RECOMMENDATIONS FOR IMPROVING COMPLIANCE WITH THE DTAP # 4 IMMUNIZATION
Relevant Factors Affecting DTaP # 4
Timely Administration

Personal and Family Factors
Personal and Family Factors

- A recipient’s educational level
- Life experiences and beliefs,
- Attitudes and values,
- Decisions based on vaccine risk according to
  - how they perceive the risk of disease
  - the ability to control those risks
  - the preference for one type of risk over another.
Personal and Family Factors

- The principal motivation for getting vaccinated was fear of the disease.
- Negative effects mentioned by anti-vaccination groups, such as the impact on the immune system, were uncommon.
- Trust is a key component of information exchange at every level.
Personal and Family Factors

- The most critical issue is providing mechanisms by which families come in contact with the health care system
- Strongest compliance: The Medical Home
- Best safety net: Public Health Clinics
- Coordination between the two is critical
Personal and Family Factors

- Access to immunization is influenced by the nature of the health care facility and service available.
- Publicly funded healthcare facilities with large numbers of walk-in acute care cases may be more likely to overlook immunization needs than Pediatricians or Family Practice physicians with whom the family or patient has an established relationship.
Relevant Factors Affecting DTaP # 4
Timely Administration

Health Education
The effectiveness of information provided to the public depends upon

- The quantity of information provided
- The clarity of the information
- The source of the information

Presented in a form that is readily understood by the lay public
Health Education

- Vaccine information must be relevant and accurate
  - Potential risks with and without vaccine
  - Effectiveness
  - Any contraindications
  - Any associated risks
  - The procedures required for successful completion
Health Education

- Information should come from publicly recognized authoritative sources
  - Community leaders
  - Popular figures (e.g. football stars)
  - Religious leaders
  - Health professionals
Health Education

- Family and friends are important sources of health care information
  - Inform communities
  - Educate families
Health Education

Focused on parents and families who may not be motivated

- Low educational level of either parent
- Large family size
- Low SES
- Minority
- Young parental age
- Single parent status
- Lack of prenatal care
- Late start with immunization
Health Education

- Mass media campaigns have been shown to be highly effective.
- Using such techniques, in excess of 99% of target group has been reached during the Polio Eradication Initiative of the 1990s.
Health Education

- Educational programs in schools may have limited effectiveness
- Require a high community participation in the education effort
Health Education

- Public Service Announcements
  - Radio,
  - TV, and
  - Print media
Health Education

- Concise, easily understood public service announcements using
  - National public figures that have reputations for sincerity and credibility
  - Well-known and authoritative local representatives of the target population and
  - Typical or representative members of the target population with whom the members of the target population can identify.
Relevant Factors Affecting DTaP # 4
Timely Administration

Physician Education
Physician Education

- The most common errors that occurred in physician offices were missed opportunities for:
  - **Invalid administration of the fourth DTP/DTaP dose**
  - **Administration of the fourth dose <6 months after the third** caused the vast majority of invalid DTP/DTaP immunizations
  - **Late third DTP/DTaP immunization** was associated with invalid fourth DTP/DTaP immunization
  - The fourth Hib immunization
  - Superfluous administration of polio vaccine
Physician Education

- Causes that contribute to immunization errors
  - Poor patient record tracking and availability
  - Insufficient provider knowledge regarding
    - Vaccine contraindications
    - Immunization status
  - Having >1 provider administering immunizations
  - The complexity of current immunization guidelines
Relevant Factors Affecting DTaP # 4 Timely Administration

The High Cost Of Immunization To The Consumer Is Likely To Be A Major Barrier
The High Cost Of Immunization To The Consumer Is Likely To Be A Major Barrier

- Ways of lowering the cost include
  - The provision of private or public health insurance coverage
  - Government or publicly sponsored programs
  - Universal Vaccine Programs
The High Cost Of Immunization To The Consumer Is Likely To Be A Major Barrier

- Ways of lowering the cost include
  - Collaborative efforts by employers and government
  - Public foundations and government
  - International/national/regional collaboration
  - Pharmaceutical / government collaborations
The benefits that accrue to employers from such collaborative efforts include:
- Reduced manpower losses due to sick leave
- Public relations benefits
- Free advertising
- Institutional good will
- Tax benefits
The High Cost Of Immunization To The Consumer Is Likely To Be A Major Barrier

- Benefits to government include
  - Shared costs
  - Utilization of commercial infrastructures for implementation
Summary of Recommendations
Summary of Recommendations

A Three-Pronged approach involving the
- Public Health Department
- Medical Societies in the State of Texas
- Pharmaceutical Companies providing the immunizations
- Commercial insurance companies
- CHIPS program
- Medicaid program
Summary of Recommendations

Prong I

- An intensive advertising program targeting the weakest links in the population
Summary of Recommendations

Prong II

Education

- Physicians caring for children
  - Mandatory Immunization CME similar to the state requirement for Ethics education
  - Requirement of proficiency for renewal of licensure
  - Inclusion as a voluntary presentation at hospital staff meeting at least once a year
  - Inclusion in state society meetings
Summary of Recommendations

