

The Avian Overture

How pandemic training builds
public health and safety
partnerships



Cambridge Public Health Department
Cambridge Health Alliance

BIRD FLU...



ME??
I FEEL
GREAT!
HONESTLY!
JUST FINE.
NOT EVEN A
HINT OF A
SNIFFLE...
NEVER BEEN
BETTER...

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Agenda for the Day



- Introductions
- What is a tabletop exercise?
- Why avian flu?
- The exercise
- Debrief
- Break
- Tools for organizing your scaleable exercise



Introductions

Mary Clark, JD, MPH
Kerry Dunnell, MSW

Cambridge Public Health Department
Advanced Practice Center for
Emergency Preparedness



Cambridge Public Health Department
Cambridge Health Alliance

Who is the CPHD APC?

- Host agency for Massachusetts public health [Region 4b](#) (27 communities surrounding Boston)
- Public health emergency planning for [City of Cambridge, MA](#)
- Emergency planning & training for the [Cambridge Health Alliance](#)

Introduction of Participants



- Name & Organization
- Have you participated in a tabletop in the past?
- What do you hope to take home with you?

What is a Tabletop?



- Scenario-based discussion to test plans for potential emergencies and disasters
- Lower stress, no fault environment
- Do not measure performance
- Lessons learned inform further planning



Pandemic Primer

What is Flu Pandemic?

Normal vs. Pandemic

- In a “normal” flu season, 36,000 persons in U.S. die; 200,000 hospitalized
- History has recorded roughly three pandemics per century
- 1918 “Spanish Influenza”
 - 500,000 deaths in the U.S.
 - 50 Million deaths worldwide

Flu Symptoms

- Dry Cough
- Fever
- Headache
- Tender lymph nodes
- Weakness/Tiredness
- Sore Throat

Pandemic concerns

- Widespread illness
- Death
- Social disruption/panic

What is Avian Influenza (H5N1)?

H5N1

- Infected large number of fowl throughout Asia & into Eastern Europe ([progression](#)) ([migration](#))
- First human case 1997
- Sporadic transmission from bird to human
- Limited probable human-to-human transmission
- Sustained transmission leads to pandemic

Avian Flu Symptoms

- Chills & fever
- Malaise
- Substernal burning
- Non-productive cough
- Diarrhea
- Lower respiratory distress

2005 Confirmed Human Cases (as reported to WHO as of 23 December 2005)

- Cases 92
- Deaths 38
- Death rate 41%

What is the treatment for Avian Flu?

Oseltamivir and zanamivir (Tamiflu)

- Course of treatment 10 doses over 5 days
- Reports of resistance to Oseltamivir
- Production slow
- Current stockpile small (roughly 2.3 million courses)

Amantadine and rimantadine

- Ineffective with current virus
- *Might* be useful if virus reassorts or “shifts”

Pandemic Vaccine

- Once pandemic virus composition is known, vaccine production would take greater than four months

The Tabletop Scenario

Developed in partnership with:



<http://www.hsph.harvard.edu/>

Tabletop Ground Rules



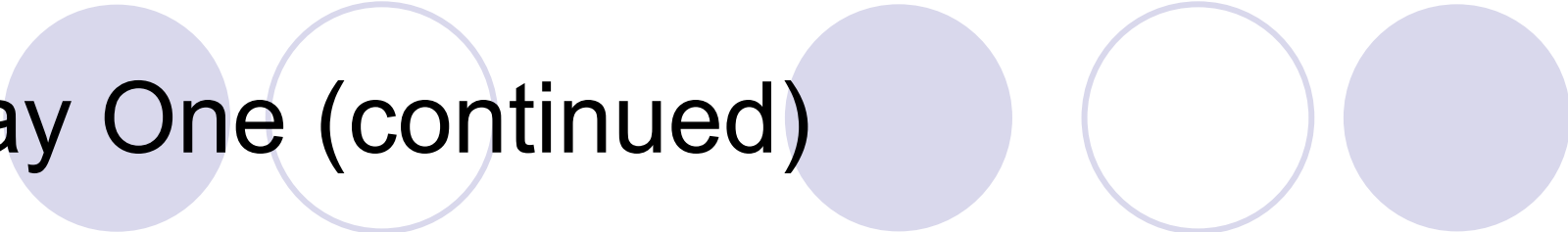
- Always stress that “This is a drill”
- Participate; simulate your role
- Limit response to scenario to actual resources & current response plan(s)
- No right or wrong answers
- Be respectful
- Facilitators guide discussion and observe response

Day One

- At 9 pm, a 47 year-old man who lives in your town presents to the emergency department (ED) in the hospital closest to his house with fevers, chills, malaise, cough and shortness of breath.
- The patient is a businessman who returned from Cambodia 1 day ago where he had been on a business trip with his wife.



