edu/telehealth	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. Videoconference 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

Homeland Security

State	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated within Emergency Planning
IN	**Health & Hospital Corporation of Marion County**	Gurinder Hohl, MPH 3838 N. Rural St. Indianapolis, IN 46205 Ph: 317-221-3112 Fax: 317-221-2020 ghohl@hhcorp.org	1. Urban Areas Security Initiative (UASI). 2. HRSA Bed Surge 3. Metropolitan Medical Response System.	County-wide (1-3)	1. Indianapolis/Marion County/Hamilton County receives funding through UASI for a wide variety of homeland security efforts. 2. For increasing hospital bed surge capacity in the event of an emergency. 3. To increase capacity of public health and hospital system to respond to BT attacks within a 48 hour period.	1. State of Indiana and all local government agencies. 2. State of Indiana. 3. State of Indiana, City of Indianapolis.
KS	**University of Kansas Medical Center**	David Cook, Ph:D University of Kansas Medical Center Mail Stop 3013 3901 Rainbow Blvd. Kansas City, KS 66160	Two large bioterrorism and disaster preparedness conferences are scheduled for 2007.		KUCTT will videotape the conferences and archive them for later ITV broadcasts to ITV sites and for web-enabled asynchronous viewing for CE purposes.	External Affairs Continuing Education
KY	**The James B. Haggin Memorial Hospital**					N/A
	Marcum & Wallace Memorial Hospital					N/A

Homeland Security

State	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated within Emergency Planning
KY	**New Horizons Health Systems, Inc.**	Linda Saur, RNC 330 Roland Avenue Owenton, KY 40359 Ph: 502-484-3663, ext. 2302 lsaur@bellsouth.net	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. 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. (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.	1	Participate with Kentucky Hospital Association in regional and state planning to coordinate services, communication, other needs.	Kentucky Hospital Association, Kentucky Homeland Security, Owen County Emergency Management, Owen County Public Health
	University of Kentucky Research Foundation—Kentucky TeleCare	Rob Sprang MBA Director, Kentucky TeleCare K128 KY Clinic, 740 S. Limestone Lexington, KY 40536-0284 Email: rsprang@uky.edu	Utilize the larger Kentucky TeleHealth Network KTHN for distributing education and emergency response programs, including disaster drills.	72 TH sites + 20 new public grant facilities	Kentucky TeleCare partnered with University of Louisville on HRSA BT grant. TeleCare coordinates the PROACT network of 20 VTC sites that are contracted to deliver education and respond 24 x 7 in the event of a disaster.	UK College Of Agriculture, UK Department of Psychiatry, UK College Of Pharmacy, KY Department for Public Health, University of Louisville, KY Department for Homeland Security, CDC, University of Missouri, University of Tennessee.

Homeland Security

State	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated within Emergency Planning
MA	**Massachusetts College of Pharmacy and Health Sciences**					N/A
	UMass Memorial Medical Center	Gina Smith, RN Emergency Preparedness Coordinator UMass Memorial Medical Center 55 Lake Avenue North Worcester, MA Ph: 508-334-7688 Fax: 508-334-7579 Email: smithg02@ummhc.org	UMass Memorial participates in the Massachusetts Department of Public Health Hospital Emergency Preparedness Committee, Metropolitan Medical Response System (MMRS), and 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	**Eastern Maine Healthcare Systems**	Kathy Knight, RN 43 Whiting Hill Rd. Brewer, ME 04412 Ph: 207-973-8008 kknight@emh.org	Statewide network for distributor of bioterrorism training and homeland security alert. Emergency Management Agencies Distributing lectures in region.	8	ME Telehealth Network coordinates videoconferencing education for preparedness training for Northern, Eastern, and Central Maine	Blue Hill Memorial Hospital, Inland Hospital, CA Dean Memorial Hospital, Sebasiticook Valley Hospital, The Aroostook Medical Center, The Acadia Hospital and Eastern Maine Healthcare Systems
	Regional Medical Center at Lubec	Carol Carew Regional Medical Center at Lubec 43 South Lubec Road Lubec, ME 04652 Ph: 207-733-5541 Fax: 207-733-2947 Web: www.rmcl.org	Distance education training on emergency preparedness for nursing home staff with CEU credits	5	Trainer, Dr. Ronald Blum, is contracted by the State of Maine as an educational resource for emergency planning for health facilities	N/A

