

Community Mitigation: nH1N1

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Learning Objectives

1 Review modes of transmission for nH1N1

2 Discuss prevention activities for healthcare and community settings that involve a comprehensive approach to infection prevention

Mitigation

The actions involved in the lessening of intensity or severity

President's Council of Advisors on Science and Technology (PCAST):

4 critical pillars of mitigation include

- **Vaccines**
- **Anti-viral drugs**
- **Medical care**
- **Non-medical interventions**

H1N1 influenza and seasonal influenza are transmitted primarily in the same ways

A. True

B. False

Modes of Infection Transmission

Seasonal Influenza

Airborne

- Small particles
- Able to stay afloat in air currents
- Directly inhaled
- Projected when coughing, talking, sneezing

Examples include:
Tuberculosis
Respiratory illnesses
with high public health
impact*

Droplet

- Larger particles
- Drop quickly out of the air
- Projected directly into face, eyes, nose and mouth of others

Examples include:
Seasonal flu
Bacterial meningitis

Contact

- Infectious particles directly contact surfaces, items, and hands
- Able to move from surfaces primarily via hands

Examples include:
Seasonal flu
MRSA
Diarrheal illnesses

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Modes of Infection Transmission

Pandemic Influenza nH1N1

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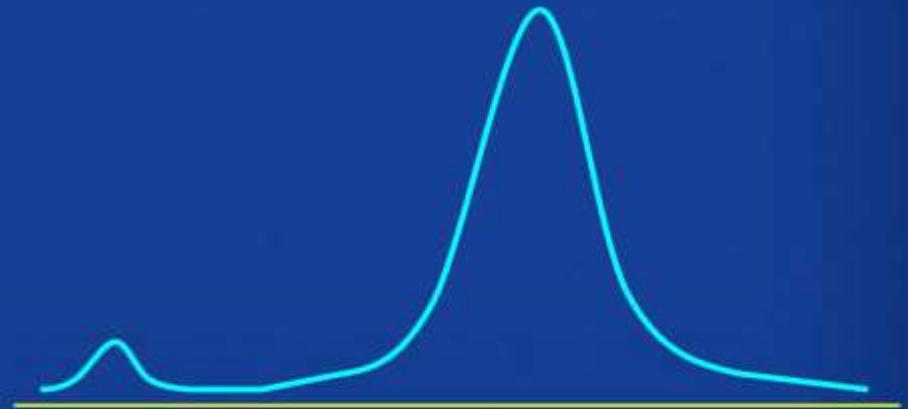
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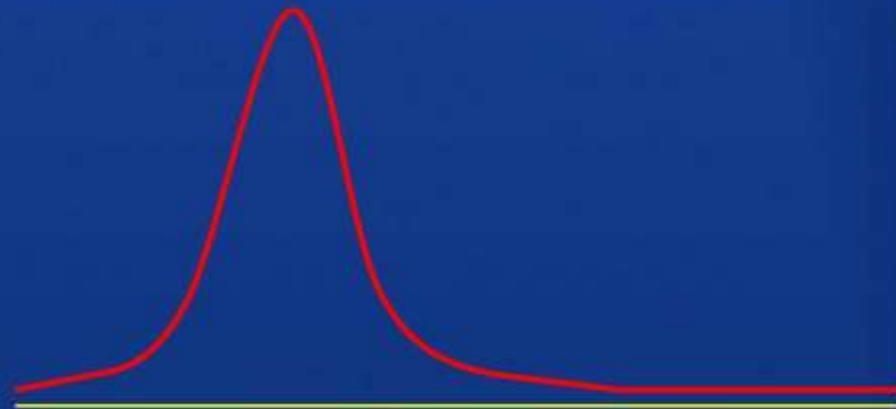
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What's Next

- Disease persisted through summer in US, expected surge in fall
- Southern Hemisphere being monitored for subtypes, spread, and severity



Northern Hemisphere



Southern Hemisphere

nH1N1 Pandemic

Confronted by novel pathogen with high public health impact

Rapidly changing and sometimes conflicting guidance regarding Personal Protective Equipment and patient placement

