The Hospital Response
Real Time Experience at AMCH

Sarah Elmendorf, MD
Rebecca O’ Donnell MT,CIC
Introduction

- Hope for the best, plan for the worst
- Evolving plan, never completed!
- Current approach—not all the answers
- **4 initial measures** (J healthcare management 2004 49 (40 227-235))
  - hospital staff education
  - information technology
  - disease surveillance improvement
  - additional equipment and staff
- Regional efforts
Approach

- Assess a single patient's entry into AMCH system
  - Real time
- Identify current strengths and weaknesses
  - Table top
- Respond to weaknesses
  - Additional needs assessment/planning at department and division level
- Assess surge capacity
Key Assumptions

- SARS planning applied to Avian Flu Preparedness
- Overall threat is small
  
  Science 2004 304:968-969 BUT

- High case fatality rate
- **Who (5/05): Avian flu making ominous changes**
- Potential global health impact could be catastrophic
Arrival

Challenges

- Safe entry into the system
- Preparedness for the unknown

Strategies

- Education of triage staff
- Signage
Arrival

Challenges
- Diagnosis unknown
  - Distinguish from other respiratory infections
- Changes in case definitions

Strategies
- Respiratory etiquette
- Anyone who presents with a cough is immediately masked
- Triage alert
- Recognize risk factors
  - Travel, exposure to poultry, exposure to other cases
Arrival

Challenges
- Sign interpretation

Strategies
- English and Spanish signs
- Signs with pictures—don’t reinvent, use!

Are you confident infection is not being spread?
Arrival

- Visual Alerts

![Visual Alert Sign](image)
Arrival

Challenges
- Surge Capacity

Strategies
- Influx of patients will require regional collaboration and coordination
Triage

Challenges

- Triage staff unsure of current events and case definitions

Strategies

- Communication
  - ICP rep on ED QIT
  - IC rounds

- Alerts
  - Central location

- Education

- Test the system
Triage

Challenges
- Enforcement of respiratory etiquette
  - Legal issues
  - Security issues

Strategies
- Segregate patient from main waiting area
- Separate waiting areas/family conference room
- Development of respiratory etiquette bags

Are you prepared to enforce policy?
Triage
Isolation

**Challenges**
- Extended Precautions
- Visitors and Family

**Strategies**
- Contact/Airborne signs for doorframe
- Stickers for chart
- Communication
  - Notify infection control
- Visitor/family screening, PPE, check in logs
Isolation

Challenges
- Correct use and removal of personal protective equipment (PPE)
- Compliance with PPE
- Availability of PPE

Strategies
- Contact /Airborne sign
- PPE removal sign
- PPE observer
- PPE cart
- Education sessions
Isolation
Isolation

Challenges

- Disinfection of environment and equipment

Strategies

- Dedicate where possible
- Empty room of unnecessary supplies
- Disinfect! Disinfect! Disinfect!

Are you prepared for extended precautions?
Patient Movement

Challenges
- Contain disease
- Communication

Strategies
- Mask patient
- Identify most direct route
- Security participation and traffic control
- ICP involvement
- Use of PPE during transport
Communication Challenges

- Multiple disciplinary involvement

Communication Strategies

- Prepared policies-located on Intranet site

- Notification
- Patient placement
- Patient management
- Identification of patient
- Hand hygiene
- PPE
- Environment and equipment disinfection
- Laboratory specimens
- Linen and waste
- Interdepartmental transfer
- Visitors
Communication

Challenges
- Internal/External communication
- Laboratory notification

Strategies
- County notification
- Testing the system with other communicable diseases
- Stickers for lab specimens
- Education
- Intranet site
AMC Installs Public Defibrillators

Albany Med is the first hospital in the Capital District to install public access automatic external defibrillators (AEDs)—devices that have become popular in airports, malls, ballparks, and other public places. Eleven devices have now been placed in high traffic areas in the Medical Center and its offsites for use in sudden cardiac arrest.
AMC Emergency Preparedness Readiness Information
(formerly AMC Readiness Information)

GENERAL INFORMATION

- Anthrax
- Avian Flu
- Code Red Biological Agent Sampling Protocol
- Influenza
- Marburg Virus Hemorrhagic Fever
- Microbiology Pathogen Surveillance - Weekly Reports
- Negative Pressure Room Locations
- Pertussis
- Severe Acute Respiratory Syndrome (SARS)
- Smallpox
- Summary of Biological Warfare Agents
- Tularemia
- West Nile

Important Phone Numbers:
Albany County Health Department
(for Albany County Residents only)
Days: 447-4695
After Hours: 447-4614

New York State Department of Health
1-800-278-2965
Center for Disease Control
1-888-246-2675 (English)
1-888-246-2857 (Espanol)

Archived information
Links for more information
AMC Emergency Preparedness Readiness Information
(formerly AMC Readiness Information)

Avian Flu
Information about Avian Influenza (Bird Flu) and Avian Influenza A (H5N1) Virus (5/16/05)

Laboratory Specimens (3/31/05)

NYSDOH Advisory, (2/23/2005)

Infection Control Alert (2/28/2005)

Patient History Form (8/18/2004)

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Back to AMC Readiness Homepage
Communication: a critical but time consuming element
Medical Evaluation
Medical Evaluation

**Challenges**
- Medical staff fit testing/compliance

**Strategies**
- Powered air purifying respirator (PAPR)
- Fit testing critical medical staff
- All sizes/types of N-95 respirators available on units
Medical Evaluation

Challenges

- Multi-specialty involvement/ education
- Movement of patients

Strategies

- Emergency Preparedness Readiness Site
- Streamline clinical management
- Maintain precautions
- Intubate/extubate in negative pressure room
- Limit movement of patient
Diagnosis

Challenges

- What specimens to collect?
- Avian flu/other respiratory infections

Strategies

- Intranet site
  - Identify specimens needed
  - Current case definition with symptoms/risk factors/travel
- Maintaining precautions
Laboratory Specimens for Suspect Avian Flu, Influenza A (H5N1) Patients

Laboratory specimens on patients with suspect Avian Flu should only be done as directed by the Department of Epidemiology after consultation with the local health department.