Homeland Security

State	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated within Emergency Planning
MI	**Altarum Institute**					N/A
	Hurley Medical Center					N/A
	Marquette General Hospital					N/A
	Michigan State University					N/A
	Western Michigan University					N/A
MN	**Fairview Health Services**	Tom Ormand, Director 323 Stinson Blvd. Minneapolis, MN 55473 612-672-6822 tormand1@fairview.org	The Ambulatory Electronic Medical Record is used in conjunction with FHS acute care electronic medical records 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 enables 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 (4) Fairview Ridges Hospital and free-standing clinics (6)	Unrelated to this project Fairview Health Services' Internal/External Disaster Plan and Evacuation Plan/Policy (Orange Alert Plan) embraces the Hospital Emergency Incident Command System (HEICS) model of emergency management. HEICS is an all-hazard plan to manage natural, biologic, chemical and radiation disasters and emergencies.	HEICS is used by the Metro medical community and Federal, State, and military emergency responders.
	Tri-County Hospital	Corrine Neisess, RN Tri-County Hospital 415 North Jefferson St. Wadena, MN 56482 Ph: 218-631-7516 Fax: 218-631-7503 corrine.neisess@tricountyhospital.org	Tri-County Hospital representative for the MN Central Region HRSA Bioterrorism Task Force		Unknown at this time	
	University of Minnesota					N/A

Homeland Security

State	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated within Emergency Planning
MO	**Citizen's Memorial Hospital District**					N/A
MT	**Benefis Healthcare Foundation**	Jack W. King 1101 26th St So. Great Falls, MT 59405 Ph: 406-455-4285 Fax: 406-455-4141 Email: kingjacw@benefis.org	N/A	N/A	Benefis Healthcare Foundation is a partner in a Federal HRSA grant for Bioterrorism Preparedness.	St. Vincent Healthcare
	Billings Clinic Foundation	Joe Marcotte 2800 10th Avenue North Billings, MT 59101 Ph: 406-657-4824 jmarcotte@billingsclinic.org	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
	Deaconess Billings Clinic Foundation					N/A
	Saint Patrick Hospital & Health Foundation					N/A
	Saint Vincent Healthcare Foundation	Doris T. Barta, Director Grants Division 175 North 27th Street, Suite 803 Billings, MT 59101 Phone: 406-237-3602 Fax: 406-237-3615 Email: doris.barta@svh-mt.org	Implementation of a Statewide Bioterrorism Grant focusing on education and training of healthcare providers across the state of Montana.	Service area includes the state of Montana	Local LEPCs have been engaged in grant activities and grant personnel have been engaged in Statewide Activities regarding Emergency Planning for Montana.	All 56 hospitals in the state of Montana; the Department of Public Health and Human Services, all Infectious Disease physicians in the state of Montana
NC	**Duke University Medical Center**	John Vargas, Director of Emergency Preparedness and Planning Duke University Hospital Box 3521 Durham, NC 27710 Phone: 919-681-2933 Email: john.vargas@duke.edu	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
	Educational and Research Consortium of Western Carolinas					N/A

Homeland Security

State	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated within Emergency Planning
ND	**North Dakota State University College of Pharmacy, Nursing, and Allied Sciences**					N/A
NE	**Good Samaritan Hospital Foundation**	Tracy Donner, Health Alert Network Coor. NE HHS Ph: 402-471-1996 Fax: 402-326-3014 Email: tracy.donner@hhss.ne.gov	Developing a connected network of Hospitals, Public Health dept. Labs & HHS (i.e., 3 Statewide Health Alert tests, monthly tests of the Nebraska Telehealth Network)	20	Participating in the emergency preparedness program establishing the state wide communications network to be utilized in any emergency. Another avenue of communication and administrative connectedness. Secretary Leavitt broadcast his Nebraska visit with topics including the Asian Bird Flu & other bioterrorism threats.	NHA, NHHS, NSTH, Various Nebraska health departments, UNMC, Nebraska bioterrorism labs, Nebraska information technologies
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					N/A
NV	**Nevada Rural Hospital Partners Foundation**					N/A
	University of Nevada, Reno	L.D. Brown, MD, MPH NV State Health. Lab. 1660 N. Virginia St. Reno, NV 89503 Ph: 775.688.1335 Fax: 775.688.1460 lbrown@medicine.nevada.edu	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.

