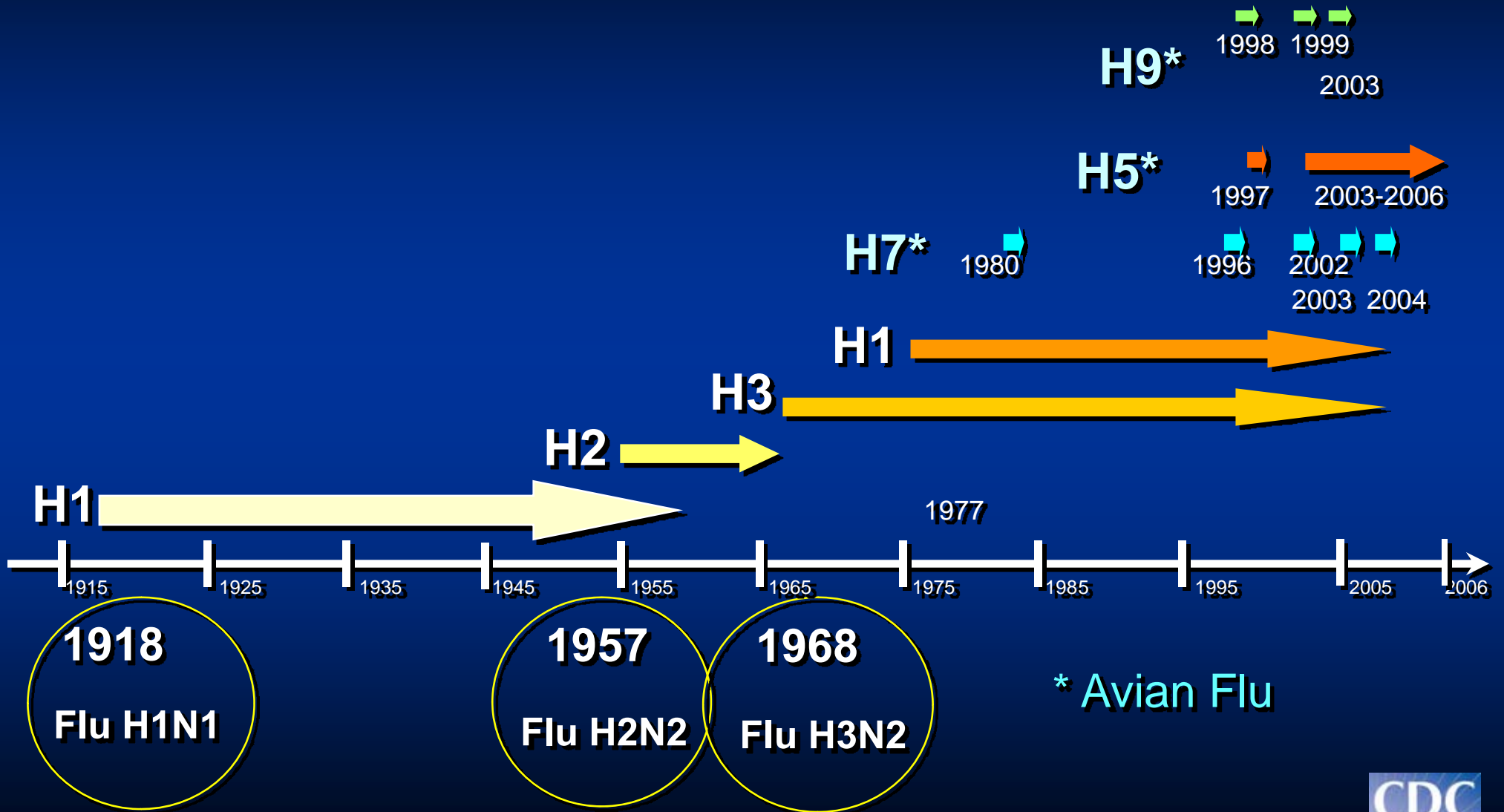


Community Mitigation Guidance: Business Planning for an Influenza Pandemic

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Centers for Disease Control and Prevention