Day One (continued)



- Since returning from his trip, he has spent time with his family and at the office, and he is just now coming from an awards dinner attended by 200 of his colleagues and business associates.
- The patient was evaluated in the ED, was found to have pneumonia on chest x-ray, and was subsequently intubated and placed on a ventilator for severe respiratory distress.
- Just as the patient is moved from the ED to the ICU, his wife begins to complain of similar, milder symptoms and registers as a patient in the ED.
- The physician in the ED, concerned by this history, decides he should report this case to the local Department of Public Health

Day One Discussion



- *How would a physician reach local public health officials during regular business hours?*
- *How would a physician reach local public health officials during off hours?*
- *Do your local physicians really know this information?*
- *What would you do upon receiving this information?*

Day Two



- The local television station has just reported a possible case of avian flu in the United States in your town.
- The local public health office, mayor's office, police and fire departments receive calls from the media, local clinics and health care providers.

Day Two Discussion



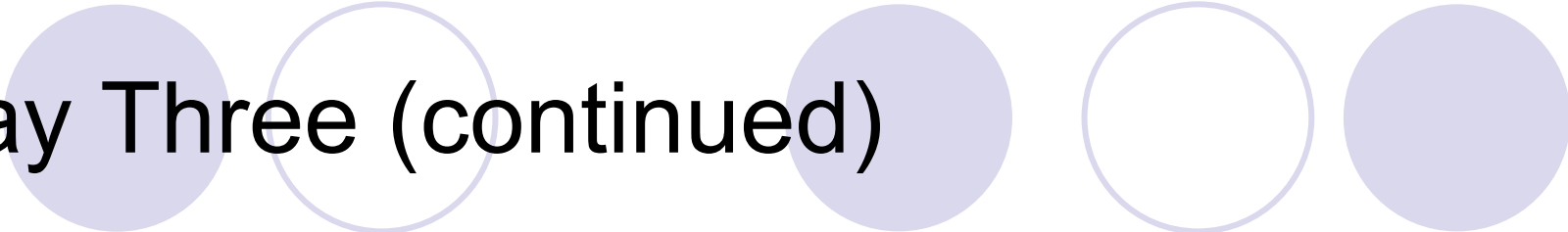
- *Who speaks to the media?*
- *Do you activate your emergency plan?*
- *How do you activate your plan?*
- *Which staffs are called in?*
- *What state or national resources are requested?*
- *Who speaks to local health care providers?*
- *How do you reach your local health care providers?*

Day Three

- Four more patients present to the hospital with severe flu-like illnesses.
- The initial index patient has now died and his wife is in the ICU.
- Three of the four new patients were on the same flight as the index patient and live in the surrounding area.



Day Three (continued)



- The media reports that the index patient was on a recent airplane flight and also attended a large public gathering.
- Local residents are flooding their physicians' phone lines and offices with concern about possible exposure.
- Many of these PCPs are calling the local public health department and the state health department.
- The CDC calls to say it will be sending representatives.

Day Three Discussion



- *Who will track down contacts of the affected patients?*
- *How do you get additional staff if required?*
- *How do you decide whether to quarantine contacts?*
- *Who will interact with the state DPH and the CDC?*
- *Who has jurisdictional authority?*
- *How should you protect health care workers and first responders in your community?*
- *Can you set up a phone hotline for concerned citizens to call?*
- *How will you rapidly help public safety find appropriate PPE, and train and fit-test them in its use?*

Day Four



- The first two patients have now been confirmed to have Avian Influenza Type A H5.
- Two more victims have died and the local hospital has admitted 18 more patients with the clinical picture of severe influenza.
- 2 healthcare providers in the hospital who cared for the index patient now show clinical signs of influenza.