Homeland Security

State	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated within Emergency Planning
NY	**Community Health Care Services Foundation, Inc.**					N/A
	Genesee Gateway Local Development Corporation, Inc.					N/A
	Integrated Community Alternatives Network, Inc.					N/A
	Long Island Association for Millennium Center for Convergent Technologies					N/A
	Montefiore Medical Center					N/A
	New York Presbyterian Hospital					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 www.telehealth.buffalo.edu	Specialized Medical Assistance and Response Team (SMART) Mobile deployable wireless Disaster LAN Store-and-Forward Emergency Network Emergency Department Triage Surveillance	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

State	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated within Emergency Planning
OH	**Case Western Reserve University**					N/A
	Children's Hospital Medical Center of Akron					N/A
	Cincinnati Children's Hospital Medical Center	Nathan Timm, MD 3333 Burnet Ave. MLC 2008 Cincinnati, OH 45229 Ph: 513-636-7972 Fax: 513-636-7967	As the primary and tertiary center for Pediatric care in the region, CCHMC conducts 2 to 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.
	Ohio Board of Regents	David Barber, 36th Fl., 30 E. Broad St. Columbus, OH 43214 Ph: 614-752-9530 Fax: 614-466-5866 www.regents.state.oh.us	Joint development of training materials and conduct of simulation between sites offering specialized homeland security training	3	Two 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	N/A	N/A	N/A	N/A
	Southern Consortium for Children	Steve Trout, 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 strout@frognet.net www.scchildren.com	Disaster Preparedness training, Emergency Response to Trauma	13	Coordinate videoconference training in 10 county area	Four mental health agencies, four Alcohol, Drug Addiction, and Mental Health Services (ADAMHS) Boards, Ohio Department of Mental Health, Health Department

Homeland Security

State	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated within Emergency Planning
OK	**INTEGRIS Health, Inc.**					N/A
	OSU Center for Rural Health					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 E-mail: 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 Department of Health and PEMA
	Good Samaritan Hospital Regional Medical Center					N/A
	Home Nursing Agency & Visiting Nurse Association					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

Homeland Security

State	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated within Emergency Planning
PA	**Pennsylvania College of Optometry**					N/A
	Penn State University					N/A
	Pennsylvania State University College of Medicine					N/A
	Pinnacle Health System	Christopher P. Markley, Esq. 409 South Second Market Street Harrisburg, PA 17105-8700 Ph: 717-231-8210 Fax: 717-231-8157 www.pinnaclehealth.org	Bioterrorism surveillance	4	De-identified data is sent from our hospital emergency rooms to the University of Pittsburgh, the administrator of Pennsylvania's RODS (Real-time Outbreak Disease Surveillance) Program.	University of Pittsburgh; Siemens Health Services
	Safe Harbor Behavioral Health					N/A
	SUN Home Health Services	Steven B. Richard MBA, CHCE 61 Duke Street, PO Box 232 Ph: 570-473-7625 Fax: 570-473-3070 www.sunhomehealth.com	Member of the East Central and North Central Regional Emergency Management/Bioterrorism Task Force. Participates in regional planning and ensuring that homecare, as well as the Telehomecare resources are included in emergency planning. Computer connectivity is used by staff 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, Emergency Management Services from all involved counties
	Susquehanna Health System	Charles G. Stuzman 777 Rural Ave. Williamsport, PA 17701 Ph: 570-321-2398 Fax: 570-321-2397 cstutzman@susquehanna.org	Emergency Preparedness Decon Center MCI Surge Capacity Organization Drill participation	3	Participates in NCCTTF on various committees and assists with health and medical response both prehospital and hospital responses.	N/A

Homeland Security

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

Homeland Security

State	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated within Emergency Planning
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 http://www.thundermisthealth.org E-mail: 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 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 http://www.aticorp.org	Public Health Information, Distance Learning	4	Health diagnostic procedures, distance learning	
	Voorhees College					N/A
SD	**Avera Health**	David Erickson 3900 W. Avera Drive Sioux Falls, SD 57108 Ph: 605-322-4550 Fax: 605-322-4522 www.avera.org	While Dr. Erickson serves as the contact for Avera Health, each regional facility also has their own contact for emergency preparedness. The regional facilities are involved at varying levels within their community and region.		Avera McKennan participates in various distance learning opportunities and on-going cooperation with the state bioterrorism contact and activities, as well as regular coordination activities with the local community activities.	
TN	**University Health System, Inc.**					N/A
	University of Tennessee Health Science Center	Toy Strickland, MBA Director, UT Outreach Center 920 Madison, Suite 434 Memphis, TN 38163 Ph: 901-448-2611 Fax: 901-448-4344 www.utmem.edu/telemedicine	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 Assistance Center/Training Site (REAC/TS), national radiation accident response, and Emergency Management Agencies. Distributing lectures in region.	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 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

