OBJECTIVE OF TALK

To provide an overview of AAP leadership experiences during the 2009 H1N1 pandemic
To consider next steps for enhancing pediatric preparedness partnerships and building community teams

Child Health Priorities

Child health priorities for 2010-2011 include:

- Tobacco 2006
- Obesity 2007
- Disaster Preparedness 2008
- Immunizations 2008
- Mental Health 2010
- Oral Health 2010
- Vision of Pediatrics 2020

DISASTER PREPAREDNESS

- Work Group on Disasters 1993
- Task Force on Terrorism 2001
- Disaster Preparedness Team 2005
- “Disaster Preparedness” identified as 1 of 7 strategic health priorities 2007
- Disaster Preparedness Advisory Council appointed 2007

DISASTER RESPONSE

www.aap.org/disasters/index.cfm

- Hurricanes (Katrina, Ike, Gustav)
- Pediatric Education in Disasters course
- H1N1 Pandemic
- International (China, Philippines, Haiti, Chile, Pakistan)
- Oil Spill
- Japan Nuclear Crisis
DISASTER

• By definition, is a situation that overwhelms the capacity of available resources.
• Experience of the AAP has been that children are often overlooked in disaster planning and response, partially because “it’s too hard” or “it costs too much”.

2009 H1N1 PANDEMIC

• AAP, CDC, and HHS leadership calls
• District chairpersons connected with chapter leaders to seek input
• While some common themes were noted, perspectives of members varied
• Throughout the pandemic, AAP sought to offer a response that considered critical care, disaster preparedness, emergency medicine, hospital care, infectious disease, practices, public health, schools, child care

2009 H1N1 PANDEMIC

• AAP conducted various “After-Action” discussions to compile information on the response to the 2009 H1N1 pandemic.
• Potential areas of improvement were identified.
• A key finding was the need to encourage partnerships between pediatricians and state health department representatives.
• It was recommended that the AAP and its Chapters build on relationships forged during the 2009 H1N1 experience and develop improved strategies for preparedness planning.

2009 H1N1 PANDEMIC

Pre-meeting survey and discussions revealed some consensus on areas for improvement:
1. Incorporating pediatricians into decision-making.
2. Promoting strategic communication, systematic messaging before and during disasters/pandemics.
3. Addressing challenges regarding prioritizing within high-risk groups (e.g., pregnant women, children with chronic medical conditions or who are otherwise at risk, health care workers, and minority populations).
4. Leveraging school-based clinics and school-located services.
5. Improve and consider pediatric countermeasures.
6. Many states have multiple counties. Important to address statewide differences with regard to plans for response during a pandemic or disaster.

PARTNERSHIP OPPORTUNITIES

Leveraging partnerships to improve preparedness
1. Identifying key partners.
2. Facilitating communication between health professionals/public health.
3. Parents view pediatricians as trusted leaders and partners.
4. Mobilizing community assets to promote resilience (child care, schools businesses, hospitals, children’s hospitals).

Special Thanks to the Meeting Planning Group

- Joseph A. Bocchini, MD, FAAP
- Steven E. Krug, MD, FAAP
- Georgina Peacock, MD, MPH, FAAP
- Lance Rodewald, MD, FAAP
- David J. Schonfeld, MD, FAAP
- Geoffrey Simon, MD, FAAP
- Renee Turchi, MD, FAAP
- Laura Aird, MS
- Hope Hurley
Response to the 2009 H1N1 Pandemic and Lessons Learned

Joseph A. Bocchini, Jr. MD
Professor and Chairman
Department of Pediatrics
Louisiana State University Health Sciences Center – Shreveport
April 27, 2011

Financial Disclosure

During the past 12 months, I have not had a significant financial interest or other relationship with the manufacturers of the products or providers of the services that will be discussed in this presentation.

2009 H1N1 Pandemic: response timeline

- April 24th – H1N1 influenza A isolated in US
- April 26th – US Public Health Emergency Declared
- May 26th – vaccine working seed established; pilot studies begun
- July – decision to manufacture vaccine for US population
- October 5th – distribution of monovalent inactivated vaccine begins

Influenza Positive Tests Reported to CDC by U.S. WHO/NREVSS Collaborating Laboratories, National Summary, 2009-10

- Vaccine distribution begins
- H1N1
- Outbreak not reported
- Percent Positive
2009 H1N1 Vaccination Coverage (through Jan 1, 2010)