1. Complete the Avian Flu Patient History Form for Laboratory and send with the specimens. The form is located in the kit and is also available on the AMC Readiness site, Avian Flu Link.

2. Label all requisitions and specimens with the "Special Precautions" label.

3. All specimens sent to the lab are to be **hand delivered** to the microbiology lab and not delivered through the pneumatic tube system.

4. Collect one specimen sets for submission to the Wadsworth Center for molecular testing. Each specimen set should consist of one nasopharyngeal swab and one oropharyngeal (throat) swab contained in one sterile vial containing 2 mL of viral transport medium. Collection guidelines:
   - Nasopharyngeal swabs - Insert swab through the nasal cavity and into the posterior nasopharynx. Rub swab against mucosal surface and leave in place for a few seconds to absorb secretions. Repeat for second swab.
   - Oropharyngeal swabs – Swab both posterior pharynx and tonsillar areas, avoiding the tongue. Repeat for second swab.

5. Collect an additional oropharyngeal swab using a culturette for rapid influenza antigen detection. This test will be done at AMC.

6. Obtain a blood specimen (red topped tube) from the suspect case. In addition to the patient identifier, label the blood tube with the date and time of collection. Blood samples will be stored at Wadsworth for serologic testing when appropriate reagents become available.

3/21/05
Treatment

**Challenges**
- Options limited

**Strategies**
- Pharmacy preparedness
- Vaccination campaign
- Increased stock of antiviral medication
- Knowledge of most current recommendations
Potential for Surge

Challenges
- Overwhelming resources of health care system
  - PPE
  - Equipment
  - Staff

Strategies
- Early recognition
- Early treatment
- Early isolation
- Stocked PPE
- Negative pressure units
- Patient diversion
Potential for Surge

Challenges
- Overwhelming resources of health care system
  - PPE
  - Equipment
  - Staff

Strategies
- Team approach
- On the spot tracking and references, Palm Pilots
Potential for Surge

Challenges
- Multiple hospital Collaboration

Strategies
- Regional Resource Center
- HEOCC
- Albany County Community Advisory Group
- Albany County Communicable Disease Workgroup
### Influenza Pandemic Impact

<table>
<thead>
<tr>
<th></th>
<th>Weeks</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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</thead>
<tbody>
<tr>
<td><strong>Hospital Admission</strong></td>
<td>Weekly admission</td>
<td>141</td>
<td>199</td>
<td>246</td>
<td>246</td>
<td>199</td>
<td>141</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Peak admission/day</td>
<td></td>
<td></td>
<td>38</td>
<td>38</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Hospital Capacity</strong></td>
<td># of flu patients in hospital</td>
<td>141</td>
<td>199</td>
<td>246</td>
<td>259</td>
<td>239</td>
<td>190</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of hospital capacity used</td>
<td>22%</td>
<td>31%</td>
<td>39%</td>
<td>40%</td>
<td>37%</td>
<td>30%</td>
<td></td>
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</tr>
<tr>
<td><strong>ICU Capacity</strong></td>
<td># of flu patients in ICU</td>
<td>21</td>
<td>40</td>
<td>51</td>
<td>54</td>
<td>53</td>
<td>43</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of ICU capacity used</td>
<td>38%</td>
<td>72%</td>
<td>92%</td>
<td>99%</td>
<td>96%</td>
<td>78%</td>
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<tr>
<td><strong>Ventilator Capacity</strong></td>
<td># of flu patients on ventilators</td>
<td>11</td>
<td>20</td>
<td>25</td>
<td>27</td>
<td>26</td>
<td>22</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>% usage of ventilator</td>
<td>12%</td>
<td>23%</td>
<td>30%</td>
<td>32%</td>
<td>31%</td>
<td>25%</td>
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<tr>
<td><strong>Deaths</strong></td>
<td># of deaths from flu</td>
<td>29</td>
<td>41</td>
<td>51</td>
<td>51</td>
<td>41</td>
<td>29</td>
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<td># of deaths in hospital</td>
<td>20</td>
<td>29</td>
<td>36</td>
<td>36</td>
<td>29</td>
<td>20</td>
<td></td>
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</tr>
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</table>

### Notes:

1. All results showed in this table are based on most likely scenario.
2. Number of flu patients in hospital, in ICU, and number of flu patients on ventilator are based on maximum daily number in a relevant week.
3. Hospital capacity used, ICU capacity used, and % usage of ventilator are calculated as a percentage of total capacity (see manual for details).
4. The maximum number of flu patients in the hospital in a week is greater than weekly admission after the peak because we assume a 7-day stay in general wards (see manual for details).