Day Four (Continued)



- Other hospitals in the state are also seeing patients with a similar clinical picture.
- Sporadic cases of severe influenza have been reported in other states
- Many similar cases have been reported in East Asia
- The ICUs in all local hospitals are over capacity and cannot accept any more patients.
- The mortality of patients affected with avian flu in East Asia appears to be 75-80%.
- The CDC now recommends oseltamivir phosphate 75mg once a day for 7 days for all contacts of suspected cases.

Day Four (Continued)



- The CDC recommends treatment of all affected persons with oseltamivir plus amantidine or rimantidine as soon as the diagnosis of avian influenza is suspected.
- The CDC also recommends that health care staff wear a Powered Air-Purifying Respirator (PAPR) when caring for affected patients.
- Many hospitals and EMS providers now complain of a lack of sufficient PAPRs and cartridges for their staff.

Day Four Discussion



- What information do you share with the public at this point?
- *How will you stay current with state and federal communications and guidelines regarding the outbreak?*
- Given a potential shortage in medications, how will you determine distribution of the medication in your community?
- *Where will your distribution sites be?*
- *Who will staff your distribution sites?*
- *Who will provide for security of your distribution sites?*

Day Six

- There are now 58 suspected cases of avian flu admitted to hospitals in the nation, 32 of which are from your town.
- 20 people have died so far.
- Local and hospital pharmacy stocks are empty of oseltamivir, amantidine and ramantidine.

- All local hospitals are full and several hospitals are reporting an increase in sick calls.
- Several people who are quarantined as contacts of influenza patients are getting ill at home and one ambulance crew has refused to transport them to the hospital.
- Some of them are trying to leave their houses in order to seek medical care. Others are trying to leave their houses for food and water or to go to their jobs.

Day Six (Continued)



- EMS is overwhelmed between calls for respiratory illnesses and requests to transfer patients from local hospitals to other facilities farther away.
- Only a limited number of private ambulances are available to assist with transfers.
- Two local pharmacies have witnessed break-ins, presumably by persons looking for oseltamivir.
- Local businesses are suffering from a lack of workers and a lack of customers.
- The local mortuaries are refusing to accept the bodies of influenza victims.
- The local DPH remains flooded with calls from citizens and doctors about how to get medications.

Day Six (Discussion)

- *How will you provide food and water to quarantined persons?*
- *How would you reassure quarantined persons about wages lost?*
- *How can you help your local hospital, MD offices and EMS providers with surge capacity?*
- *Pharmacy stocks of oseltamivir, amantidine, and rimantidine are limited. How will you access more medicine?*
- *Does the SNS include oseltamivir, amantidine, and/or rimanditine? How would you find out? How would you request the medications?*
- *How would you request activation of the Strategic National Stockpile (SNS)?*
- *What will hospitals do with their excess of infected corpses?*
- *What do you say to the media?*

Day Ten



- The outbreak has been confirmed as a novel strain of avian influenza H5N1 with genetic components of human influenza. It clearly appears to be transmissible from person-to-person. There are almost one thousand cases nationally. Your town remains severely affected. 13 local hospital workers have become infected with avian influenza and 6 have died. Area hospitals continue to report much higher than normal sick calls.

Day Thirty



- Avian influenza has now become a pandemic in the United States and East Asia with more than 7,000 people infected and nearly 5,400 dead. Public health officials are struggling to implement effective control measures and the health care system remains overwhelmed.



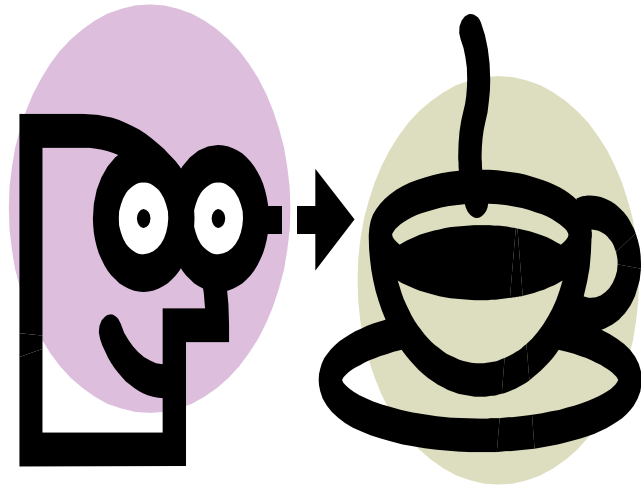
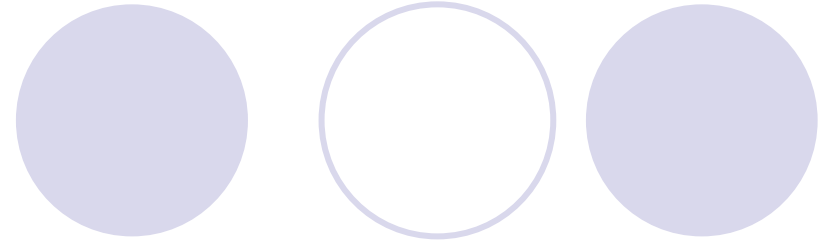
Scenario Debrief