- 61 million persons vaccinated
- By state: median (range)
  - ≥ 6 mo: 23.9% (12.9% - 38.8%)
  - 6 mo - 17 yrs: 36.8% (21.3% - 86.2%)
  - 4 states > 60%
  - 10 states < 30%
  - ≥ 18 years: 26.1%
- ACIP initial target groups: 33.2%
  - (19.4% - 57.5%)

H1N1 Pandemic: AAP Response

- Established a multidisciplinary leadership team of 24 staff and 13 pediatricians from key councils, committees and sections
  - Collaborate with partner organizations
  - Participate in public health planning at federal level
  - Serve as a resource for timely communication of key information for diagnosis, management and prevention of influenza to pediatricians and parents
  - Address member concerns
  - Respond to external requests

AMERICAN ACADEMY OF PEDIATRICS
Lessons Learned from the 2009 H1N1 Pandemic: Recommendations for Improving Future Response: What Worked, What Didn’t, and What’s Next?

SUMMARY REPORT
Prepared by Hope Rickett and Laura Abril, August 2010

THE H1N1 PANDEMIC AND THE AAP RESPONSE

Pandemics are rare events and the public’s understanding of them comes mainly from data and information obtained when studying history. The H1N1 outbreak began in April 2009, and continued for more than a year. The US Public Health Emergency for 2009 H1N1 influenza ended on June 23, 2010. On August 10, 2010 the World Health Organization (WHO) declared an end to the global pandemic. This pandemic provided a real-world test that revealed both the strengths and weaknesses of the public health system in response to a major infectious disease outbreak. The American Academy of Pediatrics (AAP) implemented various strategies during the pandemic, and lessons learned can be utilized in preparedness planning. The AAP staff prepared this report with input from AAP leaders to compile information on the response to the 2009 H1N1 pandemic and identify potential areas of focus for future collaborative efforts.
Challenges expressed by members

- Federal guidance was not always easy-to-understand or relevant to pediatric practice
- Information overload
- Adequate resources for managing increased patient volume
- Increase in number of telephone calls and questions during office visits was much greater than practices could handle

Communication Issues

- Communication regarding what to expect at local level was not always clear
- Connecting with state and/or local public health programs was often difficult
  - Identifying contacts
  - Obtaining a response from contacts
  - Inability to offer appropriate guidance
  - Inadequate resources
  - Community plans were unclear

H1N1 Vaccine related issues

- Lack of clear and effective distribution planning at local levels
- Vaccine availability
- Identification and vaccination of high risk groups during initial stages of limited availability = “priorities within priority groups”
- Coordination with mass vaccination efforts
  - Response to parents
  - Documentation: Immunization registries
- Administrative issues: payment

Lessons Learned

- Need for improvement in ability to facilitate and promote strategic consultation and collaborative decision-making among pediatric experts, AAP leadership, key federal agencies and professional organizations
- Better define agency roles
- Manage messaging and reduce information overload

Lessons Learned

- Improve disaster planning/preparedness at state and local levels by
  - Establishing pediatric-public health partnerships
  - Including pediatric leaders and experts in planning and response efforts
  - Increase communication and awareness before and during an emergency
  - Plan for rapid and effective response activities

Enhancing Partnerships and Improving Pandemic Preparedness Session*

- Ongoing communication
  - Decentralized “county” health system
  - Inconsistent use of registries
  - School related issues
    - When to return?
  - Time lag on information from organizations
  - Consistency of messages from CDC, State, others
  - No venue for pediatricians to communicate back

* Annual Leadership Forum, March 25, 2011
**Enhancing Partnerships and Improving Pandemic Preparedness Session**

- Suggestions to improve communication at state/community/office levels
  - Advisory Committee to/with Public Health
  - Identification of pediatricians in state
    - Email list
    - Partnership with schools
    - High-risk patient registries

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*Annual Leadership Forum, March 25, 2011*
Lessons Learned and Moving Forward: Children at Highest Risk

Georgina Peacock, MD, MPH, FAAP
Medical Officer
Centers for Disease Control and Prevention

CHILDREN’S HEALTH TEAM RESPONDING TO 2009 H1N1 INFLUENZA PANDEMIC

Why Establish a Children’s Health Team?
- Leadership realized it was going to be a children and young adults’ pandemic
  - Children aged 0-24 years accounted for 72.6% of all US H1N1 cases
  - Children aged 0-24 years accounted for 56.4% of H1N1 hospitalizations
  - 2/3 of the 300 children under 18 years of age who died from 2009 H1N1 influenza had underlying pulmonary or neurological conditions

