Addressing Preparedness and Planning for the Pediatric Population: Prioritizing Within and Among High Risk Groups

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Addressing Preparedness and Planning for the Pediatric Population: Prioritizing Within and Among High Risk Groups: Facilitated Discussion

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Prioritizing within and among high risk groups: issues

- Identification of high risk children
  - State, local, practice levels
  - Definitions
  - Setting “priority within priority” groups
- Awareness – providers, caregivers
  - Communication strategies
- Organize, contact and schedule
  - Capacity
  - Availability of vaccine

Children’s presentations in pediatric settings

- Doxorubicin, doxorubicin-like drugs
  - Children treated for acute lymphoblastic leukemia (ALL)
  - Children treated for other malignancies
- Childhood medical conditions
  - Heart disease
  - Kidney disease
  - Liver disease
  - Inborn errors of metabolism
  - Immune system conditions
  - Other conditions requiring medical care

Vaccine delivery to the high risk groups

- Centers for Disease Control and Prevention (CDC)
  - National Immunization Program
  - Advisory Committee on Immunization Practices (ACIP)
  - State and local health departments
- Vaccine providers
  - Pediatricians
  - General practitioners
  - Other healthcare providers
- Vaccine storage and handling
  - Freezing and thawing
  - Transportation
  - Refrigeration
- Vaccine availability
  - Supply chain management
  - Manufacturer capacity
  - Distribution network

Summary

- Importance of prioritizing high risk groups
  - Children with cancer
  - Children with chronic medical conditions
  - Children with special needs
- Challenges of vaccine delivery
  - Limited vaccine supplies
  - Transportation difficulties
  - Storage constraints
- Recommendations
  - Increase vaccine supplies
  - Improve vaccine distribution
  - Enhance communication strategies
  - Support pediatricians and other healthcare providers
Identifying and Addressing At Risk populations:

H1N1 Campaign in Virginia

Virginia’s approach

- Build upon and improve a strong public-private partnership between clinical medicine and public health
- Enhance communication with all clinicians
- Set up Commissioner’s clinical advisory groups
- Ensure continuous feedback and plan adjustments as needed

Vaccine Allocation

Overarching principles
VDH’s approach to vaccine distribution will be divided into phases

Each phase will be defined based on CDC’s target groups and the anticipated dates and volume of vaccine formulation

Every attempt will be made to reach 60% of target groups (in addition, estimated uptake will be accounted for) in a phase before moving to the next phase (formulation distribution will affect VDH’s ability to accomplish this)
- Estimated uptake will be estimated using national data on target group’s uptake for 2008-9 season plus 20%, except pregnant women whose uptake will be estimated at 80% (24% in 2008-9)

Guiding principles for vaccine allocation

- Strive to be fair and ethical throughout the campaign.
- Focus on CDC’s target groups.
- Partner with public and private vaccinators in communities throughout the Commonwealth.
- Rely on the judgment of the vaccine providers in the healthcare community to help it reach CDC’s target groups.
- Focus on priority groups with special attention pregnant women
- Local Health Departments- School age large scale vaccination plans
- Documentation to occur through VIIS with minimal information- Name, DOB, vaccine type and lot number

Guiding principles for reaching target groups

Focus on:
- High-risk for hospitalization and death from flu
- Act as source for outbreaks in high-risk group settings
- Easily accessible through specific providers

Targeted Vaccination and After Action Analysis

Vaccination Strategy

First of Regular Shipments
Pre campaign shipments for most at risk
School Based Clinics
LHD Clinics
Private Providers and Pharmacies
Community Mass Vax Events

Vaccine Doses Administered

Targeted Outreach to Specific Groups

The most at risk
Children 6 months to 18 years; their caregivers
General Public

Approx. Date

Pre-Pandemic Flu Vaccination

First Drip
Phase I
Phase II

1st Drip
Phase I
Phase II

-3-
Lessons Learned

Communication
- "Dear Colleague" letters, call center (18K Calls) and H1N1 web site were critical components of the response.
- Communication between public health and clinicians at all levels (federal, state and local):
  - must also be effectively communicated, consistent and made relevant to state/local context
  - Ensure we can reach providers not using e-mail
  - More multi-lingual cross-cultural information is required
  - Coordinate with faith-based and communities
  - Social media to reach youth
  - Coordination with all forms of schools is paramount
  - Public, private, home schooled, higher education
  - Cross-border coordination is necessary as clinicians near neighboring states may receive conflicting information

