Report on Plans to Increase Immunization Rates in Texas

Disease Prevention and Intervention Section
Texas Department of State Health Services
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EXECUTIVE SUMMARY

Raising vaccine coverage levels for Texas children is one of the highest priorities for the Texas Department of State Health Services (DSHS). Recognizing that no single intervention alone can be successful, DSHS incorporates a comprehensive, collaborative approach that includes proven strategies for raising vaccine coverage levels and integrates local involvement and the commitment of other public programs, private organizations, and community groups. This systematic approach is designed to eliminate barriers to vaccination and expand immunization delivery.

The National Vaccine Advisory Committee (NVAC) identified several key barriers to timely vaccinations. For families and communities, the most significant barriers continue to be those related to poverty or markers of poverty such as residence in public housing, certain race/ethnicity, lower education rates, and numbers of single mothers. Being uninsured or underinsured are also barriers to obtaining timely and appropriate health care. Finally, understanding, beliefs, and attitudes of parents can be important barriers to vaccinations; the most critical of these factors are a belief that the timing of vaccinations is unimportant and parents not knowing when vaccines are due.

A consistent medical home may help raise vaccine coverage levels. A "medical home" is defined as a respectful partnership between a child, the child's family, and the child's primary health care setting that coordinates comprehensive health care services. Among Vaccines for Children (VFC)-eligible children, those with a medical home were more likely to be up-to-date than those without.[1] Moreover, strategies to raise coverage levels are best implemented and most effective in the medical home.

To address immunization barriers, DSHS has directed many of its efforts toward the following nationally proven strategies that are consistent with higher vaccine coverage levels:

- Promoting the Medical Home
- Promoting the Use of the Statewide Immunization Registry, ImmTrac
- Promoting the Use of the Reminder and Recall Systems
- Expanding Provider Education
- Increasing Public/Parent Education
- Developing Public/Private Partnerships

Raising vaccine coverage levels requires a sustained, multi-faceted approach and commitment, not only from state programs and agencies, but also from parents, businesses, and schools. As a leader in the Texas immunization system[2], DSHS will continue efforts toward proven strategies and reach out to its constituencies to provide technical expertise and support, to enhance local ownership, to provide data for communities to develop appropriate plans, and to increase participation in immunization activities. DSHS's integrated approach is the foundation for improving the health of Texas citizens.

[1] Smith, P.J., et al. (2005). The association between having a medical home and vaccination coverage among children eligible for the vaccines for children program. *Journal of Pediatrics*, 116(1), 130-139.

[2] The Texas immunization system is a complex partnership that integrates federal agencies and programs, state and local governments, schools, health care providers, employers, insurers and health plans, vaccine manufacturers, and others in the private sector.

LIST OF ACRONYMS

AAP	American Academy of Pediatrics
ACIP	Advisory Committee on Immunization Practices
BOH	Board of Health
CASA	Clinic Assessment Software Application
CDC	Centers for Disease Control and Prevention
CHIP	Children's Health Insurance Program
CME	Continuing Medical Education
CSA	CHIP Service Area
DFPS	Texas Department of Family and Protective Services
DSHS	Texas Department of State Health Services
DTaP	Diphtheria, Tetanus, and acellular Pertussis
DTP	Diphtheria, Tetanus, and Pertussis
EMR	Electronic Medical Records
FQHC	Federally Qualified Health Center
FTP	File Transfer Protocol
HHSC	Health and Human Services Commission
Hib	Haemophilus Influenzae Type B
HL7	Health Level Seven
HMO	Health Maintenance Organization
HPPWG	Health Plan/Payor Working Group
HSR	Health Service Region
HTTPS	Hypertext Transfer Protocol Secure
IPWG	Immunization Provider Working Group
LHD	Local Health Department
MMR	Measles, Mumps, and Rubella
MOU	Memorandum of Understanding
NIS	National Immunization Survey
NVAC	National Vaccine Advisory Committee
PICS	Pharmacy Inventory Control System
PTA	Parent Teacher Association
TAHP	Texas Association of Health Plans
TAOG	Texas Association of Obstetricians and Gynecologists
Tdap	Tetanus, Diphtheria, Pertussis
TDH	Texas Department of Health
TEA	Texas Education Agency
TECCS	Texas Early Childhood Comprehensive System
THSteps	Texas Health Steps
TISWG	Texas Immunization Stakeholder Working Group
TMA	Texas Medical Association
TMF	Texas Medical Foundation Health Quality Institute
TMHP	Texas Medicaid and Healthcare Partnership
TPS	Texas Pediatric Society
TVFC	Texas Vaccines for Children
TWICES	Texas Web-based Integrated Client Encounter System
VFC	Vaccines for Children
WIC	Women, Infants, and Children

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I. INTRODUCTION

Results of the 2005 National Immunization Survey (NIS) show that 76.8% of Texas children ages 19 months through 35 months were fully vaccinated in the 4:3:1:3:3:1 vaccine series[3]. This figure represents a 10.8% increase (7.5 percentage points) over the previous year's 69.3%. The national vaccine coverage level for 2005 was 76.1%. Based on the 2005 NIS results, Texas ranks 24th among the 50 states. This is the first time Texas' vaccine coverage level has been higher than the national average since the inception of the NIS in 1995.

To address the concerns for increasing vaccine coverage levels, the National Vaccine Advisory Committee (NVAC) identified several key barriers to timely vaccinations. For families and communities, the most significant barriers continue to be those related to poverty or markers of poverty such as residence in public housing, certain race/ethnicity, lower education rates, and numbers of single mothers. Being uninsured or underinsured are also barriers to obtaining timely and appropriate health care. Finally, understanding, beliefs, and attitudes of parents can be important barriers to vaccinations; the most critical of these factors are a belief that the timing of vaccinations is unimportant and parents not knowing when vaccines are due.

The NVAC also recognized specific provider practices and beliefs that contribute to under-vaccination. These include the lack of reminder/recall systems or any system to identify under-vaccinated children in their practice and failure to adequately assess immunization status at all visits—particularly sick-child visits--usually termed "missed opportunities." Many physicians have been misinformed and underestimate the number of vaccines that can be administered during one visit or overestimate the contraindications to vaccination; both of these situations lead to missed opportunities to vaccinate. A complex immunization schedule with increased and changing numbers of routinely recommended childhood vaccines leads to provider and parent confusion.

A consistent medical home may help raise vaccine coverage levels. A "medical home" is defined as a respectful partnership between a child, the child's family, and the child's primary health care setting that coordinates comprehensive health care services. Among Vaccines for Children (VFC)-eligible children, those with a medical home were more likely to be up-to-date than those without.[4] Moreover, strategies to raise coverage levels are best implemented and most effective in the medical home.

Raising vaccine coverage levels requires a sustained, multi-faceted approach and commitment, not only from state programs and agencies, but also from parents, businesses, and schools. As a leader in the Texas immunization system[5], the Texas Department of State Health Services (DSHS) will continue efforts toward proven strategies and reach out to its constituencies to provide technical expertise and support, to enhance local ownership, to provide data for communities to develop appropriate plans, and to increase participation in immunization

[3] The NIS is conducted by the Centers for Disease Control and Prevention (CDC). The 4:3:1:3:3:1 series is four doses of diphtheria-tetanus-pertussis vaccine [DTP/DTaP], three doses of poliovirus vaccine, one dose of a measles-containing vaccine, three or more doses of Hib vaccine, which can prevent meningitis and pneumonia, three doses of hepatitis B vaccine, and one dose of varicella vaccine.

[4] Smith, P.J., et al. (2005). The association between having a medical home and vaccination coverage among children eligible for the vaccines for children program. Journal of Pediatrics, 116(1), 130-139.

[5] The Texas immunization system is a complex partnership that integrates federal agencies and programs, state and local governments, schools, health care providers, employers, insurers and health plans, vaccine manufacturers, and others in the private sector.

activities. DSHS's integrated approach is the foundation for improving the health of Texas citizens.

DSHS is committed to raising vaccine coverage levels for Texas children, as well as ensuring the delivery of age-appropriate immunizations for Texas children and adults. This commitment remains one of the highest priorities for DSHS.

II. METHODOLOGY FOR DETERMINING IMMUNIZATION RATES

To determine immunization rates, Texas relies on the National Immunization Survey (NIS). The NIS is a large, on-going, random-digit-dial survey conducted by the Centers for Disease Control and Prevention (CDC) to measure vaccine coverage levels of children 19 months through 35 months of age. Each summer, the previous year's annual results of the NIS are released (e.g., results of the 2004 survey were released in July 2005). Estimates of vaccine coverage levels are calculated for the United States as a whole, for each state, and for 28 urban areas considered at high-risk for under-vaccination. In Texas, these urban areas include Bexar, Dallas, and El Paso counties, and the City of Houston.