Children with Medical Conditions and Influenza
An At-Risk Population

Child Health Desk activated
May 1, 2009

Goals
- Decrease seasonal and H1N1 influenza morbidity and mortality among children in the US during the 2009-2010 influenza season
- Decrease morbidity and mortality among children at highest risk for seasonal and 2009 H1N1 influenza
- Coordinate and optimize pediatric and child health expertise within the CDC H1N1 response

Children’s Health Team Organization
- Two team-leads (health communication and policy; pediatrician with knowledge of CSHCN)
- Desk Operations
- Subject Matter Experts
- Epidemiologists
- Health Communication Specialists

1. Age distribution of cases, hospitalizations and deaths reported to CDC between April 15 and July 19, 2009.
CHILDREN’S HEALTH DESK
ACTIVITIES

Children’s Health Desk Responsibilities
- Triage all child-related inquiries to appropriate Subject Matter Expert
- Respond to inquiries regarding general & high-risk children within the clinical, child care, school or hospital environment
- Revise desk standard operating procedures to reflect changes in pandemic and to improve inquiry response

Children’s Health Desk Activities
- Develop and disseminate 2009 H1N1 influenza information related to children
- Work with each response task force to tailor ways to provide them with internal CDC pediatric expertise to meet their mission
- Support internal and external partners in their activities to meet the needs of children during the 2009 H1N1 influenza response

CHILDREN’S HEALTH TEAM
WORK WITH TASKFORCES

Children’s Health Team Activities
- Epidemiology/Lab Task Force
  - MMWR on pediatric deaths
  - Monitored number of pediatric deaths and hospitalizations
  - Assisted with (PICU) survey
  - Assessed the risk to children with high risk medical conditions

Children’s Health Team Activities
- Medical Care and Countermeasures
  - Recommendations for antiviral medications
  - Triage algorithm for clinicians jointly endorsed w/AAP
  - General public guidance for compounding anti-viral medications
  - Emergency Use Authorization
    - Use of oseltamivir (under age 1)
    - IV peramivir

Dr Peacock's Presentation
Children’s Health Team Activities

Vaccine Task Force

- Promoted vaccine uptake among children with high risk conditions
  - State vaccine coordinators
  - AAP
  - Title V directors
- Provided information to subspecialists on importance of their patients being immunized
  - Child neurology
  - AUCD Director’s meeting

Communications

- Partner Calls
  - AMCHP
  - NACCHO
  - AAP
  - Child care leader partners
  - HRSA Title V
  - White House public engagement calls
  - Pediatric stakeholder group

Children’s Health Team Activities

Education & Outreach

Internet-based (non-webinars)
- Web MD blog entry
- Medscape video
- CDC podcast
- Mommy blog podcast
- Flu.gov webcast

Webinars
- YMCA
- Easter Seals
- Families Fighting Flu
- Family Voices
- NACCRRA
- Whyville.com

LESSONS LEARNED

Partnership is essential (TFs, AAP, & community faith-based orgs)

Establish internal operating procedures ahead of time (staff roles, communication plan, CHD database)

Lessons Learned

Build infrastructure to ensure effective communication to partners/stakeholders of pandemic updates and changes (consistent reporting)

Integration of CHT for 2009 H1N1 could lead to children’s desk permanency in EOC for future flu & non-flu outbreaks
At-Risk Populations
Opportunities
- Surveillance key to evaluate the extent of the problem and the adequacy of the response
  - Need a consistent strategy for tracking emergency – related morbidity/mortality among CYSHCN
- Inclusion of at-risk populations essential in emergency response planning at all levels
- Communication networks and partner engagement crucial elements for building capacity to address emergency response needs for at-risk populations

CURRENT ACTIVITIES & COLLABORATIONS

Continued Collaboration with AAP
- Developing FAQ for “Pandemic Influenza Revisited: Special Considerations for Newborns”
- AAP/CDC Clinician Outreach and Communication Activity (COCA) calls/webinars
- Planned & coordinating meeting “Enhancing Pediatric Partnerships to Promote Pandemic Preparedness”
- Meeting follow-up

Education & Outreach
- Brochure on Flu & Children with High-Risk Medical Condition in English and Spanish
- Toolkit for child care & early childhood programs “Teaching Children about Flu”
- Article for parents on NCBDDD website in English and Spanish

Children with Medical Conditions
Recent Response Efforts
- Developed materials for parents and pregnant women related to the 2010 Gulf Oil Spill (DBDDD and DRH)
- Participated in the development of a National Contingency Plan for newborn bloodspot screening in case of public health emergency
- Continued work related to influenza and children with high risk conditions
- Sustained interest in including children in disaster preparedness planning and response

