



A New Focus on Adolescent and Adult Immunizations in 2007

Anita Freeman, RN, MSN

Texas Department of State Health
Services

Immunization Branch

September 2007

Objectives

- Understand the role of the Advisory Committee on Immunization Practices.
- Select recommended ages for adolescent immunizations.
- Identify the age groups recommended to receive meningococcal vaccine.
- Select priority groups for influenza vaccination.
- Select recommended immunizations for healthcare workers.

Presentation Outline

- 2007 Influenza vaccine recommendations
- New adolescent vaccines and recommendations
- Adult immunization recommendations
- Immunization recommendations for health care workers
- Immunization recommendations for pregnant women

Advisory Committee on Immunization Practices

- ACIP
- Department of Health and Human Services
- 15 experts in fields associated with immunizations
- Develop written recommendations for routine vaccination of all age groups
- Goal is to reduce the incidence of vaccine preventable diseases



TEXAS

Department of
State Health Services

Texas Immunization System

- Immunization Branch
- Texas Vaccines for Children
- ImmTrac (registry)
- Infrastructure:
 - DSHS health service regions. Local health departments, FQHCs, some WIC clinics
 - Private providers

2007 Influenza Recommendations



Influenza Disease

- 36,000 influenza-related deaths annually
- Persons ≥ 65 account for $>90\%$ of deaths
- Average 226,000 flu related hospitalizations annually during flu season
- 80% of flu activity peaks in January or later

Increase Risk of Influenza Complications

- 65 yr/age and older
- 59 months/age and younger
- Pulmonary disease
- Cardiovascular disease
- Diabetes
- Renal dysfunction
- Hemoglobinopathy
- Immunosuppression
- HIV
- Compromised respiratory function
- Residents of LTC
- ASA therapy
- Pregnant women

Vaccination Timeframe

- Begin vaccinating as soon as vaccine is available
- Offer flu vaccine during routine healthcare visits
- Continue throughout influenza season (December-March)

Recommendations for Influenza Vaccination

- Persons 50 and older or 5 years and younger
- Residents of long term care facilities
- Women who will be pregnant during flu season
- Persons with chronic pulmonary, cardiovascular, renal, hepatic, hematological or metabolic disorders
- Persons with immunosuppressive conditions

Recommendations cont'd

- Health care personnel including home care
- Persons with compromised respiratory function
- Healthy household contacts and caregivers of adults 50 and over or children under 5 years, and/or have medical conditions that increase their risk of complications from influenza.

*'Prevention and Control of Influenza;
Recommendations of the Advisory Committee on Immunization
Practices (ACIP), 2007'. Morbidity and Mortality Weekly Report
Volume 56. June 29, 2007.*

Influenza Vaccines

INACTIVATED

- FluLuval
 - 18 and older
- Fluarix
 - 18 and older
- Fluvirin
 - 4 years and over
- Fluzone
 - Several dosages
 - Multiple ages

LIVE ATTENUATED

- FluMist
 - 5-49 years of age

Adolescent Vaccines



Adolescent Vaccines and Recommendations

In 2007, separate Immunization Schedule for children 7-18 years/age

- Tdap
- Meningococcal
- Human Papilloma Virus
- Hepatitis B
- Varicella
- Measles, Mumps & Rubella

Recommended Immunization Schedule for Persons Aged 7–18 Years—UNITED STATES • 2007

Vaccine ▼	Age ▶	7–10 years	11–12 YEARS	13–14 years	15 years	16–18 years
Tetanus, Diphtheria, Pertussis ¹	<i>see footnote 1</i>		Tdap		Tdap	
Human Papillomavirus ²	<i>see footnote 2</i>		HPV (3 doses)		HPV Series	
Meningococcal ³	MPSV4		MCV4		MCV4³ MCV4	
Pneumococcal ⁴			PPV			
Influenza ⁵			Influenza (Yearly)			
Hepatitis A ⁶			HepA Series			
Hepatitis B ⁷			HepB Series			
Inactivated Poliovirus ⁸			IPV Series			
Measles, Mumps, Rubella ⁹			MMR Series			
Varicella ¹⁰			Varicella Series			



Range of recommended ages



Catch-up immunization



Certain high-risk groups

This schedule indicates the recommended ages for routine administration of currently licensed childhood vaccines, as of December 1, 2006, for children aged 7–18 years. Additional information is available at <http://www.cdc.gov/nip/recs/child-schedule.htm>. Any dose not administered at the recommended age should be administered at any subsequent visit, when indicated and feasible. Additional vaccines may be licensed and recommended during the year. Licensed combination vaccines may be used whenever any components of the combination are indicated and other components

of the vaccine are not contraindicated and if approved by the Food and Drug Administration for that dose of the series. Providers should consult the respective Advisory Committee on Immunization Practices statement for detailed recommendations. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS). Guidance about how to obtain and complete a VAERS form is available at <http://www.vaers.hhs.gov> or by telephone, 800-822-7967.