Emergence of Influenza A Viruses in Humans



Potential Tools in Our Toolbox

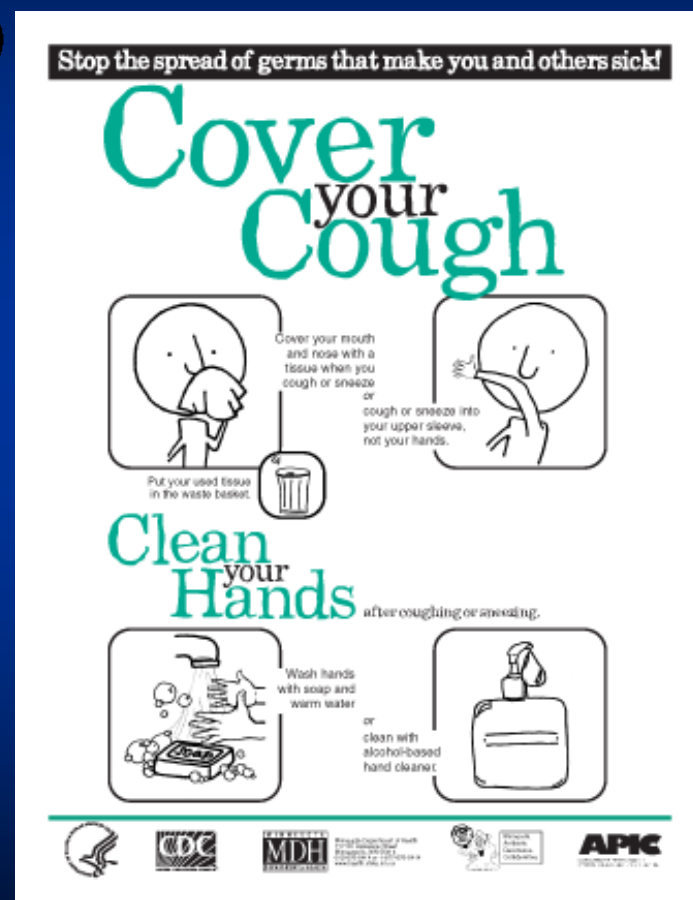


- **Pandemic Vaccine** – will probably be unavailable during the first wave of a pandemic
- The supply of **antiviral** medications is limited
- **Infection control and social distancing measures:**
 - Transmission Interventions (Infection Control)
 - Contact Interventions (Social Distancing)



Infection Control Measures

- Transmission Interventions (Infection Control)
 - Hand hygiene
 - Facemasks
 - Cough etiquette
 - Sick people stay home (isolation)
 - Perhaps stay home if have an ill household member (voluntary home quarantine)
 - Environmental cleaning



The Use of Facemasks and Respirators

- People should consider wearing a **facemask** during an influenza pandemic if they are...
- Sick with the flu and might have close contact with other people (within about 6 feet)
- Living with someone who has the flu and might have close contact with other people
- Well (not sick themselves) but need to be in a crowded place
- People should consider wearing a **N-95 respirator** during an influenza pandemic if they are...
- Well and will be in close contact (within about 6 feet) with people who are known or thought to be sick with pandemic flu
- Taking care of a sick person at home

Social Distancing Measures

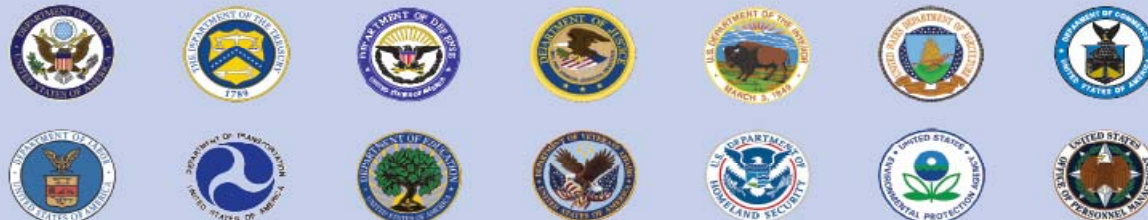
Contact Interventions (Social Distancing)

- Protect children and teens
 - School closure
 - Perhaps keeping children and teens at home
- Cancellation of mass gatherings
- Alternatives to face-to-face contact at work
- Increasing distance between people (>3 feet)
- Decreasing number of contacts



