PANDEMIC INFLUENZA IN THE WORKPLACE

WILLIAM CANDLER, D.O., M.T.M.& H.
Medical Director
John Deere Harvester Works, Seeding Group and Cylinder Division
Proposed Crisis Management Structure

The CCMT is the executive level decision-making body.

The CIST is the corporate level team responsible for ensuring that the units and divisions have the best available resources necessary to effectively manage an incident.

The Incident Response Team (IRT) is responsible for the immediate tactical on-scene response to any emergencies and/or incidents. There may be more than one John Deere Incident Response Team at a unit/site.
## Disaster Characteristics

<table>
<thead>
<tr>
<th>Disaster</th>
<th>Primary Damage</th>
<th>Geography</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earthquake/Tornado</td>
<td>Infrastructure</td>
<td>Limited</td>
<td>Short</td>
</tr>
<tr>
<td>Flood</td>
<td>Infrastructure</td>
<td>Moderate</td>
<td>Short</td>
</tr>
<tr>
<td>Terrorism—Bomb</td>
<td>Infrastructure</td>
<td>Limited</td>
<td>Short</td>
</tr>
<tr>
<td>Terrorism—Bio/Chem</td>
<td>Human</td>
<td>Limited</td>
<td>Short</td>
</tr>
<tr>
<td>Terrorism—Nuclear</td>
<td>Both</td>
<td>Moderate/Large</td>
<td>Very long</td>
</tr>
<tr>
<td>Pandemic</td>
<td>Human</td>
<td>Large</td>
<td>Long</td>
</tr>
</tbody>
</table>
Influenza A: Single Strand RNA Virus
Seasonal Flu

- **Impact:** ~36,000 deaths and 200,000 hospitalizations yearly in the United States
- **Timing:** Peak usually occurs December through March in North America
- **Genetic Drift:** minor changes
  - Yearly vaccine recommended
  - Considerable immunity exists
PANDEMIC FLU

• Rapid global spread among *humans*
• Novel virus – concept of “antigenic shift” – most people are susceptible
• At least ten recorded in last 300 years
• Timing: may begin any time of year and resurge in one of more waves, with a total duration of up to one year or more
• Possible major human and economic impact with 30-40% absenteeism and a 1-2% Death Rate
INFLUENZA DEATH RATES:
1917 v. PANDEMIC of 1918

Average Year: 35,000 deaths in U.S.
1918 Pandemic: 600,000+ deaths in U.S.
20-30 million deaths worldwide
Symptoms of Avian(H5N1) Influenza in Humans

- Young Adults may have a more severe case
  - Robust Immune system – cytokine storm
  - Tumor necrosis factor-α
  - Severe pulmonary tissue destruction
- Fever, cough, Sore throat, muscle aches, conjunctivitis, pneumonia
- NOTE: Human infections have involved direct, heavy exposure to H5N1
H5N1 Infection in Humans

To date, H5N1 virus strains enter through the lower respiratory tract not the upper respiratory tract.
Avian Flu Global Response Procedures

- The World Health Organization Phases are used to trigger corporate actions
- Response actions increase as the threat level increases

<table>
<thead>
<tr>
<th>Inter-pandemic phase</th>
<th>Low risk of human cases</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>New virus in animals, no human cases</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Pandemic alert</td>
<td>No or very limited human-to-human transmission</td>
<td>3</td>
</tr>
<tr>
<td>New virus causes human cases</td>
<td>Evidence of increased human-to-human transmission</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Evidence of significant human-to-human transmission</td>
<td>5</td>
</tr>
<tr>
<td>Pandemic</td>
<td>Efficient and sustained human-to-human transmission</td>
<td>6</td>
</tr>
</tbody>
</table>
Avian Flu Global Response Procedures

RESPONSE ACTIONS: WHO PHASE 3

1. Produce manager and employee information packet worldwide
2. Produce Travelers precaution Fact sheet and policy for returning travelers
3. Develop policy for stockpiling and using antiviral medication and facemasks
4. Develop hygiene and social distancing procedures at work
5. Develop policy for screening and isolating ill or exposed employees
6. IT-enhance capability to work from home
7. Develop global supply exposure analysis
8. Ensure that business units have updated business continuity plans
Preventing Pandemic Influenza

EMPLOYEE EDUCATION

• Good Hygiene
  – Cover that cough!
  – Wash hands and objects that are shared

Social Distancing
  - Avoid crowds
  - Consider increasing shifts
  - Consider working from home
Pandemic Influenza: Prevention and Treatment in the Workplace

• Caring for Ill Employees
  – Have a designated isolation room
  – Promptly isolate ill employees
  – Provide protective mask for ill employee and employees with direct contact with potentially ill employees (N-95)
  – Assist employee to get care
    • Home isolation or
    • Hospital if severely ill
Preventing Pandemic Influenza

- Anti-Viral drugs*
  - Tamiflu (oseltamivir)
  - Relenza (zanamivir)

- Vaccine

- Quarantine
  - Amantidine & rimantidine not effective
Avian Flu Global Response Procedures

RESPONSE ACTIONS: WHO PHASE 4

1. Close coordination with local health authorities
2. Provide medications to at-risk employees in other countries if not available through local government
3. Travel restrictions
4. Increase Order Fulfillment Team planning
5. Cross train to bridge critical knowledge gaps in the event of absenteeism
Avian Flu Global Response Procedures

RESPONSE ACTIONS: WHO PHASE 5 & 6

1. Coordinate with local health authorities to distribute antiviral and vaccine if available
2. Continue to provide medications to at-risk employees in other countries if not available through local government
3. Update recommendations for travel restrictions
4. Identify and track vaccinated and immune employees
Questions