- Motivate caregivers of 11 and 12 year olds to have their pre-teens immunized with Tdap, MCV4 and HPV (for girls).
- Motivate caregivers to get their pre-teens caught up on missed childhood vaccines.
- Through additional targeting of African Americans and Hispanics, increase awareness of immunization recommendations and benefits (and thereby increase immunization rates and prevent disparities).
- Promote the 11 to 12 year old medical check-up.
- Provide healthcare providers with educational materials to facilitate their efforts

Tdap Recommendations

- Adolescents 11-18 years of age should receive a single dose of Tdap if 5 years since last DTaP or Td booster.
- Administer at 11-12 year old visit OR 13-18 visit
- Minimum ages for specific vaccines:
 - BOOSTRIX 10 years
 - ADACEL 11 years

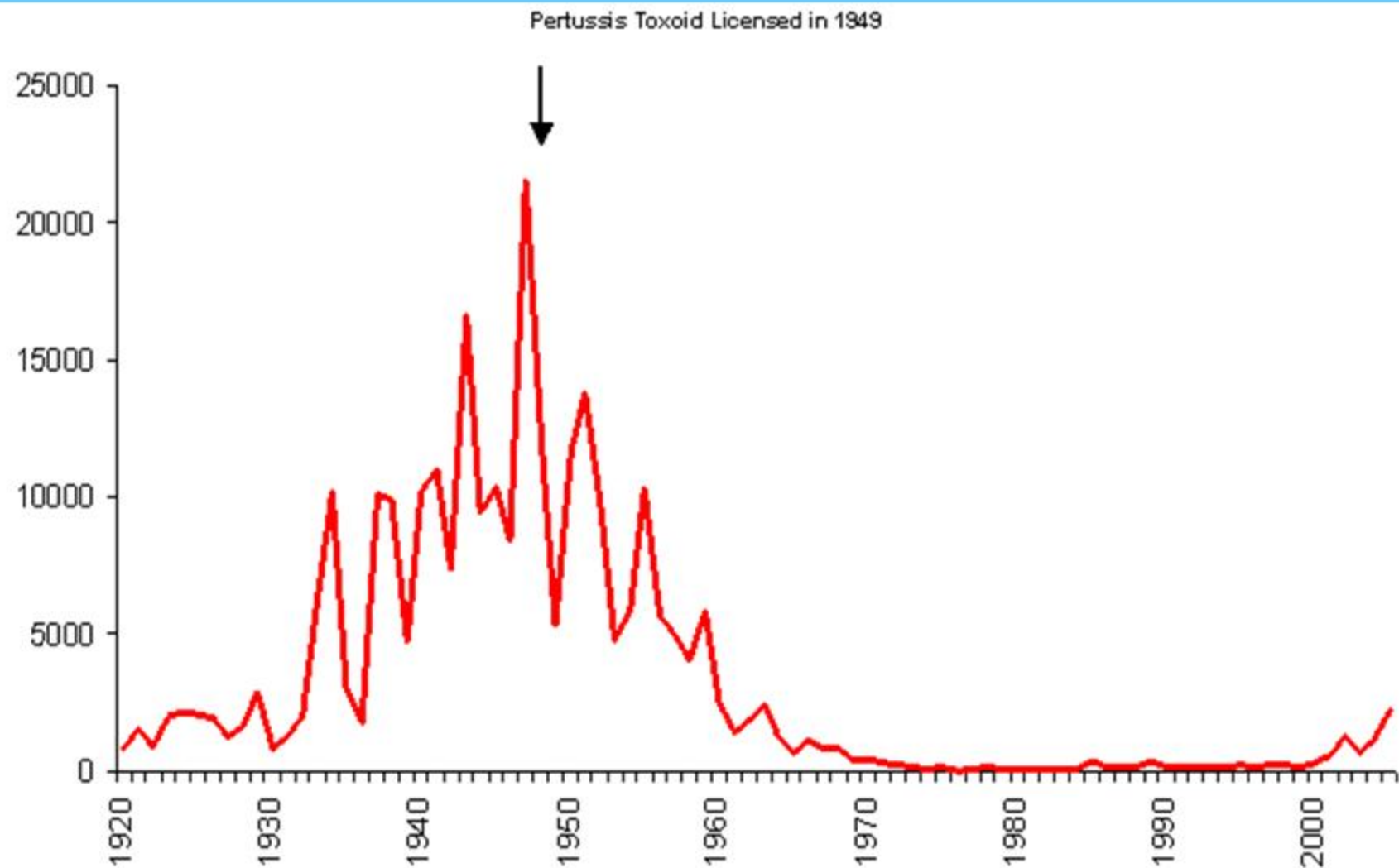
Pertussis Incidence in Texas



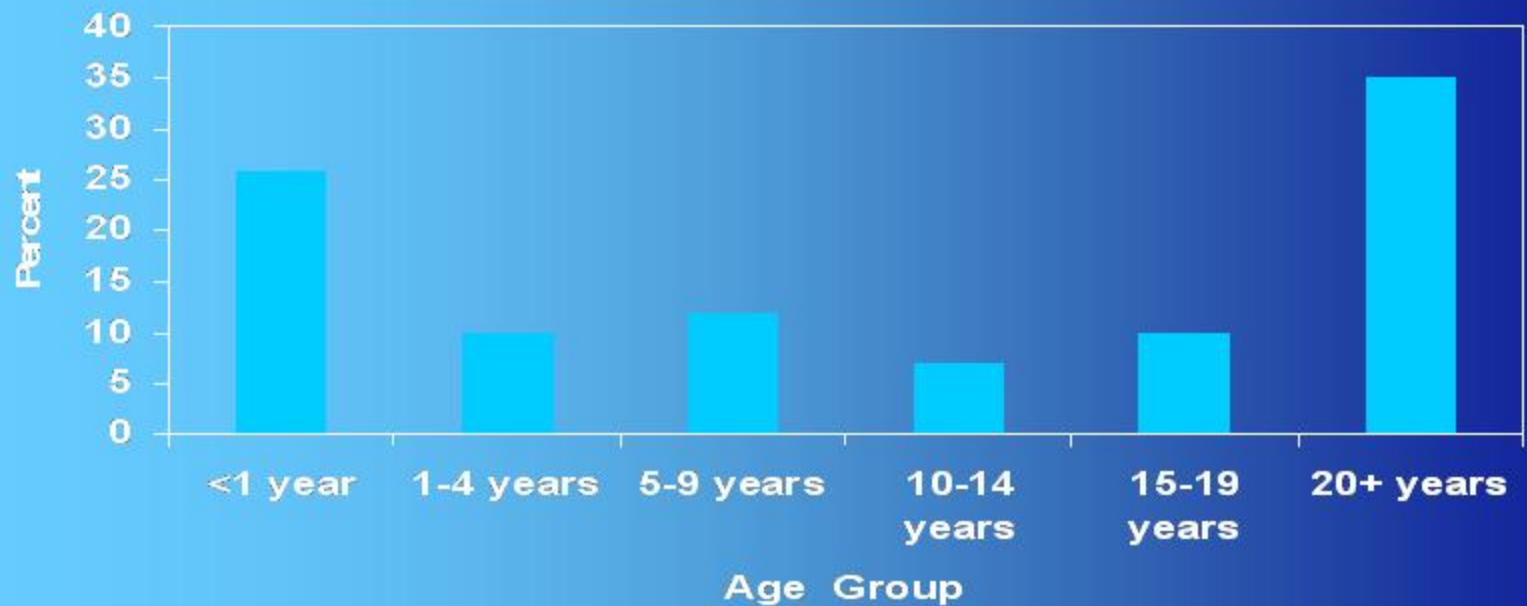
- 954 cases in Texas in 2006
- One infant death under 3 months of age