Homeland Security

State	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated within Emergency Planning
TX	**Federation of State Medical Boards of the United States, Inc.**					N/A
	Harris County Hospital District	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 E-mail: Kim.Dunn@uth.tmc.edu Jerry Collier, Coordinator Harris County Medical Reserve Corps 3611 Ennis Houston, TX 77004 Ph: 713-783-4616 Fax: 713-785-3077 E-mail: Jerry_Collier@hchd.tmc.edu	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. Recruit and train health care professionals to respond in the event of a declared emergency.	3+1	Develop Protocols and methods for system monitoring to provide an early alert of a developing crisis. 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.	Memorial Hermann Hospital, LBJ Hospital, Ben Taub Hospital, and others 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.
	University of Texas Health Science Center at San Antonio	Primary Contact: Dr. Harold Timboe Director of Regional Medical Operations Center (RMOC) Ph: 210-567-0779 Fax: 210-567-7120 Health Science Center Videoconference Operations Unit Contact: Rudy De L Cruz, Jr. MPA, MA Manager of Videoconference Operations Ph: 210-567-4404	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.	89 sites on the Health Sciences Center Videoconference Network	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.	Unit detachments established in border areas where the UT Health Science Center has campuses, such as Harlingen, Laredo and Edinburg.
	University of Texas Medical Branch Center to Eliminate Health Disparities					N/A

Homeland Security

State	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated within Emergency Planning
UT	**Association for Utah Community Health**					N/A
	Dr. Ezekiel R. Dumke College of Health Professions					N/A
	Intermountain Healthcare					N/A
	University of Utah	Deb LaMarche 585 Komas Drive, Suite 204 Salt Lake City, UT 84108 Ph: 801-587-6190 Fax: 801-585-7083 www.utahtelehealth.net	Connect state and local health departments for training and planning. Health Department fund UTN activity with Health Alert Network & BT funding.	13	Health Departments are part of the state & federal Bioterrorism Preparedness grant program	
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 www.healthsystem.virginia.edu mls9m@virginia.edu	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 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.
VT	**The University of Vermont (UVM)**	Terry Rabinowitz, MD 111 Colchester Avenue Patrick 4, MCHV Burlington, VT 05401 Ph: 802-847-7211 Fax: 802-847-3090 E-mail: Terry.Rbinowitz@vtmednet.org www.fach.org/telemedicine	Working on wireless real time video in moving ambulance			
WA	**Inland Northwest Health Services**	Renee Anderson 601 West First Ave., Suite 200 Spokane, WA 99201 Ph: 509-232-8155 Fax: 509-232-8357 www.nwtelehealth.org	(WEMSIS) 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.	22	State Requirement for EMS agencies.	Regional hospital emergency preparedness committees, Homeland Security, Combined Communications Center, Tribal EMS, Volunteer EMS, Ambulance
	University of Washington					N/A
	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

Homeland Security

State	Organization	Contact Information	Description of Activity	Sites	Role in Federal, State or Local Emergency Planning	Other entities associated within Emergency Planning
WI	**LaCrosse Medical Health Science Consortium**		Created "Operation Heartland Defense DVD-Video" from a training session for catastrophic emergency events was held in August 2004, which was distributed throughout via the HRSA regions, the Public Health Consortia and the State Office of Homeland Security.			
	Marshfield Clinic Telehealth Network	Nina M. Antoniotti RN, MBA, PhD 1000 N. Oak Avenue Marshfield, WI 54449Ph: 715-389-3694 Fax: 715-387-5225	Internal Bioterrorism response protocols	43	Corporate member of local municipal planning group.	State FEMA State Bioterrorism Committee
WV	**Appalachian Pain Foundation**					N/A
	Robert C. Byrd Center for Rural Health					N/A
	West Virginia University, Mountaineer Doctor TeleVision (MDTV)					N/A
WY	**Memorial Hospital of Laramie County dba Cheyenne Regional Medical Center**					N/A
	Wyoming Department of Health	Rex Gantenbein, Ph:D. 100 E. University, Dept. 3432, Laramie, WY 82071	Emergency Medical Services Continuing Education Regional Hospital Network Charter Member Northwest Regional Resource Center	23 Statewide 8 States and Pacific Islands	Participation in multi-state regional readiness pilots.	N/A