From 1995 to 2003, the CDC measured and compared states and various urban areas based on the 4:3:1 series (four doses of Diphtheria, Tetanus and Pertussis (DTaP), three or more doses of polio vaccine, and one or more doses of measles-containing vaccine). In 2004, the CDC added two additional vaccines to the 4:3:1 series (three or more doses of Hib vaccine, which can prevent meningitis and pneumonia, and three doses of hepatitis B vaccine) to make the series measure the 4:3:1:3:3 series.

Beginning in 2005, the CDC again changed its measurement standard by which it compares immunization rates for states/urban areas. The new NIS results use the 4:3:1:3:3:1 series (1 dose of varicella vaccine has been added to the 4:3:1:3:3 series) to reflect the change in immunization coverage among all states and projects. As additional vaccines or vaccine series have been added over the past 10 years, the overall total coverage estimates for each state has been reduced as the coverage levels for some of later series is lower than the original 4:3:1 standard. However, it is important to measure the complete immunization coverage level for children 19-35 months of age and the 4:3:1:3:3:1 is more reflective of an up-to-date child versus one who is measured only on the completion of the 4:3:1 or 4:3:1:3:3 series.

The NIS consists of a nationwide sample size of about 30,000 children. The target sample size for Texas in 2005 was approximately 3,000. Each estimate of the vaccine coverage level has an associated statistical error. For example, in 2005, the Texas vaccine coverage level estimates for the 4:3:1:3:3:1 series was 76.8%, plus or minus a 4.0% error, meaning that the true coverage was probably between 72.8% and 80.8%.

It is important to understand that children measured in the most recent NIS (2005) were born between February 2002 and July 2004, and reflect the results of activities on immunization behaviors that occurred two to four years ago. Likewise, children measured in next year's NIS (2006) will have been born between February 2003 and July 2005, and the 2007 NIS will provide data on children born between February 2004 and July 2006. Consequently, the effect of current efforts in Fiscal Year 2006 to educate parents and providers and to improve the vaccine delivery system will not be fully observed until the 2009 NIS is conducted and data are released in the summer of 2010, four years from now.

III. CURRENT IMMUNIZATION RATES

Results of the 2005 NIS show that vaccine coverage levels in Texas children 19-35 months of age had increased 7.5 percentage points to 76.8% for the 4:3:1:3:3:1 series. This change from 69.3% in 2004 was, however, within the range of statistical error and may not reflect a significant change in actual rates. Figure 1 displays Texas vaccine coverage levels with the various vaccine series from the 1995 – 2005 NIS. Figure 2 shows the vaccine coverage levels for the state, select Texas urban areas, and U.S. for the 4:3:1:3:3:1 series in 2005.

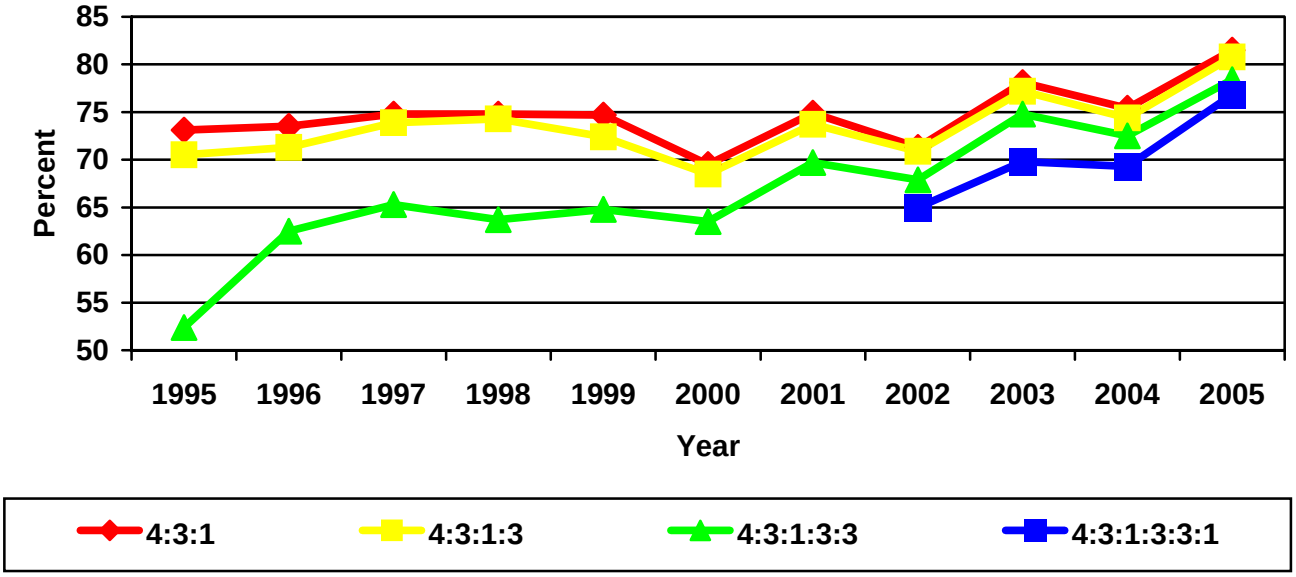

Figure 1. Texas Vaccine Coverage Levels Among Children 19-35 Months of Age, National Immunization Survey, 1995-2005

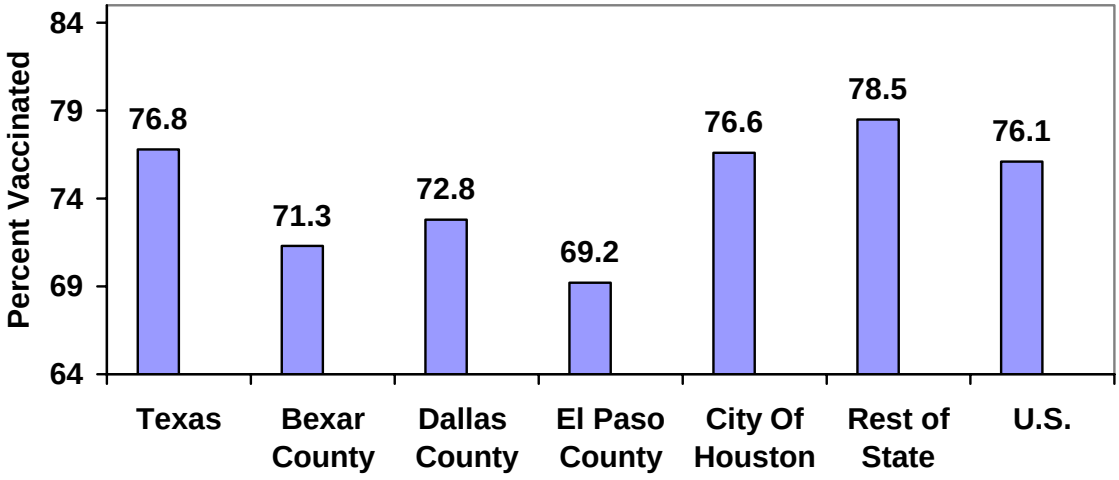

Figure 2. Vaccine Coverage Levels (4:3:1:3:3:1 Series) Among Children 19-35 Months of Age by State of Texas, Immunization Action Plan Area, and U.S., National Immunization Survey, 2005

Opportunities for Improvement

Immunization service delivery in Texas is complicated by many factors. Service delivery must meet the needs of both large urban areas and sparsely populated rural areas. The size, demographics, and division of Texas into 254 counties under local jurisdiction make standardization difficult. Limited data on vaccine coverage levels complicate efforts to monitor the effect of immunization activities. While sufficient data to explain exactly why rates are low do not exist, the NIS results and our knowledge of traditionally medically underserved areas of the state help us identify opportunities for improvement.

One opportunity is to ensure that children statewide receive the 4th dose of DTP/DTaP on time. An examination of the NIS rates for individual vaccines included in the 4:3:1:3:3:1 series indicates that low vaccine coverage for the 4:3:1:3:3:1 series is due in large part to the 4th DTP/DTaP not being received on time. Most children under 12 months of age in Texas are being vaccinated, but there is considerable loss in coverage during the second year of life. Since 1995, the completion level of the third dose of DTP/DTaP in Texas has always been above the 2010 national objective of 90%. However, nearly 20% of Texas children fail to receive the fourth dose of DTP/DTaP, which is recommended at ages 15 months through 18 months (Table 1). As seen in Table 2, this failure in completing the fourth DTP/DTaP dose is consistent across the four Texas urban areas surveyed and mirrors the drop-off in levels across the US.