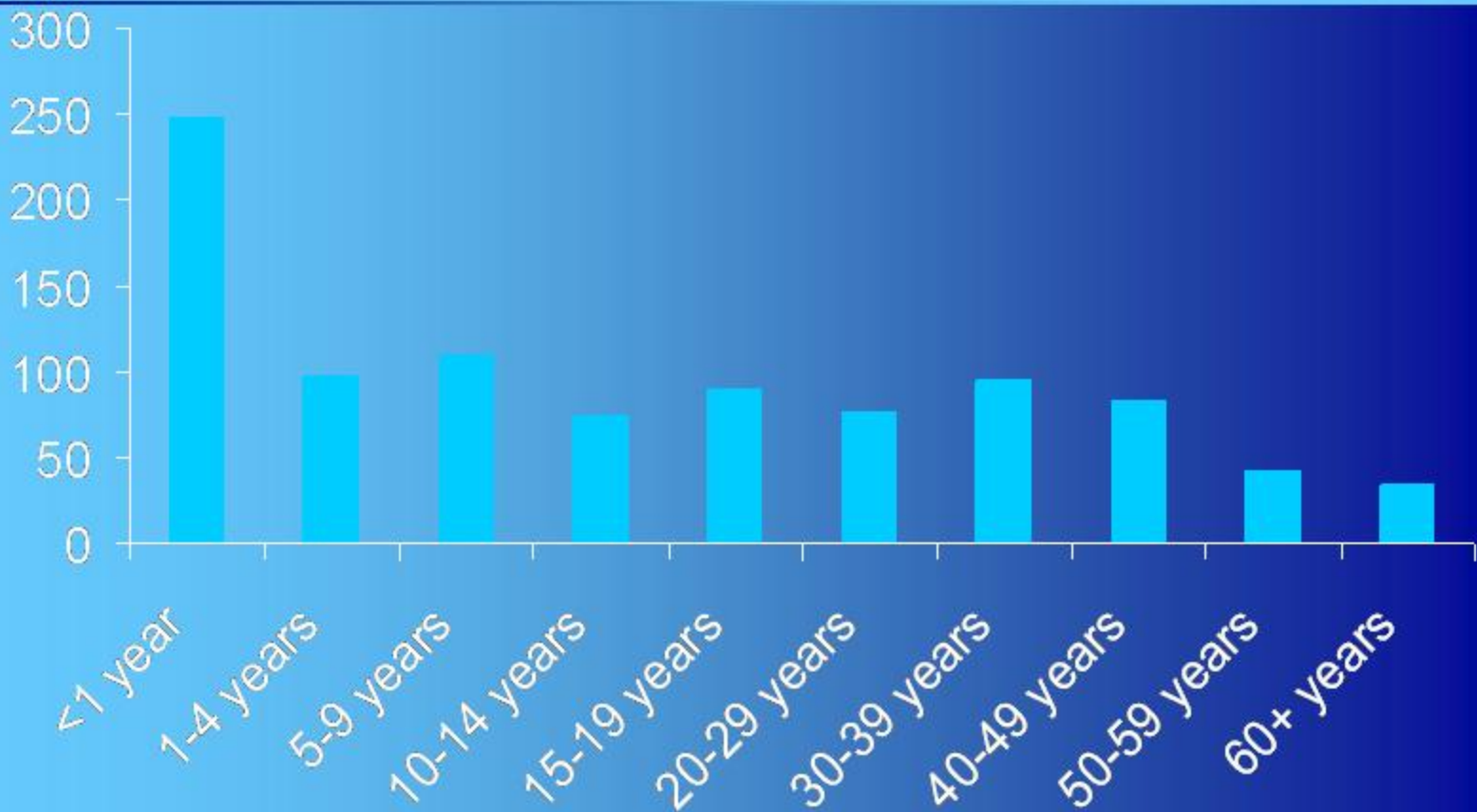
Pertussis in Texas (IDCU)