Tabletop Debrief Discussion

- What is the purpose of the debrief?
- Who should be a part of this partnership?
- How can trainings/drills be used to demonstrate the need for partnership?
- How can your community develop a multi-discipline (and perhaps multi-jurisdiction) drill?

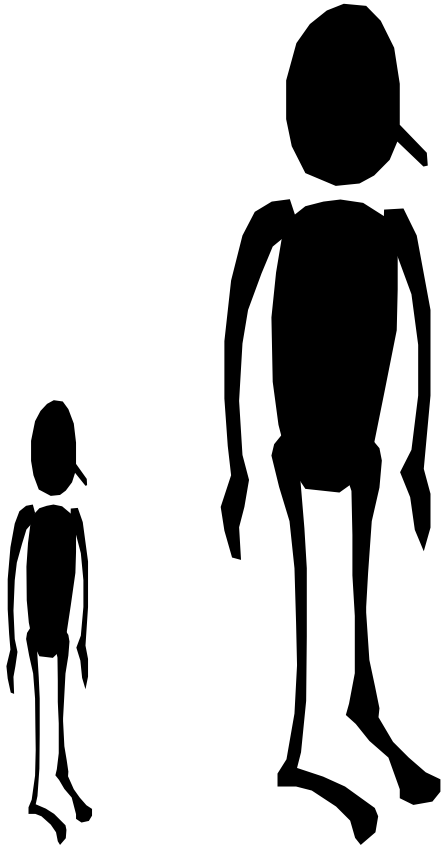
15 Minute Break



The title is centered and surrounded by six light purple circles. Three are solid and three are hollow, arranged in two rows of three. The top row has a hollow circle on the left, a solid circle in the middle, and a solid circle on the right. The bottom row has a solid circle on the left, a solid circle in the middle, and a hollow circle on the right.

Organizing Your Tabletop

Scalability of Scenario/Tabletop



CPHD APC has utilized this tabletop to exercise:

- Region 4b Public Health Departments
- Cross jurisdiction public health & safety teams
- Cambridge Health Alliance hospitals' staff
- Multi-discipline municipal teams

Seven Questions



- Why a tabletop?
- Who should attend?
- Who can help you plan?
- How will you get people to come?
- What type of scenario fits organizers and participants' needs?
- Where and when will the event take place?
- How will you know it worked?



WHY

- Exercise requirement
- Knowledge to share
- Knowledge to gain
- Staff training
- Communication questions
- Equipment questions

WHO should attend?



- Local Government
(Mayor, City Manager)
- Police Department
- Fire Department
- Emergency Management
- Public Works Department
- Public Health
- Hospitals
- EMS
- State Agencies
- Local Businesses or Universities



