Pandemic Planning

ACHA Annual Meeting
NYC
May 31, 2006

Anita L. Barkin MSN, DrPH
Carnegie Mellon University
ab4x@andrew.cmu.edu
Purpose

• Introduce ACHA Pandemic Planning Guidelines for Colleges and Universities
• Discuss the importance of planning and how to get started
• Identify the challenges to planning
• Describe specific areas that should be included in planning
  – Meeting the health and safety needs of students
  – Addressing planning issues for the campus-wide response
Why plan?

• More effective response to any public health emergency
• Pandemics are a part of human history
• H5NI is endemic in the bird population and shares some of the characteristics of the H1N1 which was responsible for 1918-1920 Pandemic
• There will be little time to act once the event starts
Pandemic Threat

- **Condition One**
  - Novel virus

- **Condition Two**
  - Crosses species
  - Humans, pigs, tigers, cats

- **Condition Three**
  - Efficient, persistent human-to-human transmission
    - Reassortment
    - Mutation
Pandemics

• Ten recorded over past 300 years
  – Range between events 10-49 years, average 24
  – No predictable pattern
• Three in the past century
  – 1957-58 – reassortment event
  – 1967-68 – reassortment event
  – 1918-20 – mutation event with markers similar to those found in birds
Seasonal vs Pandemic Flu

• Seasonal influenza
  – Peaks usually December thru March in North America
  – 36,000 deaths/200,000 hospitalizations/yr
  – Frail, elderly and very young – U shaped distribution

• Pandemic influenza
  – Rapid, global spread among humans
  – No seasonal preference
  – Comes in waves
  – Total duration a year or more
  – Millions of deaths
Impact

- Attack rate - 25%-50%
- Sickness rate 4%-12%
  - Normal flu is 5-10%
- Absenteeism
  - 25%-35% for 5-8 days over a 3 month period
- Difficult to impossible to travel
- Disruptions and shortages of fuel, food stuffs, health care
Concerns about H5N1

• Highly pathogenic strain that has persisted in the bird population despite culling of millions of domestic and wild birds.
• New role of migratory birds as an additional, significant source of international infection during 2005
• Crossed species infecting 42 animal species beyond birds including humans
• Limited human-to-human transmission has occurred
Similarities to 1918

- High mortality rate
  - Appears to have W shaped mortality curve
- Has the same protein tag
  - NS1 protein found in H1N1 and H5N1 only ones alike out of 169 viruses
  - Increased level of tumor necrosis factor alpha assoc with tissue destruction
  - Cascade leading to cytokine storm ->ARD
Clinical Features

- Aggressive clinical course with concentration in previously healthy children and young adults
- Current features
  - Virus can survive in environment 6-35 day
    - droplet infection
    - depending on temperature
  - Incubation period in humans ranges from 2-17 days
    - 7 day range current WHO standard for observation
Clinical Features (con’t)

- High fever, body aches, malaise
- Diarrhea, vomiting and abdominal pain in some cases
- Respiratory distress within 4-13 days of onset
  - Pneumonia consistent feature in severe cases
- Multi-organ failure
Treatment

• Oseltamivir and Zanavir
  – Prior to outbreak in Turkey, most patients treated late in disease
  – Early detection with treatment is stressed
  – Recommendations on optimum dosing and duration of treatment continue
  – Expensive, production capacity limited

• Antibiotics
  – Not effective in treating pneumonia
Vaccine

- Clinical trials ongoing
- Adjuvant that allows for effective delivery and adequate immune response using smaller doses of vaccine developed
- New technologies for vaccine development continue to be explored
- Will not be available at the start of pandemic and there will not be sufficient amounts to vaccinate everyone
Goal of Public Health: Slow down spread

- Isolation of the sick
- Quarantine of the exposed
- Protective sequestration
  - Isolating a community before illness enters
- Social Distancing
  - Actions taken to discourage close social contact between individuals
- Public education
  - Accurate, clear
  - Consistent with those being given by other public health authorities
What is the role of the Student Health Service?

• To be knowledgeable about pandemic planning guidelines and recommendations.
• To be an active participant in the campus-wide planning process.
• To develop a detailed plan for Student Health operations.
Role con’t

• To identify and establish contacts in the local health care community including hospitals, local health departments, emergency response personnel.

• To provide sound medical and public health information to the incident commander, key decision makers and the campus community.
Challenges to Planning

• Requires multi-faceted, multi-departmental effort over time
• Deficits in knowledge
  – No case definition
  – Gaps in our understanding of viruses
  – Gaps in our understanding of which strategies are most effective
Challenges to Planning

• Considering the what ifs
  – we can’t send all students home?
  – we have students who are ill and the local health systems are overwhelmed?
  – we must work with a reduced staff?