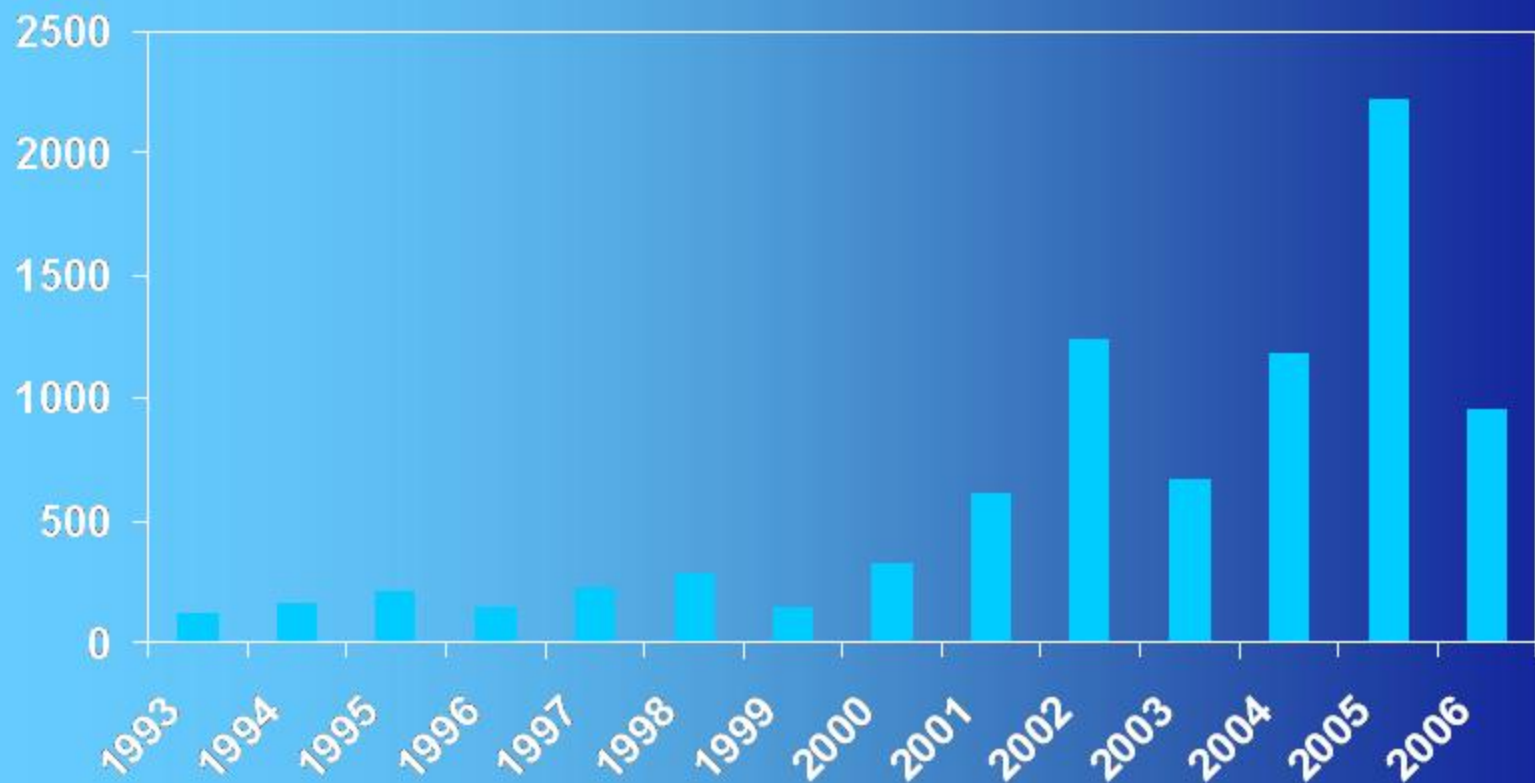
Percentage of Texas Pertussis Cases by Age Group