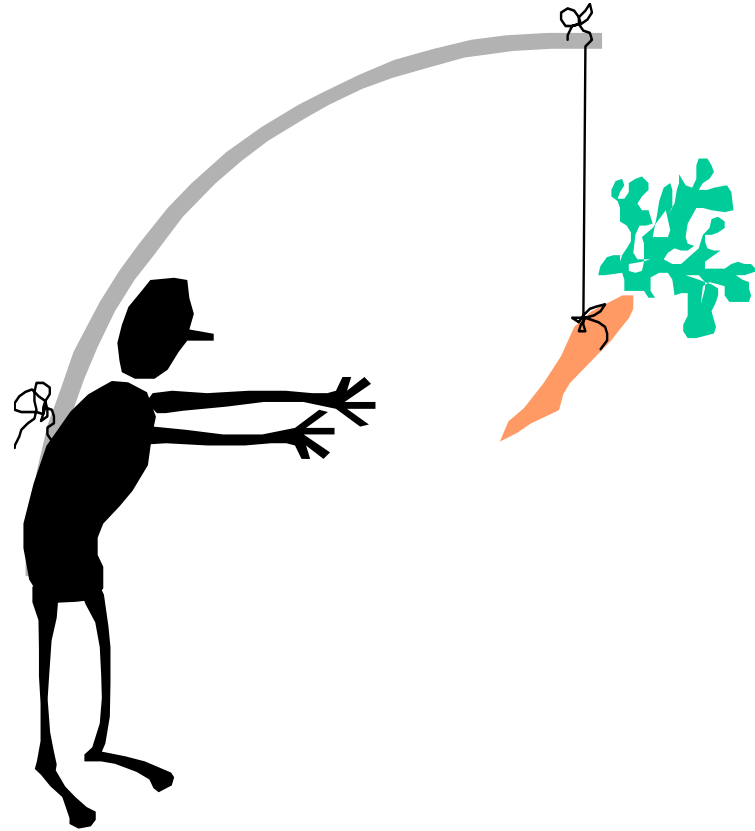
WHO

Reaching out to other disciplines

- Local Emergency Planning Committees
- Buy-in from jurisdiction's chief executive
- Presentation to Public Safety leaders
- Use of current events

HOW

Strategies for bringing
partners to the
tables...

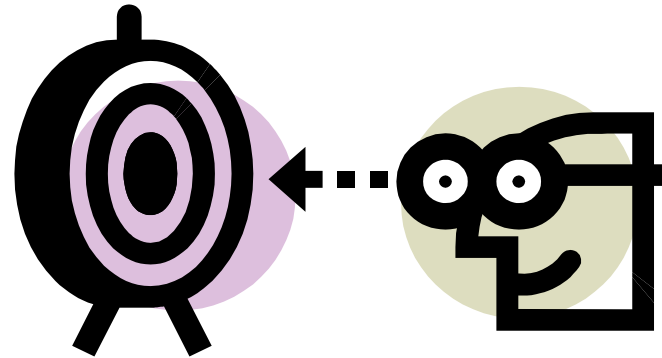




WHAT

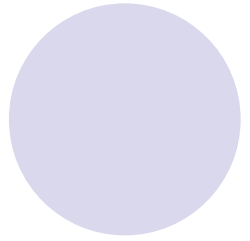
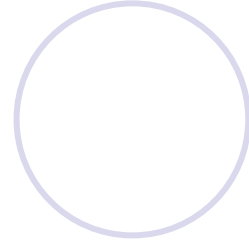
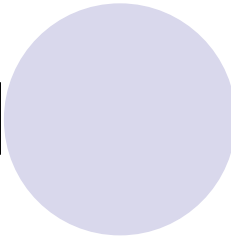
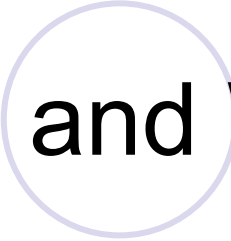
- What scenario will appeal to your participants?
- What scenario meets the needs identified?
- What evaluation methods will you use with this scenario?

Develop Exercise Objectives



- Clearly articulate the purpose of the tabletop
- Spell out objectives for participants in training materials
- Tie evaluation to exercise objectives

WHERE and WHEN



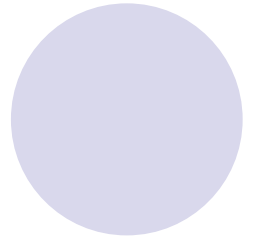
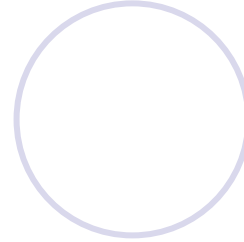
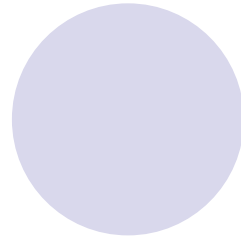
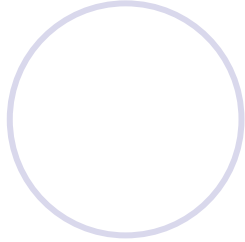
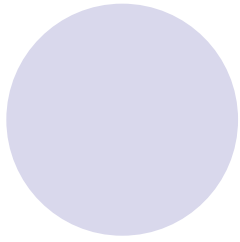
Logistical Considerations



- Number of participants
- Location
- Length of Day
- Pre-tabletop activities
- Evaluation technique
- Staff for the day
 - Facilitators
 - Evaluators
 - Registration
- Registration
- Certificate of Completion