• Allocation of resources
  – Stockpile goods? How much?
  – Questions of ethical nature
Planning in the Present

- Based on current knowledge and understanding
- Inclusive, collaborative
- Plans must be flexible, adaptable, resilient
- Plans must be tailored to the particular type of institution
- Plans must be tested and rehearsed
Getting Started

• Who is responsible for emergency preparedness on your campus?
• Does your school have an emergency response plan/template?
• Can it be adapted for pandemic planning?
• Who do you engage in the conversation on your campus to get pandemic planning on the table?
Getting Started con’t

• Identify key members of the pandemic planning committee.
  – Depth charting
• Identify essential functions and personnel.
  – Depth charting
• Identify appropriate channels of communication and chain of command.
• Identify the role of student health services.
Pandemic Planning Committee

Members

- Executive management (President, Provost, Chancellor or designees)
- Student Health
- Public Safety
- Environmental Health & Safety
- Public Affairs
- Government Relations
- Facilities Management
- Student Affairs (residence life)
- International Student Services
- Housing
- Dining
- Human Resources
- Risk Management
- Telecommunications
- Information Technology
- Operations and Finance
Determine triggers for Moving Plans to Action

- Short window for critical decision making.
- Reducing the number of students on campus may be best strategy.
  - Resources/expectations for care/support
- Once closed…when do you reopen?
  - 8-12 weeks to avoid resurgence of illness
  - Define closing – no classes? No research? Lock down of all buildings?
Levels of Emergency Response

• Level One
  – Pre-event planning to first case of human-to-human transmission

• Level Two
  – Suspected/confirmed cases of sustained human-to-human transmission anywhere in the world

• Level Three
  – Suspected/confirmed cases in the United States
Key Considerations for Student Health Services

• Health Service Staff education and preparation
  – Engage staff in pandemic planning and provide exercises and drills to rehearse plan
  – Provide regular updates for staff on the latest developments
  – Vaccinations
  – Fit testing for N95s
  – inservices on PPE
  – Encourage staff to make personal emergency plans
  – Identify resources for food/on campus shelter
Key Considerations for Student Health Services

- Supplies/equipment/services
  - Compile a list
  - Identify vendors/storage
  - Cost estimate for stockpiling/storage
  - Negative pressure rooms
  - Cleaning services, waste removal
Key Considerations for Student Health Services

- **Clinical Issues**
  - Consult with HR regarding use of volunteers
    - List of duties, training plan, telephone triage protocols
  - Plans for setting up an infirmary – staffing, location?
  - Protocol for monitoring cases in quarantine
  - Triage and treatment protocols
  - Care of the deceased – morgue/notification of family
  - Plans for mass immunization clinics
  - Clinic signage/voice messages
Communications

• Internal
  - Whose in charge?
  - Establish a central reporting plan for monitoring prevalence of illness, absenteeism, # in isolation and quarantine
    • HR, Campus Police, Residence Life
  - Identify all possible means of communicating to various audiences
    • Communication and technology departments
    • Communication capabilities, limitations, testing platforms
Communications con’t

- Provide information to campus community on status of planning, personal emergency preparedness, handwashing
  - Communicate early and often
  - Collaborate with media relations
  - Craft messages in advance
  - Ensure materials are easy to understand and culturally appropriate
Communications con’t

• External
  – Establish and maintain communications with local public health authorities, emergency preparedness groups, hospital systems
    • Identify key contacts
    • Participate in community planning/drills
  – Benchmark activities/planning of other like colleges and universities
Counseling Services

- Anticipate high need
- 24/7 counseling for staff, faculty, students
- Protocols for providing service via telephone or internet
Housing Services

- Identify rooms and buildings that could be used for quarantine, isolation and residence for students who cannot go home
- Develop a procedure for closure and evacuation of residence halls
- Procedures for notifying and relocating students
- Housekeeping staff trained in personal protection and proper cleaning
- Communication protocols between Housing and Residence Life
Dining

• Stockpiling and storing non-perishable food stuffs and fluids.
• Procedures for delivery to residential areas.
• Volunteer staff
Campus Security

- Procedures for securing buildings, protecting stored supplies
- Communication with local police, fire and emergency response.
- Protocols for transporting sick students.
- Fit for N95s
- Equip cars with disinfectants, gloves etc.
International students and Study Abroad

• Plans for communicating with students abroad.
• Guidelines for closure of study abroad programs.
• Procedures for monitoring student travel.
• Procedures for communicating to international students about travel restrictions and re-entry.
Physical Plant

- Contingency plans in case of fuel, water and energy shortages
  - Emergency generators?
- Building ventilations systems
Human Resources

- Identify essential personnel and depth charting.
- Call-off guidelines and vacation/sick leave guidelines.
- Return to work guidelines.
- Work-at-home guidelines.
- Recruitment of volunteers.
- Communications for supervisors and campus work force.
Academic Affairs

- Policies for student absenteeism due to illness/quarantine.
- Alternative procedures for completing course work.
Research

- Can some research continue?
- Plan for maintaining security in labs.
- Plan for care of lab animals.
- Plan for specimen storage and managing experiments in progress.
Business and Finance

- Procedures for rapid procurement of goods.
- Continuation of payroll functions.
- Financing and emergency funding issues.
Admissions/Financial Aid

- Plan for reviewing applications and recruiting in absence of face-to-face interviews or campus visits.

- Contingency plans for dealing with financial aid, withdrawal from school, other factors related to tuition and registration.
Recovery

• Criteria for calling an end to the crisis and resuming campus business.
• Communication plan for advising students, staff, faculty of plan to resume business.
• Timeline for restorations of operations.
• Plan to debrief.
• Structure for evaluating the effectiveness of the emergency response.
Carnegie Mellon Experience

- Started in October
- Used template for emergency response
- Dealt with health and safety first
- Currently on Version #12
- Had one tabletop with executive decision makers in March
- Currently educating various departments and constituencies.
- Working on business and academic continuity issues.
Carnegie Mellon Experience

• Communication infrastructure is inadequate to deal with pandemic
• Questions for human resources
  – Compensation for essential personnel
  – Call off policies and procedures
  – Use of volunteers
• Little to no direction from local authorities at this time.
ACHA Guidelines

• Posted on ACHA website for 14 day comment period.
• Resources and B.Board are in place for questions/suggestions.
Q & A