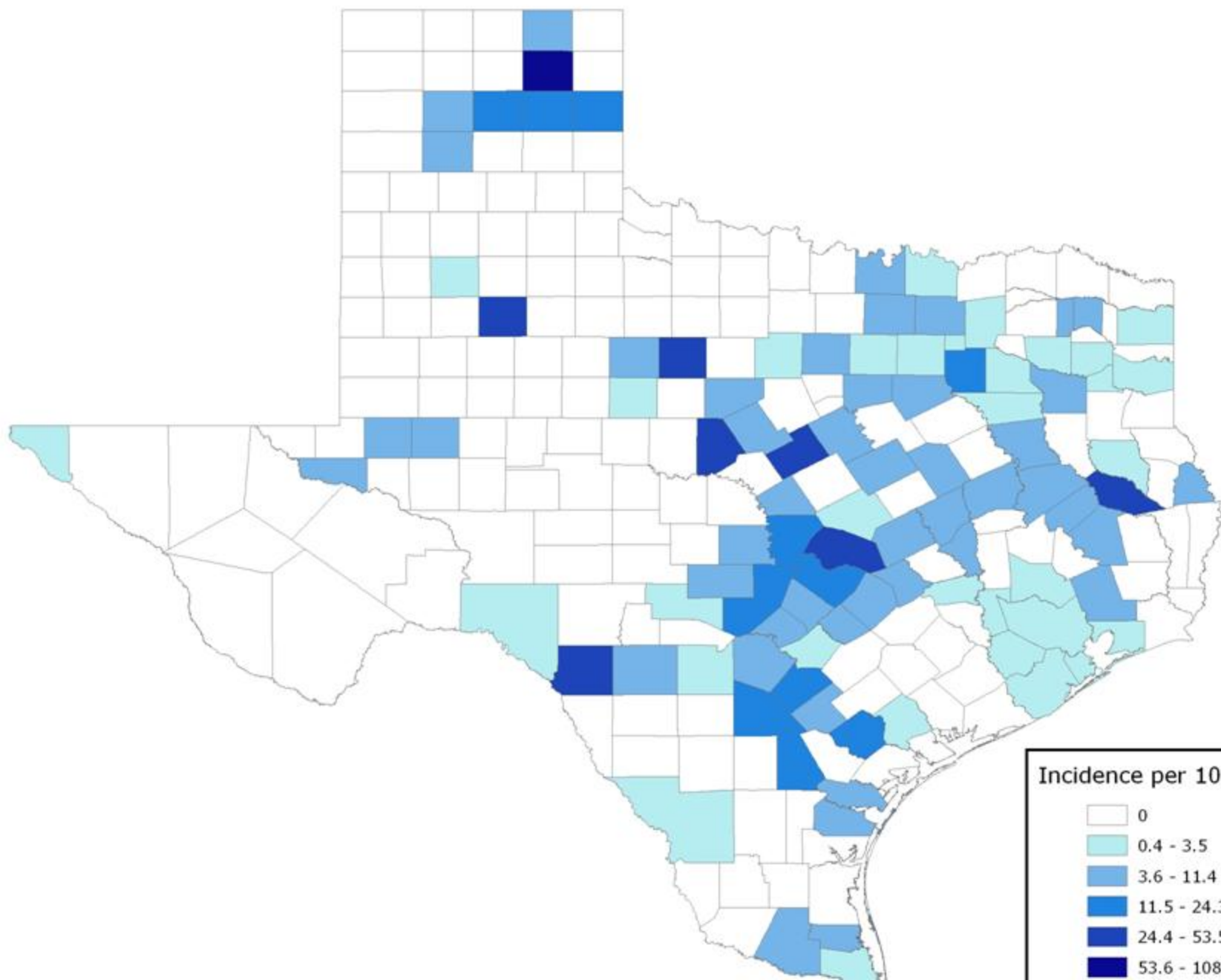
2006 Texas Pertussis Cases by Age Group



Pertussis Cases in Texas 1993-2006



2006 Pertussis Incidence (Cases/100,000 Population)



2007 Media Campaign

MMF

MATCHFRAME



SHERRY MATTHEWS
ADVOCACY MARKETING

TEXAS DSHS - Immunization Branch

"Pass It On" CC

PERT-112A

TRT :30 ENGLISH STEREO

CLOSED CAPTIONED

09/06/2006

Check Your Vials:

is
it

Tdap
DTaP
or Td?

Tdap: Tetanus, Diphtheria, Pertussis

new Preteens - Adults

ADACEL™ (sanofi pasteur, formerly Aventis Pasteur) Ages 11-64 years



Boostrix® (GlaxoSmithKline) Ages 10-18 years



DTaP: Diphtheria, Tetanus, Pertussis

Infants - Young Children

DAPTACEL® (sanofi pasteur, formerly Aventis Pasteur) Ages 6 weeks up to 7 years



Infanrix® (GlaxoSmithKline) Ages 6 weeks up to 7 years



TRIPEDIA® (sanofi pasteur, formerly Aventis Pasteur) Ages 6 weeks up to 7 years



Pediarix® (GlaxoSmithKline) Ages 6 weeks up to 7 years



Td: Tetanus, Diphtheria

Td (sanofi pasteur, formerly Aventis Pasteur) Ages 7 years and older



With the new Tdap vaccine, pertussis protection is available for teens and adults up to age 64. Carefully check your vaccine vials to ensure that you give the right vaccine to the appropriate age groups.

NEW-Changes to Packaging



Meningococcal vaccine

- Meningococcal conjugate vaccine (MCV4)
 - Menactra
 - Minimum age 11 years
 - Given IM
 - Recommendations:
 - ***New 2007*** Single dose for 11-18 year/olds
 - ***Previous Recommendations:***
 - 11-12 years/age, or
 - High school entry; or
 - Unvaccinated college freshmen who will reside in dormitories.

Meningococcal Polysaccharide Vaccine

- MPSV
- Approved for age 2-10 years and over 55 years
- Persons at increased risk of infection