Demographics of Population Served

All OAT grantees were asked whether their projects served ≥ 20% of the population int the following demographic categories: 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

State	Organization	African-American	Hispanic/ Latino	American Indian/ Alaska Native	Asian American or Pacific Islander
AK	**Alaska Native Tribal Health Consortium**				
	Continued Advancement of Telehealth Capacity in Alaska			•	
	The Summative Telemedicine Evaluation Project			•	
	Alaska Psychiatric Institute (API)				
	API TeleBehavioral Health Project			•	
AL	**University of South Alabama**				
	Center for Strategic Health Innovation (CSHI) RMEDE/BioTrac Project	•			
	Center for Strategic Health Innovation (CSHI) Traditional Telemedicine	•			
AR	**University of Arkansas for Medical Sciences**				
	South Arkansas Integrated Telehealth Oncology Program	•			
	Telehealth for KIDS (Kids in Delta Schools)	•			
AZ	**Arizona Board of Regents, University of Arizona**				
	Arizona Diabetes Virtual Center for Excellence (ADVICE)		•	•	
	Institute for Advanced Telemedicine and Telehealth (THealth)		•	•	
	Maricopa County, Arizona				
	Correctional Health Services Telemedicine Initiative		•		
CA	**California Telemedicine and eHealth Center**				
	Western Regional Telehealth Resource Center				N/A
	Familia Unida Living with Multiple Sclerosis				
	Telehealth Grant	•	•		•
	Multi-Dimensional Imaging, Inc.				
	Telemedicine for Improved Health Care and Education				N/A
	Northern Sierra Rural Health Network				
	Telehealth Network Grant Program				N/A
	San Joaquin County Health Care Services				
	Automated Drug Dispensing Medication Administration System	•	•	•	•
CO	**Avista Adventist Hospital**				
	Clinical Integration Through Health Informatics		•		

Demographics of Population Served

State	Organization	African-American	Hispanic/ Latino	American Indian/ Alaska Native	Asian American or Pacific Islander
CO	**University of Colorado Health Sciences Center**				
	Native Telehealth Outreach/Technical Assistance Program			•	
DC	**American National Red Cross**				
	Congressionally Mandated Telehealth Grants				N/A
	Center for Telehealth and E-Health Law				
	National Telehealth Resource Center				N/A
	Foundation For eHealth Initiative				
	Connecting Communities for Better Health				N/A
	CareSpark, TN				N/A
	Colorado Health Exchange Network, CO				N/A
	HealthBridge, OH				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	•			
	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				N/A
	Florida Cancer Research Cooperative, University of South Florida				
	Clinical Trial Patient/Physician Information and Education Program	•	•	•	•
	University of Florida College of Dentistry (UFCD)				
	University of Florida College of Dentistry (UFCD)				N/A
GA	**Ware County Health Department**				
	Rural Health Telemedicine Grant Program	•	•		
	Southeast Telehealth Network Program	•	•		

Demographics of Population Served

State	Organization	African-American	Hispanic/ Latino	American Indian/ Alaska Native	Asian American or Pacific Islander
HI	**Hawai'i Primary Care Association**				
	The Hawai'i CHC Telehealth Network Project				•
	The Queen's Medical Center				
	Hawaii Neuroscience Telehealth Network				•
IA	**Iowa Chronic Care Consortium**				
	Iowa Medicaid Population Disease Management Demonstration				N/A
	Mercy Foundation				
	Midwest Rural Telemedicine Consortium				N/A
ID	**Clearwater Valley Hospital and Clinics, Inc.**				
	Clearwater Valley Hospital: Electronic Medical Records				N/A
	Idaho State University, Institute of Rural Health				
	Telehealth Idaho		•		
	North Idaho Rural Health Consortium (NIRHC)				
	Expanding Telehealth to North Idaho Districts (EXTEND)				N/A
	Public Hospital Cooperative, Inc.				
	Cooperative Telehealth Network				N/A
IL	**Illinois Department of Human Services**				
	Illinois Developmental Disabilities Telehealth Network and Services: A Program Dedicated to Optimizing Health and Support of Community Living				N/A
	The National Council of State Boards of Nursing				
	Moving Toward Portability: Uniform Core Licensure Standards for Nursing				N/A
	Saint John's Hospital				
	Neonatal Telehealth Project in Rural Illinois Located at the Perinatal Center				N/A
	Southern Illinois University School of Medicine				
	Downstate Illinois Regional Telehealth Project				N/A
IN	**James Whitcomb Riley Hospital for Children**				
	Riley Connections	•	•		•
	Health & Hospital Corporation of Marion County				
	Congressionally-Mandated Telehealth Grants	•			