- **Prong II**
  - **Education**
    - Public Health and School Nurses
      - Mandatory CEUs similar to that required for physicians
      - Requirement of proficiency for renewal of licensure
Summary of Recommendations

- **Prong II**
  - Education
    - Provision of an optimized, simplified Public Health Department approved Immunization Schedule
## Summary of Recommendations

### Immunization Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth</td>
<td>Hep B # 1, State Screening Test</td>
</tr>
<tr>
<td>3-7 Days</td>
<td>Well Child Visit</td>
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<tr>
<td></td>
<td>Jaundice evaluation</td>
</tr>
<tr>
<td>2 Weeks</td>
<td>State Screening Test</td>
</tr>
<tr>
<td>1 Month</td>
<td>Well Child Visit</td>
</tr>
<tr>
<td>2 Months</td>
<td>Well Child Visit</td>
</tr>
<tr>
<td></td>
<td>DTaP # 1, IPV # 1, HIB # 1, PCV-7 # 1, HEP B # 2</td>
</tr>
<tr>
<td>4 Months</td>
<td>Well Child Visit</td>
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<tr>
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<td>DTaP # 2, IPV # 2, HIB # 2, PCV-7 # 2</td>
</tr>
<tr>
<td>6 Months</td>
<td>Well Child Visit</td>
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<tr>
<td></td>
<td>DTaP # 3, HIB # 3, PCV-7 # 3, HEP B #3</td>
</tr>
<tr>
<td>Age</td>
<td>Recommendations</td>
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<tr>
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<tr>
<td>9 Months</td>
<td>Well Child Visit&lt;br&gt;</td>
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<tr>
<td></td>
<td>Anemia Test (CBC)</td>
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<tr>
<td>12 Months</td>
<td>Well Child Visit&lt;br&gt;</td>
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<tr>
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<td>IPV #3, MMR&amp;V #1, HEP A #1, TB test&lt;br&gt;</td>
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<td>15 Months</td>
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<td>DTaP # 4, HIB # 4, PCV-7 # 4, Anemia Test (CBC)&lt;br&gt;</td>
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<tr>
<td>18 Months</td>
<td>Well Child Visit&lt;br&gt;</td>
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<tr>
<td></td>
<td>HEP A #2</td>
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<tr>
<td>2 Years</td>
<td>Well Child Visit&lt;br&gt;</td>
</tr>
<tr>
<td>3 Years</td>
<td>Well Child Visit&lt;br&gt;</td>
</tr>
<tr>
<td></td>
<td>Blood Pressure and on all subsequent visits</td>
</tr>
</tbody>
</table>
Summary of Recommendations

Immunization Schedule

4 Years
Well Child Visit
DTaP # 4, HIB # 4, MMR&V #2, Vision and Hearing Screening

5 Years
Well Child Visit
Anemia Test (CBC), Urine Test

6-20 Years
Well Child Visit every year
10-11 Years  Tdap Booster, Menactra
15 Years  HPV vaccine, TB Test

Abbreviations:
DTaP-Diphtheria, Tetanus, Pertussis; IPV-Polio; HIB-Hemophilus Influenza type b; PCV7-Pneumococcus; HEP B-Hepatitis B; HEP A-Hepatitis A; MMR&V-Measles, Mumps, Rubella & Varicella; TB-Tuberculosis; Tdap-Adolescent Tetanus, Diphtheria, Pertussis; Menactra-Meningococcal Meningitis. HPV= Human papilloma virus
Summary of Recommendations

- Managed Care Health Plan Data Show Use of a Combination Vaccine Increased On-Time Immunization Rates in Infants
- Data from a New Analysis Presented at the 18th Academy of Managed Care Pharmacy Meeting
- Friday April 7, 2006
- Diphtheria and Tetanus Toxoids and Acellular Pertussis Adsorbed, Hepatitis B and Inactivated Poliovirus Vaccine Combined
Summary of Recommendations

Cumulative days undervaccinated with antigens contained in PEDIARIX®

- 4 DTaP: Mean delay (days) = 245
- 3 Hep B: Mean delay (days) = 317
- 3 Polio: Mean delay (days) = 363

For comparison:
- PEDIARIX (n=1,990)
- Component cohort (n=1,990)
Summary of Recommendations

- **Prong III**
  - Government/Private Corporation/Physician/Pharmaceutical Company/Insurance Company consortium creating a Universal Immunization Program for Texas
Summary of Recommendations

Prong III

- CMS approved a proposal from West Virginia that allows the state to introduce wellness incentives in its Medicaid program.
- Reprinted from the May 15, 2006, issue of MANAGED CARE WEEK.
Summary of Recommendations

- Prong III
  - Wellness incentives in its Medicaid program.
    - Healthy Rewards Accounts for individual Medicaid beneficiaries.
    - Enrollees will be asked to sign a "personal responsibility contract" that will detail the steps a beneficiary will take to improve his or her health.
    - Those who follow the contract's guidelines will receive credits in their account:
      - used for medical and pharmacy co-payments,
    - while those who do not sign the contract or meet its goals will have benefits reduced.
Summary of Recommendations

Prong I
- Intensive advertising

Prong II
- Education

Prong III
- Consortium creating a Universal Immunization Program for Texas