Lessons Learned

Vaccination
- Using systems that already existed resulted in better outcomes
  - A public-private partnership approach allowed for each entity to focus on those with whom they were most connected.
  - More work needs to be done to effectively vaccinate vulnerable populations
  - Expansion of the vaccination registry allowed for enhanced tracking of the pandemic flu vaccine effort.
  - More education and communication on LAIV and overall vaccine safety is required

Mitigation
- Respiratory protection planning in outpatient practice must be improved

Surveillance
- Clinician input and feedback is critical for adapting the surveillance plan to the current situation

Back-up slides for discussion

H1N1 Response Metrics

550 Wage Employees added to VDH
>1250 Contactors in support
>3.9mm vaccine doses distributed
>2.3mm doses vaccine administered
>3,000 external vaccinators in support
  - Increased Registry Participation grew from 75
1.1mm antiviral med courses secured
  - 35,000 distributed
>1.2mm items of Personal Protective equipment distributed to >750 providers.
>18,000 calls / emails to Inquiry Center
Early Nov. Hospital Status
As of 11/04, % Occupied
- Adult ICU 73%
- Medical/Surgical 80%
- Pediatric ICU 86%
- Pediatrics 62%
- Airborne Infection Isolation 60%
Only 1 ED reported going on Diversion status
11 hospitals activated disaster protocol/emergency operations plan
3 hospitals implemented surge plans
4 additional hospitals activated at least some portion of their Emergency Operations Plan

Mitigation - Protecting Healthcare Workers
Distribution of PPE from State SNS Stockpile
57 Free Clinics & 27 Community Health Centers
- 60,000 surgical masks
- 122,000 N-95 respirators
- 10,000 face shields
- Gloves & Gowns

School Absences
Daily Public School Absenteeism by School Type, Virginia, 2009-10 School Year

ILI Visits by Age Group
Percent of Emergency Department and Urgent Care Visits for influenza-like illness (ILI) by Age Group, Virginia, 2008-09 and 2009-10 Influenza Seasons

Results……..
Vaccination Media Campaign

Television and Cable  > 10,000 impressions (English & Spanish)
Radio  > 4,750 impressions (English & Spanish)
Internet                         > 3.7 million impressions
Bus and Rail Boards          185
Movie Theaters  260 screens
College Arena & Newspaper  15

Information Sources:
H1N1GET1 website

Phone line 877-1-ASK-VDH3
Opened 4/09: 18,000 contacts
88% of calls were from the general public
88% phone, 12% email
Volume peak >700 calls/day
84% in reference to vaccine
New Mexico

Response to 2009-2010 H1N1
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New Mexico--Demographics

- Population 2 million
- 594,000 children
- 39% live in Albuquerque
- 90% rural population living >50 miles from medical care
- 47% Hispanic
- 41% White
- 9% Native American
- 5% African American
- 29% speak Spanish at home
- 5% of children live in crowded housing
- 16% of children live in poverty

Vaccine Distribution by NMDOH

- Over 900 providers were registered to receive H1N1 vaccine. Signed Vaccine Agreement from each provider prior to shipping them vaccine.
- Vaccine was distributed among the 5 Public Health Regions based on priority group populations within each county.
- Due to initial limited vaccine, national priority groups further narrowed in NM to those most vulnerable.
- NMDOH tracked inventory sent to providers using the existing New Mexico Statewide Immunization Information System (NMSIIS).
- Staffed school-based clinics and DOH vaccine clinics, as well as a mobile “Go Team.”