Demographics of Population Served

State	Organization	African-American	Hispanic/ Latino	American Indian/ Alaska Native	Asian American or Pacific Islander
KS	**University of Kansas Medical Center**				
	Sustainability and Cost Benefit Evaluation of the Kansas Telehealth Network	•	•		
	Telehealth Access and Cost Benefit in Kansas	•	•		
KY	**The James B. Haggin Memorial Hospital**				
	PACS (Picture Archiving and Communication System)				N/A
	Marcum & Wallace Memorial Hospital				
	Teleradiology Enhancement Project				N/A
	New Horizons Health Systems, Inc.				
	Information Technology Development and Improvement				N/A
	University of Kentucky Research Foundation				
	Improving Health Outcomes for Children in Rural Kentucky Schools	•	•		
MA	**Massachusetts College of Pharmacy and Health Sciences**				
	Worcester Campus Distance Learning Initiative	•	•		
	UMass Memorial Medical Center, Inc.				
	PACS Teleradiology Project				N/A
ME	**Eastern Maine Healthcare Systems**				
	Improving Rural Maine's Critical Access to Emergency & Chronic Disease Care Through Telehealth/Monitoring				N/A
	Regional Medical Center at Lubec				
	Maine Nursing Home Telehealth Network				N/A
	Northeast Telehealth Resource Center				N/A
MI	**Altarum Institute**				
	Concepts for a Michigan Health Information Network (MiHIN)	•			
	Hurley Medical Center				
	Clinical Information System Replacement Project	•			
	Marquette General Hospital				
	Midwest Alliance for Telehealth and Technologies Resources				N/A
	Michigan State University				
	Telehospice in Mid-Michigan				N/A

Demographics of Population Served

State	Organization	African-American	Hispanic/ Latino	American Indian/ Alaska Native	Asian American or Pacific Islander
MI	**Western Michigan University**				
	The Application of Tele-Allied Health in Rural Counties in Southwest Lower Michigan				N/A
MN	**Fairview Health Services**				
	Ambulatory Electronic Medical RecordSystem – Twin Cities Metropolitan Care Systems				N/A
	Tri-County Hospital				
	Telehealth Network Grant Program				N/A
	University of Minnesota				
	Fairview – University of Minnesota Telemedicine Network			•	
MO	**Citizen's Memorial Hospital District**				
	Project Infocare: In-HomeTelemanagement				N/A
MT	**Benefis Healthcare Foundation**				
	NMHA & REACH Telehealth Network Development Project				N/A
	Billings Clinic Foundation				
	Effect of an Integrated CIS on Inpatient and Post-Discharge Medication Administration Error and Chronic Disease Management				N/A
	Deaconess Billings Clinic Foundation				
	Revolutionizing Diabetes Care at Billings Clinic: A Model for Chronic Disease Care				N/A
	Saint Patrick Hospital & Health Foundation				
	Montana Cardiology Telemedicine Network				N/A
	Bringing Healthcare Home				N/A
	Saint Vincent Healthcare Foundation				
	Mansfield Health Education Center (MHEC)	•	•	•	•
	Northwest Regional Telehealth Resource Center			•	
NC	**Duke University Medical Center**				
	Patient Inclusion in a Community-Based Telehealth Network	•			
	Patient Participation in a Rural Community-Based Network	•			
	Educational and Research Consortium of Western Carolinas				
	Western North Carolina Regional Data Link Project				N/A