Type and Doses	U.S. 2010 Objective	1997	1998	1999	2000	2001	2002	2003	2004	2005
3rd DTP	90%	92%	NA	92%	91%	93%	93%	95%	92%	Not Available
4th DTP	90%	78%	78%	78%	73%	79%	75%	81%	78%	84%
3rd Polio	90%	88%	88%	85%	83%	88%	87%	90%	87%	93%
3rd Hib	90%	90%	91%	88%	90%	91%	89%	93%	89%	93%
1st MMR	90%	89%	90%	88%	87%	90%	91%	91%	89%	89%
3rd Hep B	90%	82%	79%	82%	85%	87%	86%	90%	88%	92%
1st Varicella	-	23%	44%	59%	74%	84%	83%	88%	85%	89%
4:3:1[1]	-	75%	75%	75%	70%	75%	71%	78%	75%	82%
4:3:1:3[2]	-	74%	74%	72%	69%	74%	71%	77%	74%	81%
4:3:1:3:3[3]	80%	-	-	65%	64%	70%	68%	75%	73%	78%
4:3:1:3:3:1[4]	-	-	-	-	-	-	65%	70%	69%	77%

[1] 4 DTaP, 3 Polio, 1 MMR
[2] 4 DTaP, 3 Polio, 1 MMR, 3 Hib
[3] 4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 hepatitis B
[4] 4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 hepatitis B, 1 varicella

Table 1. Vaccine Coverage Levels among Texas Children 19-35 months of age by Selected Vaccines, National Immunization Survey, 1997-2005

Type and Doses	US	Texas	Bexar County	Dallas County	El Paso County	City of Houston	Rest of State
4th DTP	86%	84%	79%	82%	78%	82%	85%
3rd Polio	92%	93%	89%	90%	91%	93%	94%
3rd Hib	94%	93%	90%	93%	95%	93%	93%
1st MMR	92%	89%	89%	87%	89%	92%	89%
3rd hepatitis B	93%	92%	88%	88%	87%	91%	93%
1st Varicella	88%	89%	88%	89%	88%	91%	89%
4:3:1[1]	83%	82%	79%	79%	76%	81%	83%
4:3:1:3[2]	82%	81%	77%	77%	76%	80%	82%
4:3:1:3:3[3]	81%	78%	75%	74%	71%	78%	80%
4:3:1:3:3:1[4]	76%	77%	71%	73%	69%	77%	79%

[1] 4 DTaP, 3 Polio, 1 MMR
[2] 4 DTaP, 3 Polio, 1 MMR, 3 Hib
[3] 4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 hepatitis B
[4] 4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 hepatitis B, 1 varicella

Table 2: Vaccine Coverage Levels Among Children 19-35 months of Age, National Immunization Survey, by Immunization Action Area and Vaccine Type, 2005

A critical opportunity for improving vaccine coverage levels coincides with the need to improve access to health care services. Children, who are uninsured, underinsured, who lack a medical home, or who live in rural areas of the state or counties along the Texas-Mexico border typically have limited access to health care. Promoting the concept of a medical home and implementing proven strategies within that framework support the broader effort to provide better health care overall; vaccine coverage levels should be considered a key measure of a successful health care delivery system. Strategies to increase vaccine coverage levels statewide are discussed in the following section.

IV. STRATEGIES TO INCREASE VACCINE COVERAGE LEVELS STATEWIDE

Multiple barriers exist that prevent timely access to vaccination, and no single intervention strategy alone is successful. To raise vaccine coverage levels across the state, DSHS incorporates a comprehensive, collaborative approach that includes proven strategies for raising vaccine coverage levels and integrates local involvement and the commitment of other public programs, private organizations, and community groups. This systematic approach is designed to eliminate barriers to vaccination and expand immunization delivery.

The key component of this approach is the medical home as the foundation for providing children with the necessary, age-appropriate vaccinations. The medical home is supported through other strategies like ImmTrac, the statewide immunization registry, reminder/recall systems, provider education, media campaigns targeting parents and the general public on the importance of childhood and adult immunizations, and public/private partnerships. Partnerships at the state and community level are the foundation for implementing these proven strategies statewide.

The following sections describe DSHS's comprehensive approach to promote strategies to increase vaccine coverage levels:

A. Promoting the Medical Home
B. Promoting the Use of the Statewide Immunization Registry, ImmTrac
C. Promoting the Use of the Reminder and Recall Systems
D. Expanding Provider Education
E. Increasing Public/Parent Education
F. Developing Public/Private Partnerships

A. Promoting the Medical Home

A "medical home" is defined as a respectful partnership between a child, the child's family, and the child's primary health care setting that coordinates comprehensive health care services. That setting can be a physician's office, a hospital outpatient clinic, a school-based clinic, a community health center, or a health department clinic. At a medical home, the child's family and health care experts are a team. They work together to find and access all the medical and non-medical services the child and family need. The medical home concept supports quality health care that is accessible, family-centered, continuous, comprehensive, coordinated, compassionate, and culturally competent.

Studies have supported that underutilization of preventive healthcare services is associated with not being adequately vaccinated. A consistent medical home may help to raise vaccination coverage levels. In a policy statement on increasing immunization coverage, the American Academy of Pediatrics (AAP) promotes the medical home concept where all children receive comprehensive health care, including immunizations. The medical home should be responsible for maintaining the child's medical and immunization records.

Among Vaccines for Children (VFC)-eligible children, those with a medical home were more likely to be up-to-date than those without.[6] The children who used their medical home to receive all of their vaccination doses were more likely to be up-to-date than children who did not receive all of their doses in their medical home.[7] Early continuity of care at the initial source of care may also be important. According to another study, the longer children in a poor minority community continued care with their initial health care provider, the more likely they were to be up-to-date at 18 months of age.[8]

[6] Smith, P.J., et al. (2005)
[7] Ibid.
[8] Irigoyen, M., et.al. (2004). Early Continuity of Care and Immunization Coverage. *Ambulatory Pediatrics* 2004;4:199-203.

Texas leads the nation in the number of uninsured and underinsured children. In most instances, these children lack a medical home. According to the data presented in the 2005 National Survey of Children's Health, conducted by the U.S. Department of Health and Human Services, only 40% of children in Texas have a personal doctor or nurse and receive care that is accessible, comprehensive, culturally sensitive, and coordinated; and, 25% of Texas children have lacked consistent insurance coverage in the past year.

Current Activities to Promote the Medical Home

To raise vaccine coverage levels and improve immunization service delivery, the DSHS Immunization Branch continually promotes the medical home as a useful means for Texas children to receive timely, age-appropriate vaccines. Promotion of the medical home concept is supported by partnerships between the DSHS Immunization Branch and the DSHS Medical Home Workgroup, Texas Health Steps (THSteps), and the Texas Health and Human Services Commission (HHSC) Office of Early Childhood Coordination. Partnerships provide opportunities for the branch to ensure that immunization issues remain a vital part of the medical home concept.

Medical Home Workgroup

The Medical Home Workgroup is made up of family members with children with special healthcare needs and representatives from state agencies, family advocacy organizations, community physicians and other health care providers, training and technical assistance providers, and other partners. The Medical Home Workgroup is currently working to develop and implement strategies to enhance access to or participation in medical homes for all children in Texas.

Texas Health Steps

To ensure that eligible young people in Texas receive medical and dental care before health problems become chronic and irreversible, the Texas Health Steps (THSteps) Program is dedicated to expanding client awareness of existing health and dental services, as well as recruiting and retaining a qualified provider pool to assure that comprehensive, preventive health and dental services are available through public and private providers.

THSteps promotes medical home concepts and coordination of care through training and education of providers. Training for managed care organizations will occur later this year. Additionally, *Texas Health Steps Weekly Regional Connections*, an email publication, provides current information for THSteps providers and case managers.

The DSHS Immunization Branch partners with THSteps through coordinated mail-outs and educational programs. The majority of THSteps providers are Texas Vaccines for Children (TVFC) providers and receive vaccine for Medicaid children at no cost.

Texas Early Childhood Comprehensive Systems Initiative

The DSHS Immunization Branch partners with the HHSC Office of Early Childhood Coordination, which is leading the Texas Early Childhood Comprehensive Systems (TECCS) Initiative. This “school readiness” initiative is designed to promote best practices and increase coordination among health and early childhood services for children birth to five years of age.

This Initiative is based on the review of literature that advocates for optimal development of young children in Texas through common vision, united sectors of government, common goals, and coordinated services for effectively serving the birth through five populations.

Presently, the Medical Home Workgroup activities are incorporated in the component of the TECCS grant dealing with medical home. The TECCS Initiative supports a coordinated, comprehensive system that includes access to insurance medical home (including access to timely, age-appropriate vaccinations), early care and education, social emotional development and mental health, and parent education and family support. The DSHS Immunization Branch works closely with the TECCS Initiative to promote the medical home concept and ensure that immunizations are available in the child's medical home.