New Mexico Influenza-like Illness (ILI) % By MMWR week, 2009-2010

New Mexico Influenza-like Illness (ILI) % vs. H1N1 Vaccine doses Shipped

Laboratory-confirmed influenza hospitalizations by admission date
New Mexico
**Communication**

- Continuously updated website [www.nmhealth.org](http://www.nmhealth.org)
- Relied on CDC for bulk of information
- Regular press releases
- UNM Hospital website and PALS line provided centralized resource for information & support
- NMDOH collaborated with schools, distributed bilingual prevention materials regarding sheltering at home, school closures, vaccinations & home care
- Coordinated with 22 tribal governments throughout the state

**Areas for review and improvement**

- Bed tracking and hospital utilization
- Scalable Pandemic Operations Plans are needed
- Vaccine receipt and redistribution
- Personal protective equipment—less important (Surgical Mask vs N95 Respirator for Preventing Influenza Among Health Care Workers, Loeb et al, JAMA 2009;303(17))
- Lab testing—availability and turnaround time

**Strengths**

- Distributed 68,000 course of antivirals to all acute care hospital and primary care clinics in 9 days
- Good internal and external communications
  - English & Spanish 24hr telephone help lines
  - Tracked deaths, hospitalizations, and ILI weekly
- Distributed vaccine quickly once it was available; prioritized high risk populations
  - 38% vaccination for initial target groups by Jan ’10, vs 33% U.S.

**Influenza Death Rates by Race/ethnicity**

<table>
<thead>
<tr>
<th>Race/ethnicity</th>
<th>Rate per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian</td>
<td>6</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5</td>
</tr>
<tr>
<td>White</td>
<td>2</td>
</tr>
</tbody>
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**Native American Children—A new group identified as “High Risk”**

- Poverty, crowded living conditions, rural populations
- May lack running water, electricity
- Included as a separate “High Risk for complications” category for whom antiviral treatment is recommended when influenza is suspected or proven in 2010-2011 CDC guidelines
- Based on epidemiological studies
  - Issues in 2011-2012 season getting IHS pharmacists to provide Tamiflu if patients don’t fall into other 2009 “high risk” groups, due to red tape & lack of awareness of new guidelines.
Pandemic Preparedness and Planning
Prioritization Among High Risk Groups

**Michigan Experience**

**Michigan State Team Key Challenges**
- Improved participation of stakeholders who care for children in planning and delivery of disaster/mass medical emergency (MME) treatment
- Many non-pediatric providers, especially in rural areas that will need to be involved in planning and education
- Assuring consistent definition of “high risk” groups and getting information to these groups (and their health providers) across varied communication avenues

**Michigan Care Improvement Registry (MCIR)**
- Immunization registry used extensively by many types of caregivers and providers
- Nearly all providers already proficient at interfacing MCIR
- Inventory/Ordering Module
- Ability to Monitor Allocation Distribution
- Can highlight individuals at high risk for Influenza
- Potential Ability to track/flag high risk children
- All Hazard Functionality for vaccine, antivirals

**H1N1 Vaccination Strengths**
- MCIR
- New Partnerships/Local Communications
- Locally Focused Vaccine Distribution and Allocation
- School and Community Based Clinics effective
- Some localities had improved rates of 0-5 by utilizing WIC clinics for vaccination.
**Identified Weaknesses**

- Cross-jurisdictional variation in local allocations led to differences in target group implementation
- Variation in Provider Participation
- Population-based allocations do not address large health systems or universities
- Develop methods to better target allocation to providers/locales based on risk groups
- State of Michigan Economic Stressors

**Planning and Preparedness**

- Create educational products that can be used proactively and during events ("just in time") to provide consistent message to providers, caregivers, other stakeholders
- Create Safety Net for high risk groups by enhancing emergency care plans
- Improve opportunities to deliver vaccines through schools and also improve delivery to high risk groups by improving vaccine access and prioritization goals to providers
- Focus additional planning and education on caregivers of children 0-5 years who are often in preschool/centers by leveraging existing Child Care Provider (CCP) informational and educational networks AND center’s existing regulatory requirements/suggestions to have
  - Disaster Planning (although often little training)
  - Emergency Information Forms for special needs children
  - MCIR access

**High Risk Groups**

- For Children with Special Healthcare Needs (CSHCN) and other high risk groups, their access could be improved by:
  - Enhancing their “profile” on MCIR, which is widely used
  - Leverage AAP policies regarding the use of Emergency Information Forms
  - Ensure health of CSHCN caregivers (vaccine or treatment access?)
  - Education and support for the medical home of CSHCN to assist them in providing care locally without need for transport to potentially overwhelmed specialty care centers
- Enhance education of CCPs in preschools/centers through existing Michigan networks (Great Start) for both general population of children and CSHCN