Thank You
gpeacock@cdc.gov
Vaccine Distribution in an Influenza Pandemic--Lessons Learned

Pascale Wortley, MD, MPH
Immunization Services Division
CDC
April 27, 2011

Implementation Challenges

- Situation differed markedly from what had been planned for
- Vaccine projections
- Late August 2009: reduction in amount of vaccine expected to be available
- No evidence base to guide distribution of limited supply of vaccine
- Local autonomy

Situational Awareness Project

- Sarah Clark, Gary Freed et al. University of Michigan
- Data collected through biweekly calls with Immunization Program managers, starting early October 2009
- Means of monitoring programmatic decisions related to implementation of campaign

Situational Awareness, cont’d

Examples of information collected:
- State vs local locus of control
- Processes for registering providers and allocating vaccine
- State-level processes for making allocation decisions
- Groups, settings targeted over time
- Timing of expansion to general population

Substantial variation

Coverage of Children by State (21.3% to 84.7%)

Coverage for Overall Adults was 0.7% to 34.4%, and High-Risk Adults was 10.4% to 47.2%
NHFS – Place of Vaccination

Key Concerns from Perspective of Pediatricians

- Limited involvement in decision-making around vaccine distribution
- Diversion of vaccine to public settings
- Incomplete documentation of vaccination due to vaccination outside of medical home
- Reimbursement challenges
- Mismatch between available formulations and priority groups

Selected findings from post-campaign evaluations

Surveys of Providers

- Survey of primary care providers: pediatricians, general internists, and family medicine doctors conducted spring 2010
- Survey of subspecialists: allergist/immunologists, pulmonary disease, endocrinologists, conducted summer 2010

Primary Care Providers and H1N1 Vaccination*

<table>
<thead>
<tr>
<th></th>
<th>Pediatricians (n=305)</th>
<th>Family medicine (n=277)</th>
<th>General Internal Medicine (n=281)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administered H1N1 vaccine during 2009-10 season</td>
<td>92%</td>
<td>82%</td>
<td>81%</td>
</tr>
</tbody>
</table>

* A. Kempe et al. University of Colorado

Subspecialists and H1N1 Vaccination*

<table>
<thead>
<tr>
<th></th>
<th>Allergist/Immuno (n=1440)</th>
<th>Endocrinologists (n=767)</th>
<th>Pulmonary Disease (n=790)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreed to administer and received vaccine</td>
<td>71%</td>
<td>52%</td>
<td>62%</td>
</tr>
<tr>
<td>Agreed but did not receive</td>
<td>6%</td>
<td>8%</td>
<td>9%</td>
</tr>
<tr>
<td>Did not agree</td>
<td>15%</td>
<td>26%</td>
<td>20%</td>
</tr>
<tr>
<td>Did not know about opportunity</td>
<td>8%</td>
<td>14%</td>
<td>11%</td>
</tr>
</tbody>
</table>

Of those receiving vaccine: 55-65% received in Oct-Nov, 21-28% in Dec-Jan, 15-18% unsure

* S. Clark et al. University of Michigan
Dr Wortley's Presentation

Pediatrician Experiences with H1N1 Vaccination

Please answer the following regarding your experience during 2009-10 season in the delivery of H1N1 vaccine. How much do you agree or disagree with each statement?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Somewhat agree</th>
<th>Somewhat disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public health department adequately communicated which patients should receive priority for H1N1 vaccine</td>
<td>36%</td>
<td>43%</td>
<td>15%</td>
<td>6.4%</td>
</tr>
<tr>
<td>Guidelines regarding which patients were considered “high risk” thus a priority for vaccination,</td>
<td>47%</td>
<td>39%</td>
<td>12%</td>
<td>2%</td>
</tr>
<tr>
<td>Information regarding supply of H1N1 vaccine was readily accessible and up to date on state website or in emails</td>
<td>28%</td>
<td>45%</td>
<td>18%</td>
<td>9.5%</td>
</tr>
<tr>
<td>Vaccine was distributed to practices in a transparent and fair manner</td>
<td>20%</td>
<td>37%</td>
<td>24%</td>
<td>19%</td>
</tr>
</tbody>
</table>