B. Promoting the Use of the Statewide Immunization Registry, ImmTrac

DSHS considers a medical home incomplete without access to an effective, statewide immunization registry available to all immunization providers across the state. Such an immunization registry consolidates immunization records from multiple providers and stores a child's immunization information electronically in one secure, central system. A fully-functional registry helps the medical home provider ensure that a child is neither under-vaccinated nor over-vaccinated.

Since one of the most reliable tools for determining vaccine coverage levels is an immunization registry, a fully-populated immunization registry would allow DSHS to gather more detailed local information on vaccine coverage levels. In addition to its use as a central repository of child immunization records for parents and providers, a fully-populated and broadly used immunization registry would provide data to target interventions and measure success.

The following section describes the statewide immunization registry, ImmTrac, and two key information systems—the Texas Web-based Integrated Client Encounter System (TWICES) and the Pharmacy Inventory Control System (PICS)—that support ImmTrac and the goal of raising vaccine coverage levels. This section is organized as follows:

- ImmTrac
    - Response to Hurricanes Katrina and Rita
    - Ways to Use and Communicate with Local Immunization Registries
    - Ways to Increase Provider Participation in ImmTrac
    - Immunization Provider Working Group (IPWG)
- TWICES and PICS

ImmTrac

ImmTrac is the statewide childhood immunization registry. ImmTrac is designed to consolidate immunization records from multiple statewide sources to create a complete immunization history for the child. DSHS continues to place the highest priority on ensuring the security, privacy, and confidentiality of ImmTrac data. Significant business improvements to ImmTrac have resulted in timelier processing of provider requests for access to registry data, streamlined processes for verification of consent and addition of new clients to the registry, and several key enhancements to improve ImmTrac security, ease-of-use, and functionality. These enhancements make the registry more useful to DSHS, local health departments (LHD), and other providers.

House Bill 1921 (78th Legislature), which became effective January 1, 2005, requires that providers and health plans report all immunizations to ImmTrac. DSHS is responsible for verification of parental consent prior to including the child's record in the registry. Prior to this legislation, providers and health plans were required to report immunizations to ImmTrac only for clients for whom consent had been obtained. Import enhancements have been developed to allow providers, health plans, and local registries to submit data electronically to ImmTrac with verification of consent by DSHS.

During 2005 and 2006, ImmTrac experienced significant growth in provider, health plan, and other user registration for access to registry data. Immunizations reported to ImmTrac through online data entry and electronic import also increased significantly. Use of the registry as measured by online user activity and online generation of immunization history reports increased significantly. Immunizations reported through Medicaid and health plans also increased significantly.

The ImmTrac web application allows for easy setup and use at any provider site having access to a computer and the Internet. Providers may report immunizations directly to ImmTrac online via the web application or by submitting data on the ImmTrac *Paper Reporting Form*. Providers may easily access ImmTrac data through the web application or by requesting immunization histories by mail or fax.

The rules concerning the immunization registry provide a formal complaint process related to requests for exclusion from the registry and incidents of discrimination resulting from exclusion requests. Since DSHS began tracking complaints in 2004, no complaints related to failure to comply with requests for exclusion of individuals from the registry have been received. Likewise, DSHS has received no reports of discrimination for requesting exclusion from the registry.

Response to Hurricanes Katrina and Rita

In 2005, Hurricane Katrina severely damaged the public health infrastructure of Louisiana, which is primarily housed in New Orleans. The DSHS Immunization Branch acted immediately to ensure that public health issues were addressed. DSHS provided vaccines and disseminated vaccination recommendations for evacuees and for workers going to affected areas.

During this crisis, local organizations worked together to handle hurricane evacuation efforts between Texas and Louisiana. The DSHS Immunization Branch worked closely with the Texas Education Agency (TEA) and the Texas Department of Family and Protective Services (DFPS) to ensure that children could enroll in school without immediate proof of vaccinations. ImmTrac played a pivotal role in the emergency response and served as an exemplary model for the value of an effective immunization registry during a major disaster.

The DSHS Immunization Branch established a Call Center and a direct link with the Louisiana immunization registry. This interface enabled information sharing and yielded significant cost-savings:

- Over 17,000 requests for immunization records, (60% of inquiries), were successfully processed, providing timely information to hurricane victims about their children's vaccinations.
- The DSHS Immunization Branch coordinated logistics for sharing information from Louisiana with the DSHS regional and local health departments that served as the field team for

immunization delivery during this time of crisis. As a result, over 10,000 additional client searches were performed to provide immunization information to evacuees.

- DSHS located evacuee immunization records in the Louisiana registry and verified that 187,180 doses of vaccines had been previously administered. This information prevented revaccination and provided savings of approximately $2.9 million in revaccination costs. The City of Houston reported that it verified 87, 203 doses, which provided savings of approximately $1.3 million.

One month later, as hurricane Rita approached the Texas coast, DSHS evacuated vaccines worth approximately $1.3 million from the Houston area to Austin and the vaccine distribution contractor in Grapevine. Emergency protocols were implemented in other places away from the coast that included moving vaccines to locations with generators.

DSHS worked with the CDC to establish vaccination recommendations for workers going to the effected areas as well as evacuees housed in shelters. DSHS quickly responded to the vaccine needs of evacuees by establishing vaccine depots at the county level in areas serving evacuees.

Ways to Use and Communicate with Local Immunization Registries

Local immunization registries can provide a valuable source of immunization information for ImmTrac and contribute to more complete client immunization histories. Local immunization registries may provide data entry support or other services to promote childhood vaccination and encourage providers to report immunizations. DSHS has a Memorandum of Understanding (MOU) with the Houston-Harris County Immunization Registry and with the City of San Antonio Immunization Registry. DSHS is finalizing an MOU with the Tarrant County Immunization Registry. These agreements provide for collaboration and common data protection standards to facilitate data exchange between ImmTrac and local immunization registries. DSHS has proposed the formation of a Texas Immunization Registry Forum to promote collaboration and facilitate data exchange between ImmTrac and local registries.

While ImmTrac exchanges data with the local registries, the local registries do not exchange data with each other. While DSHS is committed to working with existing local registries to improve data completeness, the introduction of new local registries further increases the chance of incomplete client immunization histories and is not an effective use of limited local resources.

ImmTrac has developed an import process and a *Standard Import File Format* for submission of electronic data from providers, payors, and local registries. ImmTrac is currently developing data translation capability that will allow electronic reporting entities to submit data in a wide variety of file formats. Several electronic import options are available to entities submitting immunization data to ImmTrac, including secure, encrypted File Transfer Protocol (ftp) upload via the ImmTrac application web page using secure Internet protocol (https) and mailing files on compact disc.

ImmTrac technical support staff provide assistance to providers and local registries on data import standards and data entry standards to ensure the quality of immunization records and to ensure that records are suitable for import to ImmTrac. ImmTrac staff will continue to work with providers and local registries to resolve data import issues.

ImmTrac is developing the capability to share data using the Health Level Seven (HL7) Protocol, which is the preferred method for health data sharing and exchange. Implementation of the HL7 protocol will facilitate two-way batch and transactional exchange of data between ImmTrac and other entities, including providers using Electronic Medical Records (EMR) software and local immunization registries.

Texas statutes restrict the entities authorized to submit and access registry data. Authorized entities include public health districts, LHDs, physicians or providers authorized to administer a vaccine, and payors. To ensure that only authorized entities are allowed to access registry data, the legal ownership and organizational structure of a local registry must be considered when evaluating potential data exchange collaborations. The following guidelines apply to establishment of an electronic data exchange relationship or interface between ImmTrac and a local registry:

- A public health district or LHD must have legal ownership of the local registry, including all registry data and contents. The public health entity must maintain control of registry data including responsibility to maintain confidentiality and prevent inappropriate use of registry data.
- Confidentiality requirements and use of registry data must comply with statutes.
- ImmTrac and the local registry must comply with Chapter 161, Sections 161.007, 161.008, and 161.009, Health and Safety Code; Chapter 159, Occupations Code; and Texas Administrative Code Title 25, Part 1, Chapter 100.

Ways to Increase Provider Participation in ImmTrac

DSHS has identified the following ways to increase provider participation in the immunization registry:

1. Continue to improve registry value and benefits to providers
2. Increase registry marketing, promotion, and education efforts
3. Continue to improve registry customer support
4. Implement incentive/recognition program
5. Develop technical improvements

1. <u>Continue to improve immunization registry value and benefits to providers and payors</u>

- Providers can access the registry reminder/recall capabilities and reports online. Provider feedback will help identify additional reports that will be useful.
- ImmTrac staff have developed plans to improve business processes to facilitate the registration and set-up process for providers and payors requesting access to registry data. As provider and payor participation increase, the quality and completeness of client immunization histories will improve.
- Improvements to the client search process have facilitated the use of ImmTrac. This enhancement is one of many enhancements that have improved ease-of-use, data entry, and data utilization.
- ImmTrac, in partnership with the Texas Medical Association (TMA) and the Texas Pediatric Society (TPS), has formed the ImmTrac Provider Working Group (IPWG). This working group, comprised of physicians, nurses, and other health

care providers, meets quarterly to exchange ideas and provide input relating to ImmTrac marketing, education, and technical development activities.