- Given subq
- Revaccination may be considered after 5 years for persons with increased risk

Human Papilloma Virus (HPV)

- In US, estimated 20 million infected
- 6.2 million new infections yearly
- >80% sexually active women infected by age 50
- Genital warts
- Texas estimates for 2006:
 - 1,168 new cases cervical cancer
 - 390 cervical cancer deaths

HPV Vaccine

- Gardasil licensed in 2006
- Licensed for use in females 9-26 years of age
- Recommended age for vaccination is 11-12 years of age
- Give with other recommended vaccinations
- 3 dose series
- Given IM in deltoid

Catch Up Immunizations

- 2nd MMR
- 2nd Varicella (*new recommendation in 2007*)

- Hepatitis B series

If High Risk:

- Hepatitis A
- Pneumococcal polysaccharide

Options for Hepatitis B Vaccination

■ Twinrix

- Hep A & Hep B
- Accelerated schedule approved April, 2007
- 18+ years/age
- 0,7, 21-30 days and booster at 12 months
- No ACIP recommendation

■ Energix B

- 3 dose schedule
- 0, 1 month, 5 months
- 11-19 years/age

■ Recombivax HB

- 2 dose schedule
- Separate by 4-6 months
- 11-15 year olds only

Recommendations vs Requirements

- ACIP makes immunization recommendations for:
 - Children
 - Adolescents
 - Adults
 - Healthcare workers
 - Travelers
- State has immunization requirements for Texas schools and child care facilities
- Some institutions of higher learning may have additional requirements for students

Texas School Requirements for Adolescents

- Completed series of tetanus and diphtheria vaccines (Tdap is recommended but not required)
- Completed series of polio vaccine
- Completed series of Hepatitis B vaccine
- Two MMRs
- One varicella
- **No changes to 2007-08 requirements!**

The 11-12 Year Old visit!