Credits and Special Thanks to:

- Paul Biddinger, MD
Center for Public Health Preparedness, Harvard University
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- Justeen Hyde, PhD
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- Garrett Simonsen, MS
Cambridge Public Health Department
- Andrew Ellingson, MPH
Cambridge Public Health Department



Mary Clark, mclark@challiance.org

Kerry Dunnell, kdunnell@challiance.org

Paul Biddinger, MD, pbiddinger@partners.org

Rebecca Orfaly Cadigan, rcadigan@hsph.harvard.edu

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Cambridge, Massachusetts

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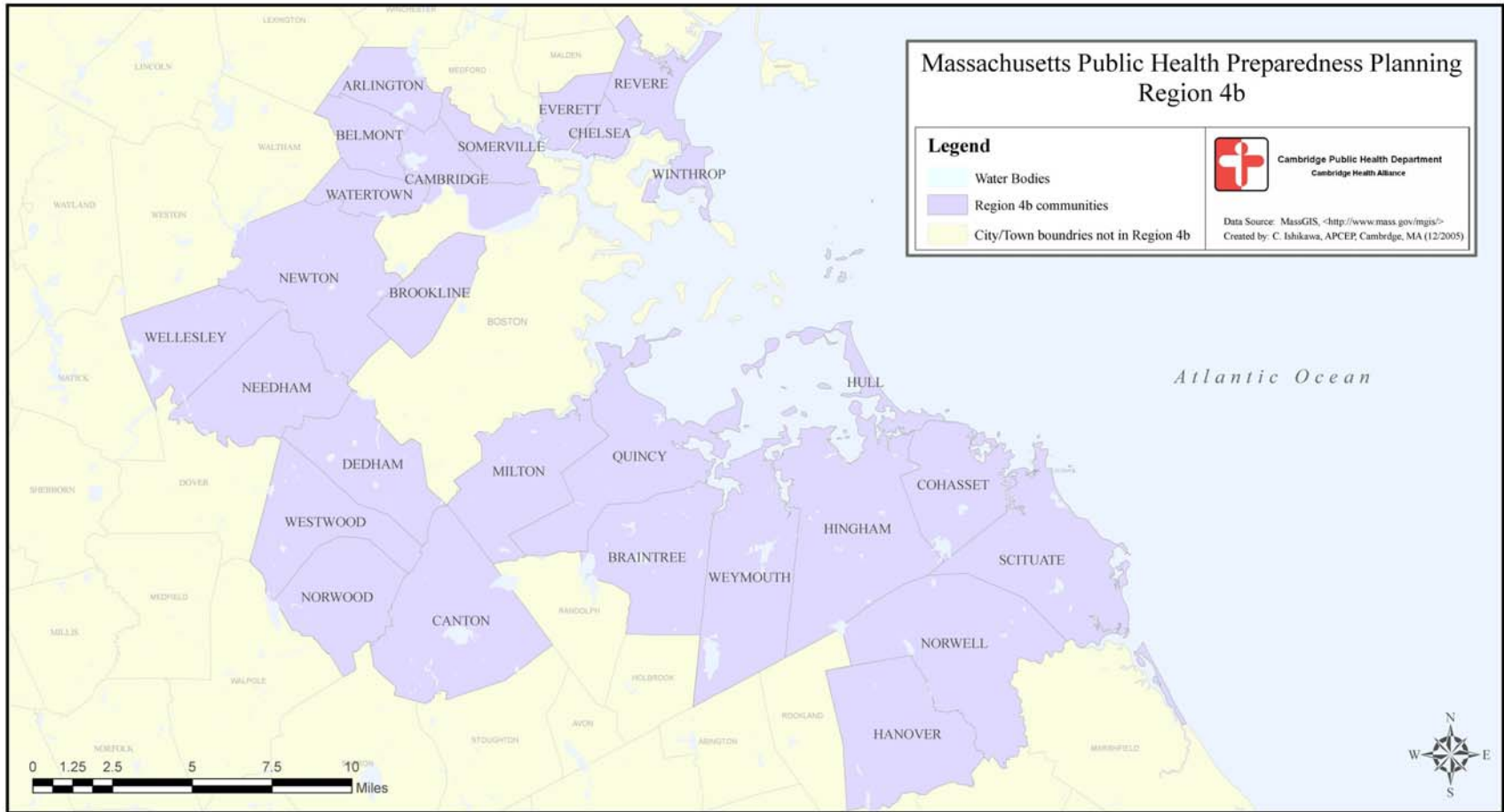
- Residential Population (101,000)
- Public Health staff of 70 persons
- Daytime population grows by 200,000+
- Long standing Local Emergency Planning Committee inclusive of Public Health
- Home to Harvard & MIT
- Center for Biotech Research & Development