- ImmTrac has formed the Health Plan/Payor Working Group (HPPWG), comprised of representatives from HMOs, health plans, and other payors. HPPWG met quarterly during 2005 to assist payors with technical issues relating to electronic reporting and access to registry data, to exchange ideas, and to provide input relating to registry utility for payors.

Next Steps

- ImmTrac staff will continue to work with providers to improve ImmTrac's fit into office workflow and the patient evaluation and treatment process and to identify potential provider cost savings in records management, staff time, and reduction of paper records storage. ImmTrac staff will continue to work with providers and professional organizations to identify needs that may be resolved by registry participation.

2. Increase immunization registry marketing, promotion, and education efforts

- ImmTrac staff developed a comprehensive marketing plan to target parents, physicians and other providers, provider office staff, school nurses, child-care centers, and Head Start facilities. The marketing plan includes informative/educational articles, educational mailings to providers, exhibits and presentations at professional organization conferences, ads/links on professional organization websites, and promotion in provider continuing education materials.
- The marketing plan addresses perceived barriers to provider participation: lack of provider staff resources for data entry, reporting to the registry is time intensive, low computer literacy levels of provider office staff, provider suspicions of data quality, and possible misuse of data.

Next Steps

- Marketing efforts will include promotion and education about improvements to the registry application, business processes, and data quality. Providers will be educated about the use of the registry to conduct reminder/recall activities and the value of the registry shot scheduler for assisting in interpretation of complex vaccination schedules and generating vaccination recommendations.
- Marketing and promotion activities will be coordinated with professional organizations. DSHS Immunization Branch staff who routinely interact with providers and with the public will be educated and trained in registry promotion. Parents and expectant parents will be educated about the registry to increase the rate of parental consent during the birth certificate registration process and to influence provider participation.

3. Continue to improve immunization registry customer support

- Business processes have been streamlined for provider registration and set-up, and plans have been developed to further improve these processes. The curriculum for new user orientation and the online user instruction manual are being reviewed and revised. In coordination with DSHS health service region

(HSR) and LHD staff, training for new users and technical support have been increased. DSHS HSRs and LHDs are providing promotion and technical assistance for ImmTrac users and increased provider education activities to inform users about registry features, advanced capabilities, and tips to improve ease of use and data quality.
- ImmTrac customer support staff received continuing training on customer service skills to improve communication and service to providers and other users.

Next Steps

- Surveys and customer focus groups are being planned to measure customer satisfaction, identify barriers to participation, and identify ways to improve communication, training, registry utility, and ease-of-use.

4. Implement incentive/recognition programs

- ImmTrac staff are collaborating with professional organizations such as TMA and TPS, Texas Association of Obstetricians and Gynecologists (TAOG), and Texas Association of Health Plans (TAHP) to promote awareness of ImmTrac among providers, increase participation (reporting and use), and encourage the use of reminder/recall capabilities.
- ImmTrac staff are working with the Texas Immunization Stakeholder Working Group (TISWG), IPWG, and HPPWG members to identify opportunities for collaboration to improve registry participation and utility for key stakeholder groups.
- During 2005, ImmTrac established the *ImmTrac Award for Excellence*, which was awarded to over forty Texas hospitals for high performance in implementation of the ImmTrac Newborn Consent Process through the DSHS Vital Statistics Unit's electronic birth registration software. This award provides an incentive for hospitals and birth registrars to ensure that parents are offered the opportunity to grant consent for ImmTrac participation during the birth registration. High performing hospitals were also recognized by publication of an article in the March/April issue of *Texas Hospitals* magazine.

Next Steps

- ImmTrac will continue to explore methods of provider recognition, reward, and certification programs in conjunction with professional organizations. ImmTrac staff will continue to work with health plans to encourage provider participation. For example, some health plans are considering incentive payments to providers based on client up-to-date immunization status and provider reporting to ImmTrac.

5. Develop technical improvements

- A priority related to technical improvements is to develop interfaces with provider billing systems and work with EMR software vendors to facilitate batch reporting and two-way real-time data exchange with providers.
- The ImmTrac and PICS programs are developing the capability for a provider to enter a child's record into ImmTrac and for the information to be shared with

PICS to decrement the clinic's inventory automatically. This feature will eliminate duplicate data entry for the same child. The interface with PICS will also simplify reporting for TVFC providers and encourage registry use by TVFC providers.

- The ImmTrac and TWICES programs are planning an enhanced interface that will allow for tighter integration between the two systems. The enhanced interface will allow real-time client search of ImmTrac from within the TWICES application, and will provide real-time data merging and immunization updates for both systems.
- The enhanced integration of ImmTrac-TWICES-PICS will offer providers an integrated system for client encounter, immunization registry, and vaccine management.

Next Steps

- ImmTrac staff will continue to seek opportunities to improve data entry interfaces and system performance to facilitate reporting and data entry, explore methods to reduce security barriers, explore alternate formats and methods for providers to submit data, and improve registry ease-of-use and utility.
- ImmTrac staff will continue to work with local registries to establish data exchange relationships based on the HL7 standard or current electronic file format standard.

ImmTrac Provider Working Group (IPWG)

DSHS, in partnership with TMA and TPS, has established the ImmTrac Provider Working Group (IPWG). The IPWG was formed to obtain input from Texas physicians and other private healthcare providers on a collaborative education, marketing, and development plan to increase physician participation in ImmTrac. Physician participation includes registration for ImmTrac access and effective use of the registry for client immunization history review and active reporting of immunizations to DSHS.

The IPWG is comprised of invited physicians from across the state, representatives from medical practice manager and nurse's organizations, plus ImmTrac, TMA, and TPS staff. All members have been nominated by the IPWG Coordinating Committee, comprised of TMA, TPS, and DSHS representatives. The IPWG is affiliated with TISWG and may seek collaboration with TISWG. DSHS founded TISWG in August 2004, for the purposes of supporting statewide efforts to raise vaccine coverage levels. TISWG provides a forum for diverse partners in the state immunization system to share ideas, perspectives, best practices, and resources to more effectively target efforts to raise vaccine coverage levels in Texas.

<u>The IPWG objectives are as follows:</u>

- Provide input on effective strategies for educating private providers about ImmTrac and immunization reporting requirements
- Identify provider target groups for education and promotion activities
- Develop initiatives, activities, and tools for increasing awareness of ImmTrac and promoting the benefits of ImmTrac participation
- Establish partnerships and collaborative efforts to implement the education and marketing plan
- Review the ImmTrac system and offer input on a development plan for future enhancements and improvements to the ImmTrac application

The initial IPWG meeting focused on a review of the ImmTrac Group's current education and marketing plan, and the development and implementation of a collaborative education and marketing plan for ImmTrac. Subsequent meetings have focused on prioritizing the implementation of enhancements .

TWICES and PICS

The Texas Web-based Integrated Client Encounter System (TWICES) is primarily available to health department clinics; however, there are a few non-health department immunization clinics also using the system. This system maintains immunization history data for children served by a specific clinic, directly bills Medicaid through the Texas Medicaid and Healthcare Partnership (TMHP) and reports immunization data to the statewide immunization registry, ImmTrac.

The Pharmacy Inventory Control System (PICS) is the new automated vaccine accounting system that orders, accounts for, and replenishes products based on pre-set reorder points for various DSHS programs, including immunizations. Streamlined vaccine management business processes significantly reduced the reporting requirements of TVFC Program participants and simplified vaccine ordering and data entry for vaccine doses administered. PICS implementation will improve and simplify vaccine ordering/accounting business processes with automated efficiencies.

TWICES vaccine inventory and accountability functions are being replaced with PICS. PICS has additional functionality that will enhance user services. TWICES will communicate vaccine usage information to PICS and will decrement the clinic's inventory seamlessly and automatically. TWICES users will not have to do duplicate data entry or send paper reports to TVFC, and they will automatically receive a monthly replenishment order based on vaccine usage history. TWICES users will access PICS once monthly to verify that the PICS vaccine inventory matches their physical inventory.

