Community Response to Pertussis: MCH Leadership in Action

Wendy Davis, MD – EPSDT Program Chief
Breena Holmes, MD – MCH Director
Vermont Department of Health
February 11, 2013

Objectives

• Understand one state’s story of pertussis as an existing/emerging health threat

• Describe unique MCH leadership role in integrated community response

• Identify strategies for prevention and community mitigation, with special attention to MCH population
  ✓ Consider at least one strategy to apply in your state or community if faced with this challenge

Conference objectives:
• Engage in networking opportunities with MCH professionals, researchers and government leaders to share ideas, information, and experiences
• Identify practices and policies designed to strengthen partnerships between local and state MCH programs and families

Our premise:
MCH professionals are highly qualified to provide leadership for a Public Health event such as a community/statewide pertussis outbreak because of their unique perspective on the vulnerability and needs of the MCH population and their competencies in working with communities and systems.
Objectives

• Understand one state’s story of pertussis as an existing/emerging health threat

• Describe unique MCH leadership role in integrated community response

• Identify strategies for prevention and community mitigation, with special attention to MCH population
  ✓ Consider at least one strategy to apply in your state or community if faced with this challenge

The Vermont Pertussis Story

• Unprecedented case numbers → outbreak/epidemic situation

• Waning immunization coverage rates

• Background legislative story: remove philosophical exemption?

Timeline of an Outbreak

• April, 2011: National Infant Immunization Week
  – News release highlighting infant case (3 week-old)
  – Watching Vermont’s IZ coverage rates decline and pertussis situation in CA (8300 cases in 2010; 9 infant deaths)

• November, 2011:
  – Health Advisory, news release: rise in Vermont cases (27 to date calendar year)
  – Actions requested: lab testing, protecting infants, vaccine recommendations, early treatment & exclusion
  – Outbreak in a small, independent school with relatively low vaccination rates

• December 7, 2011:
  – 47 cases to date, 26 in previous 6 weeks
Timeline of an Outbreak

- March, 2012: Outbreak subsiding?
  - National picture “not reassuring”
- November, 2012: initiation of formalized “response”
  - Increasing public and provider education
  - Increasing Tdap vaccination efforts
- December 7, 2012: Health Operations Center (HOC) activation
- December 19, 2012: “Vermont Tdap Day”

Vermont Pertussis Surveillance

Challenges During an Outbreak: Health Care Professionals

- Diagnosis/discrimination from other common respiratory infections
- Lack of rapid point of care dx test; cost of PCR testing
- Lack of standardized approach to evaluation and treatment
- (?) Limited access to Tdap vaccine for un-/underinsured adults
- HCPs: lack of familiarity/compliance with personal protective measures (equipment, protocols) in health care settings
  - Increased risk of exposure among HCPs
  - Confusion re: impact of HCP vaccination status on post-exposure management

Challenges During an Outbreak: Public Health Professionals

- Large case volume may overwhelm resources for case & contact investigation
  - Laboratory testing resources
- **Defining** "high-risk" population
  - Infants
  - Pregnant women
  - Persons with chronic conditions
  - Health care professionals and their close contacts
- Challenge of providing accurate and timely information re: actions to protect high-risk populations


The Immunization Backstory

- Recent decline in Vermont’s IZ coverage rates
- January, 2012: legislation introduced to remove Vermont’s philosophical exemption
  - Passed easily in the state Senate but significantly amended by House & Conference Committee
- Final bill (Act 157):
  - Philosophical and religious exemptions intact
  - Annual signed (parental) exemption statement
  - Parents read, “understand” DOH educational info
  - Increased school nurse reporting requirements
  - MCH Director (Dr. Holmes) co-chairs work group on protection of immunocompromised students/CSHN

Vermont Kindergarten Immunization Exemptions and Provisional Status

- Varicella (2 doses) and hepatitis B requirement added to school rules in 2008.
- Year of Enrollment
- Percent of Students Surveyed
  - Percent of Students receiving philosophical exemptions (%)
  - Percent of Students receiving provisional status (%)