Demographics of Population Served

State	Organization	African-American	Hispanic/ Latino	American Indian/ Alaska Native	Asian American or Pacific Islander
ND	**North Dakota State University College of Pharmacy, Nursing, and Allied Sciences**				
	North Dakota Telepharmacy Project				N/A
NE	**Good Samaritan Hospital Foundation**				
	Mid-Nebraska Telemedicine Network(MNTN)				N/A
NJ	**Hackensack University Medical Center**				
	Implementation of Oncology Patient Management System	•	•		•
	Saint Peter's University Hospital				
	Medical Technology Center for Infants and Children	•	•	•	•
NM	**New Mexico Human Services Department**				
	New Mexico Tele-Behavioral Health Improvement Project		•		
	University of New Mexico Health Sciences Center				
	Rural Health Telemedicine Program		•		
NV	**Nevada Rural Hospital Partners Foundation**				
	Digital Imaging System for Rural Nevada (DISRN)				N/A
	University of Nevada, Reno				
	Biomedical Imaging Laboratory				N/A
NY	**Community Health Care Services Foundation, Inc.**				
	Introducing Home Telehealth in New York's 20th Congressional District				N/A
	Genesee Gateway Local Development Corporation, Inc.				
	Upstate New York Telemedicine Study	•	•		
	Integrated Community Alternatives Network, Inc.				
	Foster Care Tracker and Assessment Tool		•		
	Long Island Association for Millennium Center for Convergent Technologies				
	An Electronic Clinical Trial System to Reduce Drug Development Costs	•	•		•
	Montefiore Medical Center				
	Electronic Medical Records Expansion	•	•		

Demographics of Population Served

State	Organization	African-American	Hispanic/ Latino	American Indian/ Alaska Native	Asian American or Pacific Islander
NY	**New York Presbyterian Hospital**				
	Systems Technology Interfacing Teaching and Community Hospitals (STITCH)				N/A
	Research Foundation of State University of New York (SUNY) at Buffalo				
	Telehealth New York				N/A
	The Rosalind and Joseph Gurwin Jewish Geriatric Center of Long Island				
	Demonstration of Implementation of Electronic Medical Record in Skilled Nursing Facility.				N/A
OH	**Case Western Reserve University**				
	NetWellness	•	•	•	•
	Children's Hospital Medical Center of Akron				
	Tele-Health-Kids				N/A
	Cincinnati Children's Hospital Medical Center				
	Pursuing Perfection—Transforming Health Care Delivery	•	•		
	Ohio Board of Regents				
	Medical Collaboration Network	•	•		
	Ohio State University Research Foundation (for the Ohio Supercomputer Center)				
	Computational Approaches to Research on Cancer in Children and Others	N/A	N/A	N/A	N/A
	Southern Consortium for Children				
	Southern Ohio Telepsychiatric Network				N/A
OK	**INTEGRIS Health, Inc.**				
	INTEGRIS Rural Telemedicine Project	•	•	•	
	OSU Center for Rural Health				
	Rural Oklahoma Telemedicine Service Expansion	•	•	•	
PA	**Community Nurses Home Health and Hospice, Inc.**				
	Home Telehealth				N/A
	Geisinger Clinic				
	Developing a Stroke Care Educational Program for Rural Pennsylvania				N/A

Demographics of Population Served

State	Organization	African-American	Hispanic/ Latino	American Indian/ Alaska Native	Asian American or Pacific Islander
PA	**Good Samaritan Hospital Regional Medical Center**				
	Schuylkill Alliance for Health Care Access				N/A
	Home Nursing Agency & Visiting Nurse Association				
	Telehealth Network Grant				N/A
	Jewish Healthcare Foundation				
	Reinventing Healthcare: The Application of the Pittsburgh Regional Healthcare Initiative's Perfecting Patient Care (PPC) System to Chronic Medical Conditions	•			
	Magee Rehabilitation Hospital				
	Virtual Reality Technology	•			
	Mercy Health Partners				
	Using Information Technology to Enhance Patient Safety				N/A
	Mercy Hospital of Pittsburgh				
	Mobile Clinician Project				N/A
	Millcreek Community Hospital				
	Millcreek Health System Informatics Project				N/A
	Oil Region Alliance of Business, Industry, & Tourism				
	The Venango Center for Healthcare Careers (VCHC)				N/A
	Pennsylvania College of Optometry				
	Urban Ophthalmic Telehealth	•	•		•
	Penn State University				
	Digital Informatics and Communications System				N/A
	Pennsylvania State University College of Medicine				
	Physician-Science Initiative				N/A
	Pinnacle Health System				
	Reducing Variability to Deliver Safe Care	•	•	•	•
	Safe Harbor Behavioral Health				
	Safe Harbor Behavioral Health Telemedicine Program				N/A
	SUN Home Health Services				
	SUN Home Health Services Network				N/A
	Susquehanna Health System				
	Regional Electronic Medical Record	•	•		
	Thomas Jefferson University				
	Integrative Medicine Informatics FeasibilityProject				N/A