Prompted by legislation that became effective January 2005, DSHS is now responsible for verifying parental consent prior to a child's inclusion in ImmTrac. Clinics are no longer responsible for maintaining or verifying consent for ImmTrac participation. During 2005, DSHS implemented an improved electronic interface between TWICES and ImmTrac. TWICES now electronically reports all immunizations to ImmTrac. ImmTrac verifies consent and, if consent is verified, updates the client's record in ImmTrac and returns the client's ImmTrac ID number to TWICES. The ImmTrac ID is displayed on the TWICES client detail screen. This allows TWICES users to immediately determine if the client is participating in ImmTrac. A reminder appears in TWICES if the client is not enrolled in ImmTrac and consent for ImmTrac is required.

C. Promoting the Use of Reminder and Recall Systems

Reminder/recall systems are proven strategies for raising vaccine coverage levels. Reminders and recall notices sent to parents participating in a medical home encourage the return to the medical home and decrease the likelihood that shots will be missed.

Currently, reminder/recall activities are promoted during annual site visits to clinics enrolled in the TVFC Program through a contract with the Texas Medical Foundation Health Quality Institute (TMF). Clinic reminder/recall activities are evaluated and clinic staff are educated about the value of reminder/recall systems. The assessment of clinic immunization records also emphasizes reminder/recall systems. During the site visit follow-up, additional education on the

use of reminder/recall systems is provided for every clinic that does not have such a system in place.

Reminder/recall functionality is a feature of the statewide immunization registry, ImmTrac. Providers and public health sites may utilize the registry to generate reminder/recall lists as well as bilingual letters and mailing labels. During 2005, DSHS implemented a reminder card initiative utilizing registry data to notify parents when their child is due for the 4th DTaP dose. In conjunction with National Infant Immunization Week (April 2006), registry data was utilized to generate lists of children overdue for the 4th DTaP dose. These lists were provided to DSHS HSRs and LHDs to assist in targeting client outreach activities.

Research shows that establishing a reminder/recall system is an effective strategy that physicians can take to improve immunization coverage levels. The “Be Wise, Immunize” Reminder/Recall Project was a joint effort of DSHS, TMA, and the TMA Alliance to help TMA member physicians implement effective reminder/recall systems in their practices. TMA, TMA Alliance, and the TMA Foundation partnered with the DSHS to conduct a reminder-recall system in the Houston and Dallas metropolitan areas. TMA contributed $15,000 to DSHS to be used to produce reminder-recall “shot boxes” as well as training for Alliance members. The plan was to have Alliance members contact VFC providers who did not have a reminder/recall system in place and demonstrate how to establish one in their offices; however, this initiative did not prove to be a good "fit" for Alliance members since it was a departure from their typical efforts (e.g., organizing immunization clinics, presentations to Parent Teacher Associations (PTA) and civic organizations, and promoting immunization awareness through local media).

The decision was made to allow DSHS to contact VFC providers about the most effective methods to incorporate reminder/recall programs in their offices and deliver the "shot boxes" directly.

DSHS continues to work with stakeholder groups, including professional organizations and managed care organizations, to promote reminder/recall systems and use of ImmTrac. DSHS provides reminder cards at no cost to any provider and emphasizes reminder/recall systems as a key approach to raising vaccine coverage levels.

D. Expanding Provider Education

Provider education is also a proven strategy for increasing vaccine coverage levels. Provider education that focuses on immunization education helps physicians stay current on changes to the complex immunization schedule, the number of vaccines that can be administered during one visit, and vaccine contraindications. DSHS conducts provider education through a toll-free hotline, a provider newsletter, and routine communication with TISWG. Provider education reinforces other proven strategies such as the benefits of the statewide immunization registry, reminder/recall systems, enrollment in the TVFC Program, and the medical home concept. Among VFC-eligible children, those with a medical home were more likely to be up-to-date than those without.

Texas Vaccines for Children (TVFC)

Texas is among the states with the highest percentage of uninsured and underinsured children. Over 2.6 million Texas children are on Medicaid (Federal Fiscal Year 2005 data). Many of these children are not receiving the complete series of immunizations required to protect them from vaccine-preventable diseases on time.

Texas participates in the federal VFC Program as the Texas Vaccines for Children (TVFC) Program. Since its' inception in 1994, more than 6,000 Texas providers in 3,500 clinic sites have enrolled. The program guarantees that vaccines are available at no cost to providers to immunize children who meet the eligibility requirements. DSHS actively recruits providers to enroll in the TVFC program.

Through the TVFC Program, the following groups of children receive vaccines for free:

- Uninsured or underinsured children
- Children who are covered by CHIP[9]
- Children who are of Native American or Native Alaskan heritage
- Children on Medicaid

A TVFC provider may not charge for the vaccine itself, but is permitted to charge a reasonable administration fee. The TVFC Program does not tell enrolled providers whom they must see, or dictate that they accept Medicaid clients. Providers continue to serve the same populations they have always served. TVFC automatically covers all vaccines recommended by the Advisory Committee on Immunization Practices (ACIP) and approved by the Centers for Disease Control and Prevention (CDC). One of the most important benefits of the TVFC program is removing barriers to immunizations. Providers no longer refer an uninsured child to a public health center for immunizations. TVFC removes the financial cost of vaccines, which removes the reason to refer clients. Children are kept in their "medical home," which is a benefit to providers, families, and the people of Texas. Through enrollment in the TVFC, more children receive their complete series of immunizations.

Quality assurance of providers enrolled in the TVFC Program has been a priority for the DSHS Immunization Branch since 2001. DSHS contracts with the Texas Medical Foundation Health Quality Institute (TMF) to conduct site visits in the private sector. In 2001, 1,753 clinics (53% of the total) that were enrolled in TVFC received this monitoring/educational site visit. In 2002, 2,173 site visits were conducted (71% of the total), in 2003, 2,736 site visits were conducted (88% of the total), in 2004, 2,468 site visits were conducted (72% of the total), and in 2005, 2,946 site visits were conducted (87% of the total).

An assessment of immunization records is conducted during site visits using the Clinic Assessment Software Application (CASA) developed by the CDC. The purpose of the assessment is to give the clinic their vaccine coverage level and identify areas for improvement. A standardized educational tool kit is delivered to all enrolled clinic sites. Tool kits include information on the Standards for Pediatric Immunization Practices, the General Recommendations on Immunization Practices, vaccine storage and handling guidelines, reportable diseases in Texas, the statewide immunization registry, school requirements, and

[9] CHIP reimburses DSHS for vaccine costs. CHIP saves funds by taking advantage of the federal vaccine contract prices through the federal VFC program.

reminder/recall systems. Follow-up of all deficiencies identified during visits are referred to regional and local health department staff to reinforce the education provided during the visit and to offer technical assistance. DSHS plans to enhance quality assurance services and continue education activities with public and private providers.

E. Increasing Public/Parent Education

The complex task of increasing Texas' vaccine coverage levels cannot be accomplished without the nationally proven strategy of public education, particularly parent education. DSHS remains committed to public/parent education and continues to allocate funds for immunization media campaigns designed to target underserved populations, general populations, and private providers. While media campaigns play critical roles in the public/parent education initiatives, regional and local health departments provide immunization information through the Women, Infants, and Children (WIC) program and other community based programs

Media Campaigns

In 2005, DSHS, in collaboration with HSRs and LHDs, launched a media campaign in four major cities: Dallas/Ft. Worth, El Paso, Houston City, and San Antonio. The campaign was a continuation of the 2004 campaign—Vaccines Build Your Child's Health. The campaign was a TV/Radio mix in English and Spanish programming.

The HSRs and LHDs received digital electronic media kits that contained copies of the TV and radio ads and instructions on how to work with their local media to broadcast the ads. They also received electronic copies of sample news features, print ads, graphics, and specifications for reproduction of educational materials in the kit.

Data-driven research led to all decisions in the 2005 campaign, including audience chosen, message delivered, cities selected, media strategies developed, tactics chosen, and stations/programming selected. Based on 2004 media campaign evaluations, existing ads were revised to meet customer/client expectations and frequency of ads was increased in selected markets to broaden their audience penetration.

The 2005 media campaign was evaluated using a pre- and post-survey (random-digit dial) in two cities: El Paso and Dallas/Ft. Worth. English and Spanish speaking women, ages 20 – 34 with at least one child, were contacted via telephone. The survey and comparative analysis of two of the four cities where the media campaign was held was completed on April 27, 2006. Key findings are the following:

- Approximately 73% of the respondents in both Dallas/FT. Worth and El Paso recalled seeing or hearing vaccination messages in the previous three months during the campaign timeframe.
- Approximately 31% of those who had message recall had specific recall of the actual images and messages of the DSHS TV ads.
- The majority of those who saw the ads (74%) had a behavioral response or took action in direct response to the ads as a result (i.e. checked child's immunization schedule, checked vaccination record, saw a doctor, or made an appointment to see the doctor).

The survey results showed of those motivated to vaccinate their children, 61% said they had been influenced by advertisements or public service announcements.