www.cambridgema.gov

www.cambridgepublichealth.org

Public Health Region 4b

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Cambridge Health Alliance

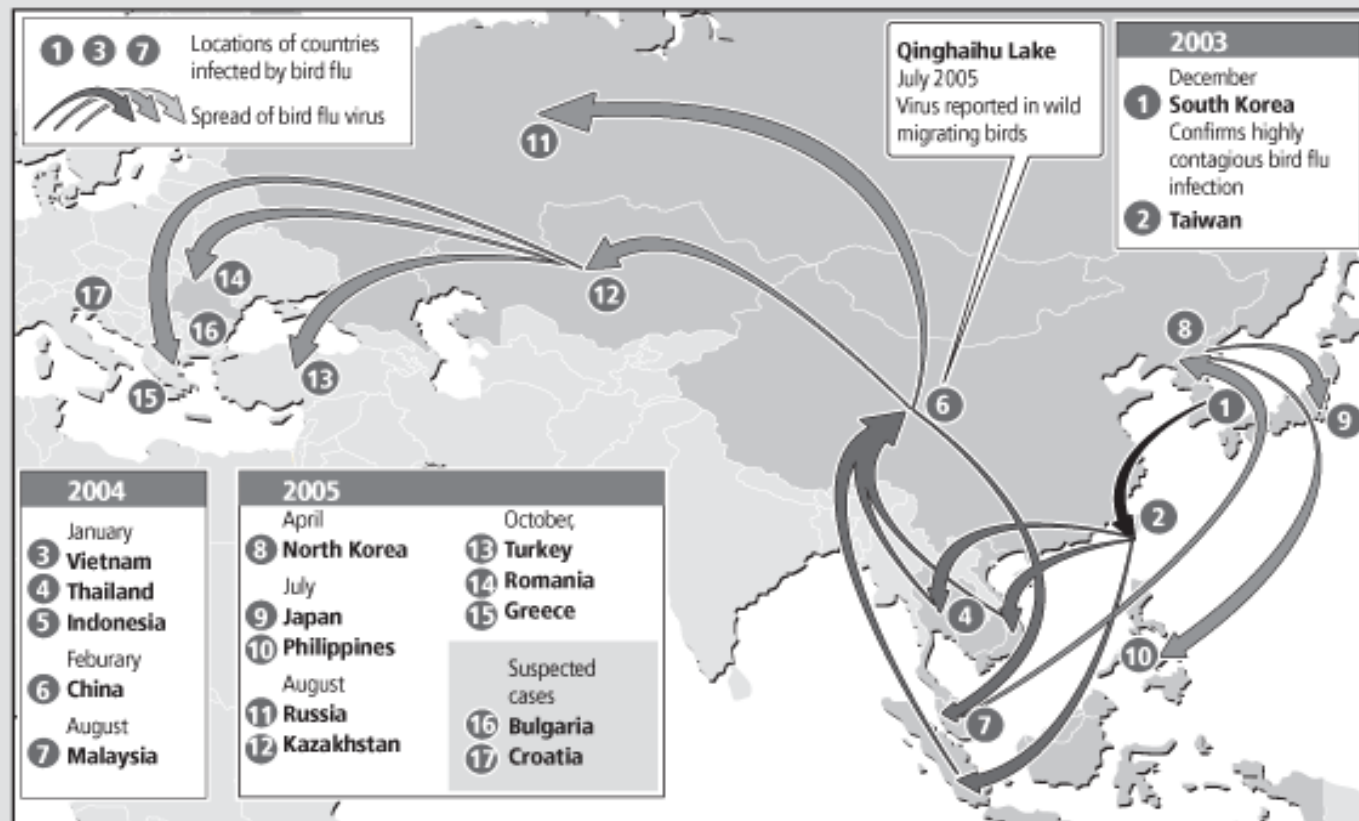
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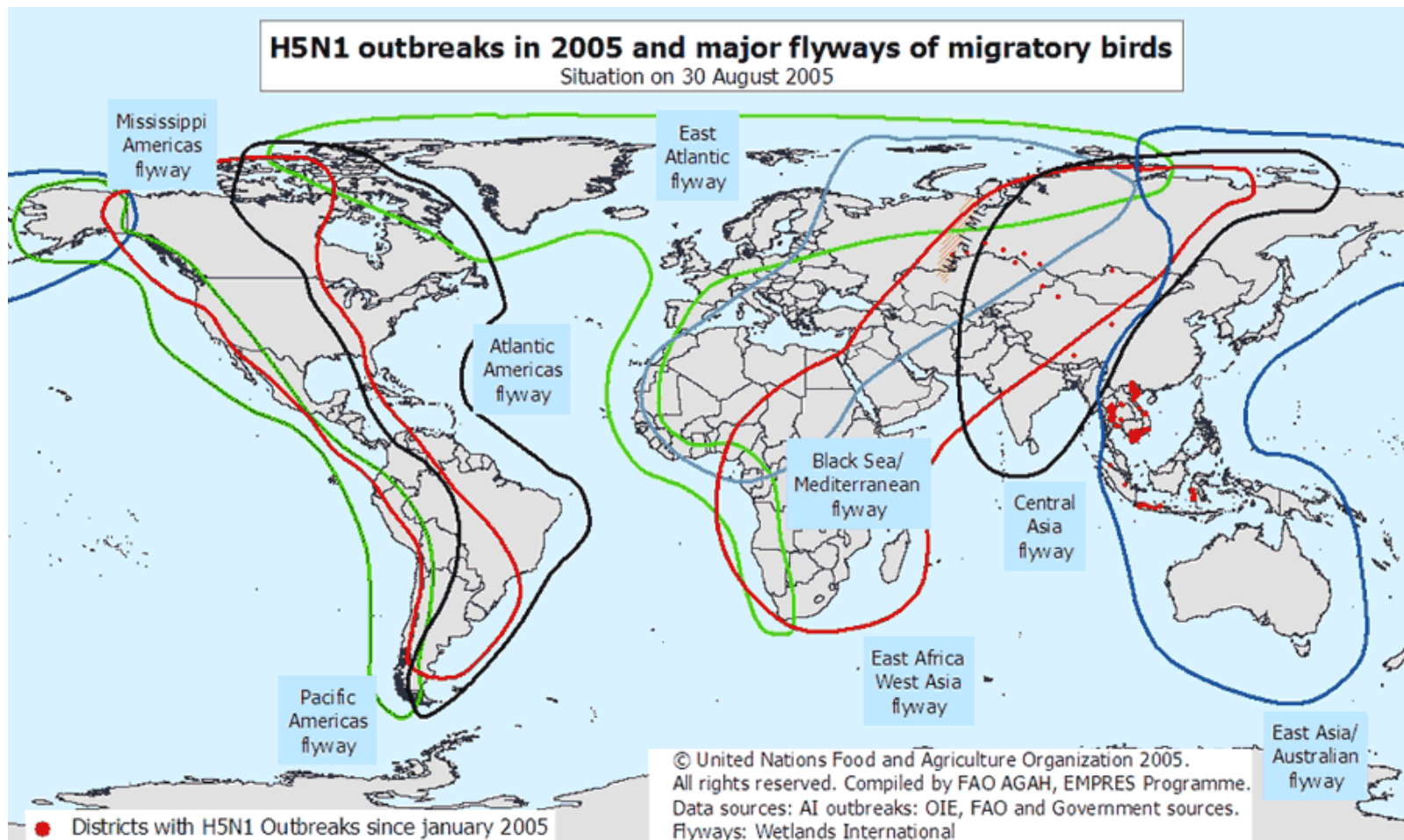
- 3 Hospitals (Cambridge, Somerville, Everett—all three communities are members of Region 4b)
- 20 Primary Care Centers in 4 communities
- Cambridge Public Health Department
- Network Health Plan
- Harvard Medical School Teaching Affiliate

www.challiance.org

Progression of the bird flu virus

The H5N1 strain of avian influenza has been detected in Turkey, Romania and Greece
The virus has killed more than 60 people in Asia since 2003 and forced the slaughter of millions of birds





Source: United Nations Food and Agriculture Organization