*A. Kempe et al, University of Colorado

Pediatrician Experiences with H1N1 Vaccination

Please tell us how much each of the following issues were a barrier to administering H1N1 vaccine this season:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Not a barrier</th>
<th>Minor barrier</th>
<th>Moderate barrier</th>
<th>Significant barrier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of paperwork required to request H1N1 from HD</td>
<td>33%</td>
<td>41%</td>
<td>17%</td>
<td>9%</td>
</tr>
<tr>
<td>Concerns about reimbursement of administration fees by insurance companies</td>
<td>49%</td>
<td>33%</td>
<td>11%</td>
<td>7%</td>
</tr>
</tbody>
</table>

*A. Kempe et al, University of Colorado

Pediatrician Experiences with H1N1 Vaccination

Subspecialist Experiences with H1N1 Vaccination

Identifying factors explaining state variation in coverage

Study conducted by Georgia Institute of Technology in collaboration with CDC
Examined association between different state characteristics and coverage, including:

- Population characteristics
  - E.g., Race/ethnicity, Poverty level, Education
- State characteristics
  - E.g., Density, area, structure of public health system, government funds
- Health infrastructure or behaviors
  - E.g., Number of healthcare providers, existing use of preventive services (flu and other)
- “Supply chain” design and processes for campaign, including:
  - Number of sites for vaccine shipment, Categories of providers whom vaccine was directed, Prioritization, Ordering lag

Identifying factors explaining state variation in coverage – Results

- Population & Infrastructure
  - Populations that were medically underserved had lower coverage rates
  - Percent of population that will not visit MD because of cost negatively associated with coverage
  - Number of sites in the state was positively associated with coverage determined by factors including existing Vaccine for Children providers and population size
- Supply Chain and Processes
  - School vaccination focus had a positive impact on children
  - Repeated distribution to the same sites was positively associated – could represent underlying system differences related to efficiency or monitoring of usage to redistribute to providers who were vaccinating quickly
- Policy
  - Percent of population <18 was negatively associated: accounting for children in population in allocations to states could increase coverage of children if children are targeted

J. Swann, et al. Georgia Institute of Technology
Summary

• Marked diversity of implementation across the country
• Interaction between Public Health and AAP state chapters varied
• High provider participation; Provider experience mixed
• Vaccine supply and related federal communications posed major challenge
• Room for improvement in regards to communication and transparency
• Billing challenges comparatively less important
• Clear lessons about best approaches to allocating limited supply are challenging to identify

Next Steps

• Promote collaboration between public health and state chapters of AAP
  – Share results of the pandemic planning pilot
  – Encourage all states to engage in this activity
• AAP to participate in NVAC seasonal influenza vaccine distribution work group
• Identify other federal activities that can address concerns of pediatricians and improve preparedness
Enhancing Pediatric Partnerships to Promote Pandemic Preparedness

American Academy of Pediatrics
Centers for Disease Control and Prevention
Elk Grove Village, IL
April 27-28, 2011

Meeting Objectives

- Review experiences from the H1N1 pandemic
  - Discuss lessons learned
  - Share best practices
- Determine collaborative strategies that AAP Chapters and State public health leaders can implement to advance pediatric preparedness
- Identify existing and potential new resources that can be disseminated to promote pediatric preparedness
- Form effective partnerships within States necessary for pediatric readiness strategies

Follow-up Resources

- After the meeting, AAP will develop a pediatric preparedness toolkit for use by AAP Chapter and public health leaders to include:
  - Key discussion points and findings from the meeting
  - Common elements in state plans relevant to all states
  - Strategies for states to improve pediatric preparedness
  - Speaking points for the 3 discussion topics (including pediatricians in decision-making, communication, prioritizing within high-risk groups)
- Meeting participants will be informed of future opportunities (eg., archived April 20th AAP/CDC COCA webinar and the October 17, 2011 NCE session: "Preparing for the Worst: How to Practice and Survive After a Community-Wide Disaster")

The Survey Says…

- Pre-meeting survey revealed that participants wanted to discuss the following at the meeting
  - Incorporating pediatricians into decision-making
  - Strategic communication, systematic messaging
  - Preparedness and planning for at-risk groups
  - School-based clinics & school-located services
  - Improving pediatric countermeasures
  - Identify common issues – State and public health perspectives during the pandemic response

The Meeting Is…

- A place to discuss optimal state-based models
- An opportunity for state teams to improve partnerships and collaborations
- A time to reflect on future preparedness and actions that CAN be taken
- An opportunity to develop a shared understanding of key strategies and next steps
- Let’s acknowledge the challenges but focus on the solutions
The Elephant in the Room...

This Meeting Is Not.....

Observed at O'Hare

Limited edition doll available at the American Girl Store: “Suzy Swine Flu”