Seniors and Volunteers for Childhood Immunizations

In 2005 and 2006, DSHS allocated $100,000 to the University of North Texas to provide education and outreach services through local seniors and retired volunteers programs. The purpose of this partnership is to expand the base of immunization education and training activities being conducted on the local level with coalitions, birthing hospitals, private providers, and public health systems. The project, based on the model entitled "Seniors and Volunteers for Childhood Immunizations," provides outreach to parents to encourage age-appropriate vaccination of their children and to maintain their children's immunization records by enrolling children in a program of reminder and recall for the children's first two years. It also offers education to providers to encourage review of immunization records and appropriate vaccination at every patient visit.

Media Campaign—Pertussis Education

The number of pertussis cases has increased in the last two years. In 2005, there were nine (9) deaths from pertussis; eight (8) infants and one (1) elderly person. The DSHS Immunization Branch presented the pertussis information to TISWG to identify ways the TISWG stakeholders could promote pertussis education.

In August 2006, the DSHS Immunization Branch began implementing a statewide pertussis awareness campaign. The goals of the campaign are to reduce the number of pertussis deaths and number of pertussis cases through awareness, education, and prevention. The campaign educates the public about pertussis as a vaccine-preventable disease, receiving the 4th DTaP at the recommended age, the need for vaccinating older children and adults, and the availability of the new Tdap vaccine.

The campaign is bilingual and includes radio and TV advertisements on English and Spanish language radio stations, network TV, and cable TV. In the major markets, which include Austin, Waco/Temple, Houston, Dallas/Ft. Worth, Rio Grande Valley, Amarillo, El Paso, and San Antonio, media talk radio/TV news shows will be emphasized. The campaign coincided with National Immunization Month in August 2006, and Adult Immunization Week in September 2006. The School Health Network will distribute information and a print ad campaign in professional journals will target physicians.

F. Developing Public/Private Partnerships

Raising vaccine coverage levels in Texas requires effective partnerships at the state and community level to implement nationally proven strategies statewide. Partners may be members of community groups or collaborations, professional organizations, state agencies, or private businesses. Sustainable measures that raise vaccine coverage levels are most successful when they are cohesively supported through partnerships.

Texas Immunization Stakeholder Working Group (TISWG)

The Texas immunization system is complex and requires collaboration among many public and private entities. Recent studies indicate that raising vaccine coverage levels will require a comprehensive, coherent, strategic approach. In accordance with legislation passed by the 78th Legislature and other recommendations for increasing partnerships, DSHS formed the Texas

Immunization Stakeholder Working Group (TISWG) in August 2004. The TISWG includes representatives from the public sector, private sector, and community groups. The TISWG provides a forum for diverse partners in the state immunization system to share ideas, perspectives, best practices, and resources to more effectively target efforts to raise vaccine coverage levels in Texas. Over 60 organizations have participated since the first meeting. The TISWG meets quarterly.

The following is a list of core participants that serve as members on the TISWG:

TISWG Core Participants

- Texas Department of Assistive and Rehabilitative Services (DARS), Division of Early Childhood Intervention
- Texas Health and Human Services Commission (HHSC)- Medicaid
- Texas Health and Human Services Commission (HHSC)-Office of Early Childhood
- National Medical Association (NMA), Texas Lone Star Chapter
- Parents Requesting Open Vaccine Education (PROVE)
- Texas Academy of Family Physicians (TAFP)
- Texas Association of Health Plans (TAHP)
- Texas Association of Local Health Officials (TALHO)
- Texas Education Agency (TEA)
- Texas Medical Association (TMA)
- Texas Parent Teacher Association (PTA)
- Texas Pediatric Society (TPS)
- Texas Pharmacy Association (TPA)
- Texas Nurses' Association (TNA)
- Texas Association of Obstetricians and Gynecologists (TAOG)
- Texas Osteopathic Medical Association (TOMA)

Accomplishments of TISWG: 2004-2006

- The TISWG maintains its original membership, which reflects the commitment of stakeholders across the state to improve the immunization service delivery system.
- Over 140 subject matter experts, participants, and invitees have participated in TISWG since 2004. This number continues to grow as TISWG members invite experts from other areas to discuss key immunization issues relevant to their respective areas. Most recently, a representative from the Texas Association of Obstetricians and Gynecologists discussed ways to educate women during pregnancy regarding the importance of timely, age-appropriate vaccines for newborn children.
- Three TISWG subcommittees have formed to tackle specific topics relating to immunizations. These subcommittees provide updates concerning recent actions and recommendations pertaining to their respective areas:
    - Adult – this subcommittee played an important role in promoting adult vaccinations during the 2005-06 flu season; in addition, the subcommittee is involved in online cultural competency continuing medical education (CME) training for physicians.
    - Adolescent
    - Public Parent and Provider education
- Two additional working groups were formed to assist the DSHS Immunization Branch by providing advice related to the immunization registry, ImmTrac.
    - Health Plans/ImmTrac

    - Immunization Provider Working Group (IPWG): The DSHS Immunization Branch collaborates with the TMA and the TPS to obtain private provider feedback on ImmTrac issues and increasing provider participation.
- TISWG is a model that has been implemented by other programs in DSHS and across the nation.
    - The TISWG model was complimented on its accomplishments by the Innovations in American Government Awards, sponsored by the Ash Institute Harvard University and the Ford Foundation.
    - The TISWG model was highlighted at the National Conference on Immunization Coalitions in Denver, Colorado as a sustainable tool for working with partners.
    - TWISG serves as a real-time network to the DSHS Immunization Branch and allows for rapid dissemination of information to the community and partners it serves.

2006 Immunization Summit

In May 2006, the Directors of the four largest metropolitan health areas in Texas, the City of Houston Health and Human Services, the Dallas County Health Department, the San Antonio Metropolitan Health District, and the El Paso City/County Public Health and Environmental Health District participated in an Immunization Summit. The Summit's goals were to share information on each of the metropolitan areas activities to raise vaccine coverage levels and to brainstorm ideas to reduce barriers and improve access to immunization services across Texas. Prior to the Summit, participant's responses to a brief survey on planned discussions were compiled. The Summit participants primarily focused on proven strategies that raise vaccine coverage levels.

Local Health Departments (LHD)

The statewide effort to increase vaccine coverage levels and implement the nationally proven strategies is reflected by the state and federal funds allocated to local health departments across Texas. DSHS Immunization Branch communicates regularly with the LHDs regarding strategies to improve partnerships at the local level. LHDs are now required to document and report their efforts to increase partnerships to the DSHS Immunization Branch three times per year.

In 2006, DSHS provided over $8.5 million in state and federal funds to 52 LHDs in cities/counties throughout Texas to provide essential immunization services. To meet performance goals and objectives, DSHS plans continued LHD funding.

LHDs are tasked to do the following:

- Incorporate systematic approaches (partnerships, registry, reminder/recall, provider and public education, use of the medical home) designed to eliminate barriers and expand immunization delivery
- Establish and maintain partnerships with community based organizations and local human service agencies, including WIC, to promote best practices and activities that will increase vaccination coverage levels
- Implement an immunization program for children, adolescents, and adults, with special emphasis on accelerating interventions to improve the vaccine coverage levels of children less than 36 months of age

- Implement practices that encourage parents to utilize the medical home for vaccinations needed in the future
- Inform and educate the public about vaccines and vaccine-preventable diseases
- Recruit and enroll providers into the TVFC program and perform follow-up visits when deficiencies are identified by the quality assurance contractor
- Conduct immunization assessments or surveys in child-care facilities and registered family homes
- Complete annual assessments in subcontracted entities and clinics
- Ensure a health care workforce that is knowledgeable about vaccines, vaccine-preventable diseases, and delivery of vaccination services
- Promote the use of ImmTrac in public clinics and private provider offices to fully implement HB 1921 and to increase the number of children participating in the registry and the number of registered provider sites
- Implement reminder/recall systems to notify parents or guardians of children less than 36 months of age when immunizations are due or past due
- Report all vaccine adverse event occurrences in accordance with the National Childhood Vaccine Injury Act of 1986
- Investigate all reported vaccine-preventable diseases
- Investigate all suspected hepatitis B infections in pregnant women and prevent infections to their infants

Texas Immunization Coalitions

Texas Immunization Coalitions serve the community interest to raise vaccination coverage levels. Coalitions exist statewide and are comprised of local professional and community organizations. The DSHS Immunization Branch continuously encourages the development of local coalitions.