- Screen for immunization status;
- Discuss recommended vaccines with parent and teens;
- Provide all recommended immunizations!

Texas Vaccines *for* Children



- An estimated 54% of Texas teens eligible;
- Become a Texas Vaccines for Children Provider and provide free vaccines to teens who are:
 - Medicaid
 - CHIP
 - Uninsured
 - Underinsured
 - Native American Indian or Native Alaskan

Adult Immunization Recommendations



Are you
asking
for
it?



If you're not asking for the **vaccines** you need,
you just might be asking for
something you really don't want—
like a serious infection or long-term health problems.

To find out more about adult vaccines, take the
CDC Adult Vaccine Quiz

www.cdc.gov/nip/foradults.htm

This 30-second quiz gives you a list of vaccines
that could help you the most. Take the quiz, then talk to your
healthcare provider about the results.

And make sure you ask
for what you need.



Recommended Adult Immunization Schedule by Vaccine and Age Group

UNITED STATES • OCTOBER 2007–SEPTEMBER 2008

DRAFT

VACCINE ▼	AGE GROUP ▶	19–49 years	50–64 years	≥65 years
Tetanus, diphtheria, pertussis (Td/Tdap) ^{1,*}		1 dose Td booster every 10 yrs		
		Substitute 1 dose of Tdap for Td		
Human papillomavirus (HPV) ^{2,*}		3 doses females (0, 2, 6 mos)		
Measles, mumps, rubella (MMR) ^{3,4}		1 or 2 doses	1 dose	
Varicella ^{4,*}		2 doses (0, 4–8 wks)		
Influenza ^{5,*}		1 dose annually		
Pneumococcal (polysaccharide) ^{6,7}		1–2 doses		1 dose
Hepatitis A ^{8,*}		2 doses (0, 6–12 mos or 0, 6–18 mos)		
Hepatitis B ^{9,*}		3 doses (0, 1–2, 4–6 mos)		
Meningococcal ^{10,*}		1 or more doses		
Zoster ¹¹			1 dose	

*Covered by the Vaccine Injury Compensation Program. NOTE: These recommendations must be read with the footnotes (see reverse).



For all persons in this category who meet the age requirements and/or who lack evidence of immunity (e.g., lack documentation of vaccination or have no evidence of prior infection)



Recommended if some other risk factor is present (e.g., on the basis of medical, occupational, lifestyle, or other indications)

This schedule indicates the recommended age groups and medical indications for routine administration of currently licensed vaccines for persons aged ≥19 years, as of October 1, 2007. Licensed combination vaccines may be used whenever the components of the combination are included and when the vaccine's other components are not contraindicated. For detailed recommendations on all vaccines, including those used primarily for travelers or that are not used during the year, consult the most current package inserts and the contraindications from the Advisory Committee on Immunization Practices (www.cdc.gov/vaccines/pubs/ACIP.htm).

Report all clinically significant adverse reactions to vaccines to the Vaccine Adverse Event Reporting System (VAERS). Reporting forms and instructions on filing a VAERS report are available at www.vaers.hhs.gov or by telephone 800-332-1987.

Information on how to file a Vaccine Injury Compensation Program claim is available at www.va.gov/vaccinecompensation or by telephone, 800-338-2382. To file a claim for vaccine injury, contact the U.S. Court of Federal Claims, 717 Madison Place, N.W., Washington, D.C. 20005; telephone, 202-357-6200.

Additional information about the vaccines in this schedule, cost of available data, and contraindications for vaccination is also available at www.cdc.gov/vaccines or from the CDC PPO Contact Center at 800-CDC-INFO (800-232-4636) in English and Spanish, 24 hours a day, 7 days a week.