Demographics of Population Served

State	Organization	African-American	Hispanic/ Latino	American Indian/ Alaska Native	Asian American or Pacific Islander
PA	**Tyrone Hospital**				
	The Tyrone Hospital Health Information Network				N/A
	Wayne Memorial Hospital				
	Improving Medication and Patient Safety				N/A
	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	•	•		
RI	**Family Resources Community Action**				
	HIV/AIDS Comprehensive Psychosocial Support Project	•	•		
	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				N/A
	Thundermist Health Center				
	Thundermist Health Center Electronic Health Record	•	•	•	•
SC	**Advanced Technology Institute (ATI)**				
	Healthcare and Emergency Awareness Response for Telehealth (HEART) Phase II	•	•	•	
	Voorhees College				
	Developing a Telehealth Infrastructure to Address Health Disparities Through Education and Training	•			
SD	**Avera Health**				
	Avera Rural and Frontier Disease Management Telehealth Network				N/A
	Great Plains Telehealth Resource and Assistance Center (TRAC)				N/A
TN	**University Health System, Inc.**				
	High-Risk Newborn Services Project	•	•		
	University of Tennessee Health Science Center				
	Delta Health Partnership	•			
	Mid-Appalachia Telehealth Project				N/A
	Mid-South Telehealth Consortium	•			
	Telehealth for Diabetic Patients in Hispanic and Underserved Rural Communities		•		

Demographics of Population Served

State	Organization	African-American	Hispanic/ Latino	American Indian/ Alaska Native	Asian American or Pacific Islander
TX	**Federation of the State Medical Boards of the United States, Inc.**				
	Medical Licensure Portability to Facilitate Multi-State Telehealth Practice				N/A
	Harris County Hospital District				
	Specialty Access Through Telemedicine (SA++)	•	•		
	University of Texas Health Science Center at San Antonio (UTHSCSA)				
	Diabetes Risk Reduction via Community Based Telemedicine (DiRReCT)		•		
	University of Texas Medical Branch Center to Eliminate Health Disparities				
	The Texas Telehealth Disparities Network	•	•		
UT	**Association for Utah Community Health (AUCH)**				
	Association for Utah Community Health Telehealth Program		•		
	Dr. Ezekiel R. Dumke College of Health Professions				
	Health Opportunity Professional Exploration (HOPE)		•		
	Intermountain Healthcare				
	HRSA Telemedicine Pilot Program for Interpreting Services for the Deaf		•		
	University of Utah				
	Utah Telehealth Network Comprehensive Telehealth Services				N/A
VA	**University of Virginia**				
	Southwest Virginia Alliance for Telemedicine	•	•		•
VT	**The University of Vermont (UVM)**				
	Pediatric Teletrauma Project				N/A
WA	**Inland Northwest Health Services**				
	Northwest Telehealth--TeleER				N/A
	Northwest Telehealth—Telepharmacy				N/A
	University of Washington				
	Native People for Cancer Control Telehealth Network (NPCCTN)			•	
	Yakima Valley Memorial Hospital				
	Bedside Medication Management (MAR) System		•		

Demographics of Population Served

State	Organization	African-American	Hispanic/ Latino	American Indian/ Alaska Native	Asian American or Pacific Islander
WI	**La Crosse Medical Health Science Consortium**				
	Virtual Population Health Centers in the Rural Midwest				N/A
	Marshfield Clinic Telehealth Network				
	Marshfield Clinic Telehealth Network				N/A
	Marshfield Clinic Telehealth Network 2006				N/A
WV	**Appalachian Pain Foundation**				
	Physician Education, Community Outreach Program to Prevent Diversion of Prescription Drugs				N/A
	Robert C. Byrd Center for Rural Health				
	Marshall University Southern West Virginia Rural Outreach Project				
	West Virginia University, Mountaineer Doctor (MDTV)				
	West Virginia Community Mental Telehealth Project				N/A
WY	**United Medical Center**				
	Regional Expansion of Telehealth and Distance Learning				N/A
	Wyoming Department of Health				
	Wyoming Network for Telehealth (WyNETTE)	•	•		