Texas Health Service Regions (HSR) Immunization Coalitions	
HSR 1	• City of Amarillo Immunization Program
HSR 2/3	• Immunize Kids, Dallas Area Partnership • Meningitis Angels • North Texas Adult Immunization Coalition • Tarrant County Immunization Collaboration
HSR 4/5	• Smith County Shots Across Texas Coalition • Livingston County Immunization Coalition
HSR 6/5s	• Galveston County Immunization Coalition • Houston Area Vaccination Outreach Coalition • Wharton County Immunization Coalition
HSR 7	• Austin AISD Immunization Collaboration • Bell County Immunization Program • Texas Immunization Partners • The Refuge Corporation

HSR 8	• San Antonio Metropolitan Health District • Laredo Health Coalition
HSR 9/10	• El Paso Immunization Project • Odessa Success By Six Coalition
HSR 11	• Immunization Program PHR 11 Corpus Christi • Immunization Program PHR 11 Harlingen

V. ADDRESSING THE NEEDS OF UNDERSERVED AREAS

Children, who are uninsured, underinsured, who lack a medical home, or who live in rural areas of Texas or along the Texas-Mexico border are traditionally underserved in terms of providers and medically underserved in general. While DSHS programs emphasize the importance of a medical home, underserved areas often require additional services.

This section includes these program approaches to raise vaccine coverage levels in underserved areas:

- Support Federally Qualified Health Centers (FQHC)
- Collaborate with the Women, Infants, and Children (WIC) Program
- Support Immunization Border Initiatives
- Partner with Texas Health Steps (THSteps)
- Collaborate with Children's Health Insurance Program (CHIP)

Support Federally Qualified Health Centers (FQHC)

In 2006, DSHS provided $500,000 to 18 FQHCs statewide. Since 1994, FQHCs have received funding to expand or enhance immunization services to reach traditionally underserved populations, especially in communities where there are no local public health departments. Immunization services focus on programs for children and adolescents with special emphasis on children two years of age and younger. The health centers eliminate barriers by offering immunization services outside usual clinic hours and by using reminder/recall systems to notify families of due or past due immunizations. Currently, the DSHS Immunization Branch reimburses FQHCs to administer approximately 96,800 vaccine doses at $5.91 per dose.

Collaborate with the Women, Infants, and Children (WIC) Program

Since 1993, the DSHS Immunization Branch and the state Supplemental Nutritional Program for WIC have collaborated to increase vaccination coverage levels among WIC participants. This collaboration includes all 80 WIC agencies participating in assessing vaccine records of WIC participants. In 2006, the DSHS Immunization Branch funded 15 WIC agencies' administration of immunizations in WIC clinics. The WIC program is required to conduct assessments and referrals. The DSHS Immunization Branch worked with the WIC program to develop a standard assessment tool and procedures.

Support Immunization Border Initiatives

DSHS has long-standing relationships with public health agencies in counties along the Texas-Mexico border. In 2006, DSHS provided over $1.1 million in state and federal funds to four local health departments in border counties:

- El Paso City-County Health District
- Laredo City Health Department
- Hidalgo County Health Department
- Cameron County Health Department

Contracts provide funding to local health departments along the border to promote the TVFC Program and the immunization registry, administer vaccines, promote immunizations, conduct vaccine-preventable disease surveillance, assess vaccine coverage levels at the clinic level, and apply principles of epidemiology and outbreak control measures. These local health departments implement immunization programs for children and adolescents under 19 years of age and adults, with special emphasis on children under 3 years of age, to eliminate barriers, expand vaccine delivery, and establish uniform immunization policies.

In 2006, of the $500,000 provided to 18 FQHCs statewide, DSHS provided over $300,000 in federal funds to 8 FQHCs in border counties:

- Centro De Salud Familiar La Fe, El Paso County
- United Medical Centers, Maverick County
- Community Health Development, Inc., Uvalde County
- Vida y Salud Health Systems, Inc., Zavala County
- South Texas Rural Health Services, Inc., LaSalle County
- Nuestra Clinica del Valle, Inc., Hidalgo County
- Community Action Council of South Texas, Hidalgo County
- Brownsville Community Health Center, Cameron County

These FQHCs administer vaccines and promote immunizations for children under 19 years of age with special emphasis on children under 3 years.

There are over 500 clinic sites enrolled in the TVFC Program in border counties. The TVFC Program provides vaccines at no charge to physicians to vaccinate children who are enrolled in Medicaid, have no health insurance or who are underinsured, who are American Indian or Alaskan Natives, or who are enrolled in CHIP. TVFC providers in the 32 border counties administer approximately 1.5 million doses of vaccine each year.

Partner with Texas Health Steps (THSteps)

To increase vaccine coverage levels in underserved areas of the state, the DSHS has partnered with THSteps to improve dissemination of immunization-related information. THSteps is dedicated to expanding client awareness of existing health and dental services, as well as recruiting and retaining a qualified provider pool to assure that comprehensive preventive health and dental services are available through public and private providers. Through this collaboration, DSHS added an immunization information card in the THSteps mail outs for participants who have not had a medical visit for 12 months.

Collaborate with Children's Health Insurance Program (CHIP)

CHIP is designed for families who earn too much money to qualify for Medicaid, yet cannot afford to buy private insurance for their children. CHIP coverage provides eligible children with coverage for a full range of health services including regular checkups, immunizations, prescription drugs, lab tests, X-rays, hospital visits and more.

Physicians, therapists, pharmacists, nurse practitioners, hospitals, and other health care providers are encouraged to join a CHIP provider network. Most urban areas of Texas are organized into CHIP Service Areas (CSAs). CSAs have one or more CHIP Health Maintenance Organization (HMO) contractors with provider networks. Health care providers are encouraged to join the member networks of all CHIP HMOs operating in their area.

Since the CHIP program provides a full range of health services, DSHS collaborates with the Texas HHSC to ensure that CHIP providers have access to low cost vaccines for their participants. Through an MOU with CHIP, children receive vaccines at a lower cost to taxpayers by taking advantage of federal vaccine contract prices.

VI. SCHOOL AND CHILD-CARE IMMUNIZATION EXEMPTION REQUIREMENTS

Since September 1, 2003, Texas has allowed exemptions from immunizations based on conscientious reasons, which include a religious belief. Between September 1, 2003, and March 31, 2004, parents requested affidavit forms from DSHS by U.S. Mail and DSHS was prohibited from maintaining a list of individuals who requested the affidavit forms. Immunization exemptions requested during this period remain in effect for five years.

On April 1, 2004, an immunization exemption rule change was approved by the Board of Health (BOH) and implemented by the Texas Department of Health (TDH), now Texas DSHS. Parents may now fax their requests for affidavit forms to DSHS, and DSHS records the number of exemptions requested by ZIP code. Exemptions claimed under this rule are in effect for two years.

Annual Report of Immunization Status

Texas requires an annual report of immunization status from public and accredited private schools. The information collected from this self-report provides data on the number of students who have a conscientious exemption on file. Beginning with the 2004-2005 school year, the DSHS Immunization Branch changed the immunization data collected from public and accredited private schools. Schools are only required to report on their kindergarten and 7th grade students. Previously, schools reported on the immunization status (including number of exemptions) of their entire student population. Based on 2004-2005 school year data, 0.06% of students enrolled in Texas schools had a conscientious exemption on file. The number of conscientious exemptions appears to be at the same level as the previous school year.

Additional demographic data would be required to accurately compile the number of affidavit forms submitted to schools and child-care facilities compared to the number of affidavit forms requested from DSHS. DSHS does not refuse affidavit form requests; therefore, individuals may request an affidavit form and never submit the affidavit to a school or child-care facility.

Affidavit Forms

By rule, DSHS tracks the number of affidavit forms mailed, the number of written request letters received, and the number of children for whom an affidavit is requested.

In 2004, DSHS received one report of an incident for using an exemption. Since then, no reports of incidences of discrimination for using an exemption have been reported.

DATA COLLECTED	FY 2004	FY 2005	FY 2006
Number of affidavit forms mailed (These numbers reflect the number of forms requested annually. If requested, up to five affidavit forms per child are allowed)	23,235	19,096	22,103
Number of request letters received (These numbers reflect the individual request letters received by DSHS each year. A request letter may list more than one child for whom an affidavit form requested)	4,235	4,037	5,392
Number of children (These numbers reflect the actual number of children/individuals for whom an affidavit has been mailed each year. These numbers differ from the number of affidavits mailed because one child may request up to five forms)	7,250	6,351	8,341

The rate of individuals (per 10,000 population) for which conscientious exemption affidavit forms were requested during state Fiscal Year 2006 was mapped according to the county of the mailing address zip code provided by the requester (see attachment). The rate of individuals for which exemptions were requested is not uniform across Texas. In some counties, the rate of individuals requesting the affidavit forms is much higher compared to other counties. The department is prohibited from collecting any additional demographic data on these individuals in order to protect privacy.

The effect of the conscientious exemption on vaccination coverage levels and vaccine-preventable diseases has not been fully evaluated. However, vaccination coverage levels among kindergarten and 7th grade students have remained high since implementation of the conscientious exemption.