Interruption in PPE supply pipeline

Deployment of Strategic National Stockpile

Attack demographics differ from expected

Recognition of disease among HCW

Masks provide the most important protective element against transmission of H1N1

A. True

B. False

Respiratory Protection

Estimates for 120 day pandemic:

**6.2 billion respirators
26 billion masks**

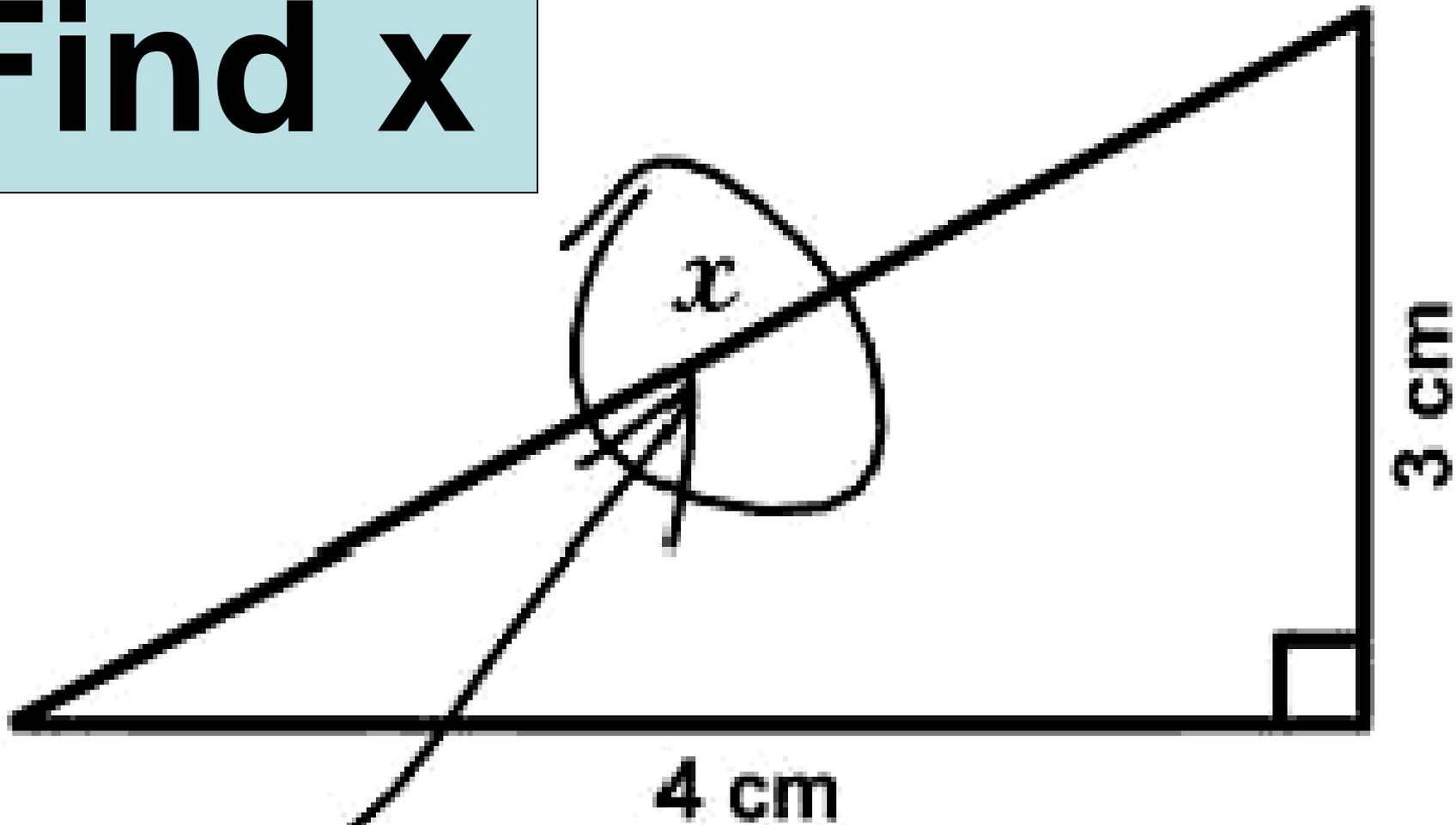
Current manufacturing capacity:

**125 million N95/month (49.6 months)
300 million masks/month (86.6 months)**

Minimal production in the US

**Respiratory protection is only a single element
of an infection prevention program**

Find x



Here it is

Comprehensive Infection Prevention

Early recognition of illness

Containment

Hand Hygiene

Respiratory hygiene/cough etiquette

Seasonal influenza and H1N1 vaccines

Social distancing

Environmental hygiene

Appropriate use of testing and antimicrobials

Comprehensive Infection Prevention

Early recognition of illness

Monitoring of illness

Surveillance: Schools, physician office, correctional facilities, hospitals...

Syndromic vs laboratory surveillance

Engagement of the public

Consistent and accurate messaging

Communication capabilities

Comprehensive Infection Prevention

Containment

Once recognized, have an action plan in place and ensure that you have tested that plan

Hospitals: Rapid triage, patient placement

Universities: Self-isolation

Corrections: Cohorting

Schools: Sick rooms and rapid parent pickup

Evaluate existing capabilities match to your plan

Educate those involved

Comprehensive Infection Prevention

Hand Hygiene

Handwashing and alcohol-based hand rubs

Training

Availability and accessibility

Schools: do sinks work, are dispensers full

Universities: are ABHR dispensers in the ideal locations and has safety been evaluated

Hospitals: were users involved in selection

Educate those involved

Comprehensive Infection Prevention

Respiratory Hygiene/Cough Etiquette

Is there an understanding of what that is?

Training and education

Availability and accessibility of supplies

Schools: tissues, garbage cans. ABHR, masks in sick rooms

Hospitals: supplies in ED, are ill patients rapidly identified and respiratory hygiene implemented

Businesses: shared responsibilities among employees and employers

Is seasonal influenza vaccine important?

- A. Since H1N1 seems to be the primary strain of influenza being seen in the community, seasonal flu vaccine is no longer important
- B. Seasonal influenza vaccine continues to be important as both strains of influenza can be present in the community and seasonal influenza impacts different population groups than H1N1

Comprehensive Infection Prevention

Vaccines

Acceptance

Training of providers

- Not everyone knows how to give an IM injection
- Intranasal administration

Safety and efficacy

Mass immunization PODs and community engagement

Business involvement

Comprehensive Infection Prevention

Social Distancing

What is it and how can it be applied

Application in specific settings:

Schools: Spatial separation, alerts regarding ill family members

Universities: Adding sections to large classes, reconsidering some on-campus social events

Businesses: Off-site work, telecommuting

General public: Extra seats between bus riders, staying “an arm’s length away”

Comprehensive Infection Prevention

Environmental Hygiene

Cleanliness vs sterility

Appropriate selection of germicides

Appropriate use of germicides

High touch surfaces and items

Application specific to the setting:

Schools: cleaning of desks, computers, handles

**Businesses: desks, common areas, computers,
phones**

Comprehensive Infection Prevention

Appropriate Testing and Antimicrobials

When to test and when not to test

**Specimen collection, handling, processing,
transport**

Appropriate selection and use of antivirals

Appropriate selection and use of antibiotics

Patient and general public education

Internet availability of antivirals

Competent Workforce

Understands how infection transmission occurs

Able to apply knowledge and prevent transmission

Recognizes others also involved in prevention

Able to apply knowledge in other settings

Applies critical thinking skills to problem solve

Collaborates with others in prevention activities

Your biggest challenge with H1N1 prevention

- A. Applying health directives in my workplace
- B. Convincing people in my workplace that H1N1 is a risk for them
- C. Not knowing how to get started with a plan that will/may work
- D. Identifying the resources needed to implement the plan we have developed

Summary

H1N1 preparedness is not an “I, You or Me” event. This is clearly a “WE” event

Fortunately, infection prevention is not rocket science

Infection prevention does not just happen

Safety of workers, families, communities must be our brightest beacon

***Chance favors the prepared mind*—Louis Pasteur**

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