<table>
<thead>
<tr>
<th>Year of Enrollment</th>
<th>Percent of Students Surveyed</th>
</tr>
</thead>
<tbody>
<tr>
<td>00-01</td>
<td></td>
</tr>
<tr>
<td>01-02</td>
<td></td>
</tr>
<tr>
<td>02-03</td>
<td></td>
</tr>
<tr>
<td>03-04</td>
<td></td>
</tr>
<tr>
<td>04-05</td>
<td></td>
</tr>
<tr>
<td>05-06</td>
<td></td>
</tr>
<tr>
<td>06-07</td>
<td></td>
</tr>
<tr>
<td>07-08</td>
<td></td>
</tr>
<tr>
<td>08-09</td>
<td></td>
</tr>
<tr>
<td>09-10</td>
<td></td>
</tr>
<tr>
<td>10-11</td>
<td></td>
</tr>
</tbody>
</table>
Objectives

• Understand one state’s story of pertussis as an existing/emerging health threat

• Describe unique MCH leadership role in integrated community response

• Identify strategies for prevention and community mitigation, with special attention to MCH population
  ✓ Consider at least one strategy to apply in your state or community if faced with this challenge

Vermont Department of Health Organization

• Alcohol/Drug Abuse Programs
• Board of Medical Practice
• Business, IT, Communications
• Environmental Health
• Health Promotion/DZ Prevention

• Health Surveillance – Infectious Disease; PH lab; PH statistics; OCME
• Maternal & Child Health
• Office of Local Health
• Office of PH Preparedness
Vermont DOH Local Health

- 12 District Offices
  - Correspondence to counties (14), HSAs (13)

- Local PH personnel:
  - PH Nursing
  - MCH Coordinators
  - Epidemiology Field Staff
  - Immunization Program
  - School Health Liaisons

Pertussis: Public Health Response

- Communication
- “Community Mitigation”
  - Intervention strategies to slow or limit disease transmission designed for implementation at the community level

- Epidemiology/Surveillance
- Immunization
- Medical Countermeasures

PH Response: Communication

MCH Leadership Competency 5

Skills
- Tailor information for intended audiences
- Disseminating information in a crisis
- Crafting a convincing MCH story designed to motivate

Activities
- Target: parents/caregivers, health & CC providers
- Outreach in community & health care settings
- Focus on infants & pregnant women – “Cocooning”
PH Response: Immunization
MCH Leadership Competency 1: Knowledge Base

Skills
• (Distinguished by) Life Cycle approach to theory and practice
• Use data to identify issues re: health status of particular MCH grp. (pregnant women)
• Systems approach

Activities
• Target multiple age groups: infants/children/teens, parents, GPs
• Pertussis surveillance data analysis re: IZ coverage and cases
• “Vermont Tdap Day”: statewide effort to increase coverage
Objectives

• Understand one state’s story of pertussis as an existing/emerging health threat

• Describe unique MCH leadership role in integrated community response

• Identify strategies for prevention and community mitigation, with special attention to MCH population
  ✓ Consider at least one strategy to apply in your state or community if faced with this challenge

Key Strategies: MCH Population

• Targeted communication

• Highlight vulnerability of MCH population

• Immunize, immunize, immunize!

Key Strategies: School-Aged Population

• (Local) Health Department School Liaison staff work directly with school nurses
  • Identify un- and under-immunized
  • Multiple strategies for catch-up or exemption verification

• Promote student EHR utilization
  – Immunization status
  – Disease surveillance

• Requires HCP collaboration
Key Strategies: Health Care Providers

• Targeted and timely communication
  – Health Advisory/Alert System
  – “Eight times, eight ways”: e-mail, web site, standing meetings (AAP, AAFP, hospital medical staff meetings, IZ Advisory Committee)

• Clinical practice tools: algorithms
• Address prescribing challenges for post-exposure prophylaxis

PH Response Challenge: Medical Countermeasures

Post-exposure Prophylaxis

• Well-established practice during outbreak to protect populations at risk for severe disease/death
• Must be timely to be effective
  – Consider model: expedited partner therapy for chlamydia
• Risk of significant adverse side effects with certain pertussis post-exposure prophylactic antibiotics
• Board of Medical Practice concerned re: prescribing when no established provider-patient relationship

Questions/Comments?
www.healthvermont.gov