Adult Vaccine Recommendations

- Td/Tdap
- Seasonal influenza
- Pneumococcal polysaccharide
- HPV up to age 26
- Zoster (provisional)
- Varicella-2 doses**
- Mumps, Measles, Rubella-1-2 doses

Tetanus, Diphtheria, Acellular Pertussis

- Single dose of Tdap to replace a single dose to Td
 - Priority groups:
 - Adults with close contact with infants:
 - Childcare staff
 - Healthcare personnel
 - Parents

Hepatitis B Vaccine

Indications

- Occupational exposure
- End-stage renal disease
- Persons getting tx for STD
- Multiple sexual partners
- Injection drug users
- Household contacts and sex partners with chronic hepatitis B infection

Strategies to Decrease Hepatitis B Infections

- Prevent perinatal transmission
- Routine vaccination of infants
- Vaccination of high risk children
- Vaccination of adolescents
- Vaccination of high risk adults

Texas Challenge

- **800 to 1,200 infants are born to HBsAg positive women every year in Texas**
- **In 2005, ONLY 37% to 55% infants were reported and of these infants, only**
 - **89 % received HBIG and first dose Hep B vaccine**
 - **70% completed vaccine series by 8 months**
 - **54% received post vaccination serology testing**

Screening and Reporting

- **Texas law requires all pregnant women be screened for hepatitis B at first prenatal visit and at the time of delivery for each pregnancy** (*Texas Administrative Code Title 25, Part 1 Chapter 97, subchapter F, §97.135*)
- **Mandatory reporting of all positive HBsAg mothers to DSHS** (*Texas Administrative Code Title 25, Part 1 Chapter 97, subchapter A, §97.3*)

Pneumococcal Vaccine

- Pneumococcal polysaccharide vaccine recommended for adults 65 and older, and
- Recommended for persons 2 years and older with:
 - Chronic illness
 - Asplenia
 - Immunosuppressive conditions
 - HIV infection
 - Settings with increased risk
 - Cochlear implants
 - CSF leaks

Recommended for Revaccination

- Persons who received initial vaccination at age 65 yrs or less; and
- Persons 2 yrs/age and over with:
 - Asplenia
 - Chronic renal failure
 - Nephrotic syndrome
 - Immunosuppressive conditions

Zoster Vaccine

- Zostavax
- Live attenuated varicella virus
- Approved for 60 years and older
- Administered subq
- May be given even if history of prior episode of shingles
- Decreases number of episodes and severity of disease

Adult Safety Net Vaccines

- Available at LHDs and DSHS regional clinics
- Uninsured and Underinsured adults
- Restrictions on some vaccines
- Hepatitis A & B, HPV, MMR, MCV4, Pneumococcal polysaccharide, Tdap, Varicella, Zoster

Immunization Recommendations for Healthcare Workers



Background

- OSHA requires employers to offer free Hepatitis B vaccine to employees who may be exposed to blood or body fluids;
- JCAHO requires hospitals to educate staff on benefits of flu vaccinations, offer vaccination on site and at no cost.

ACIP Recommendations

- Td/Tdap
 - One Tdap recommended for HCW under 65 years of age who have direct patient contact, priority to those having contact with infants under 12 months of age
- Hepatitis B
- Annual influenza
- Evidence of immunity to:
 - Measles
 - Mumps
 - Rubella
 - Varicella
 - Vaccinate if unable to confirm history
 - 2 doses MMR 4 weeks apart
 - 2 doses Varicella 4 weeks apart

Recommendations for Pregnant Women



Indicated During Pregnancy

- Inactivated influenza
- Hepatitis B if high risk
- Td
 - 1) for those who received their last Td <10 years ago, Tdap is recommended to provide protection against pertussis, but its administration should be deferred until after delivery,
 - 2) for those who received their last Td (or DTap) >10 years ago, Td is recommended (not Tdap) to provide protection against neonatal tetanus.
- The ACIP suggests administering Td during the 2nd or 3rd trimester to minimize the perception of an association of vaccine with adverse pregnancy outcomes.

NOT Recommended during pregnancy:

- Any live virus vaccine including
 - MMR,
 - varicella,
 - live attenuated influenza vaccine
- Human papilloma virus vaccine
- Inactivated polio vaccine
- Hepatitis A-only if high risk for exposure

Adult Immunization Standards

- Make vaccination available
- Assess patients' vaccination status
- Communicate effectively
- Administer and document properly
- Partner with the community to reach target populations
- Implement strategies to raise coverage rates:
 - Reminder/recall
 - Chart flags
 - Standing orders

Take home thoughts:

- Screen immunization status at every visit;
- Offer influenza vaccination throughout the flu season (December to March);
- Remind patients when next vaccines are due;
- Keep good records;
- Have standing orders for vaccines;
- Give all needed vaccines simultaneously;
- NO MISSED OPPORTUNITIES TO VACCINATE!

New CDC Vaccine Website!

- <http://www.cdc.gov/vaccines/>



We're Here to Help!

- Website: www.immunizetexas.org

- Toll Free number:

1-800-252-9152