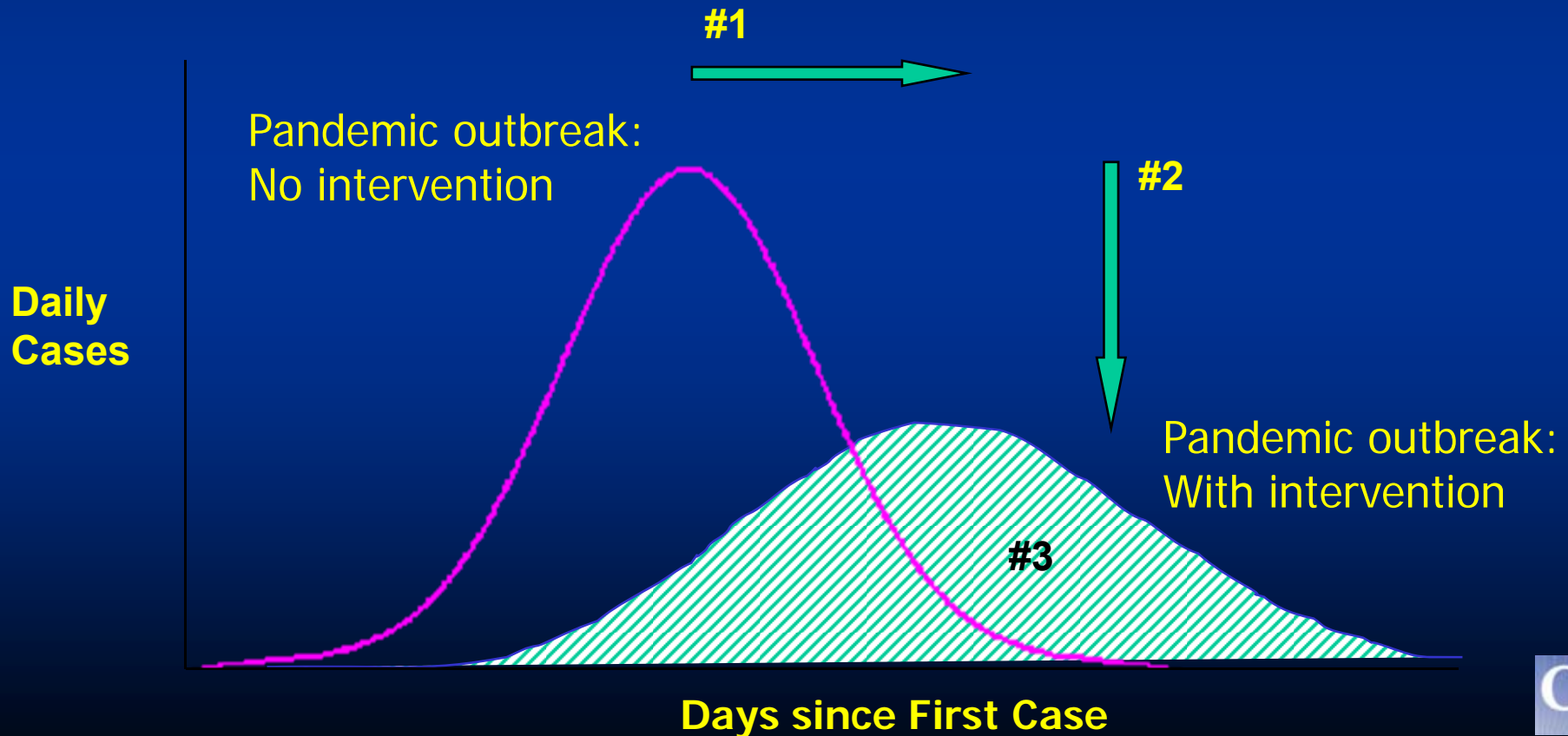
Interim Pre-pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States—

Early, Targeted, Layered Use of Nonpharmaceutical Interventions



Community-Based Interventions

1. Delay outbreak peak
2. Decompress peak burden on hospitals / infrastructure
3. Diminish overall cases and health impacts



Early, Targeted & Layered Community Mitigation Strategies

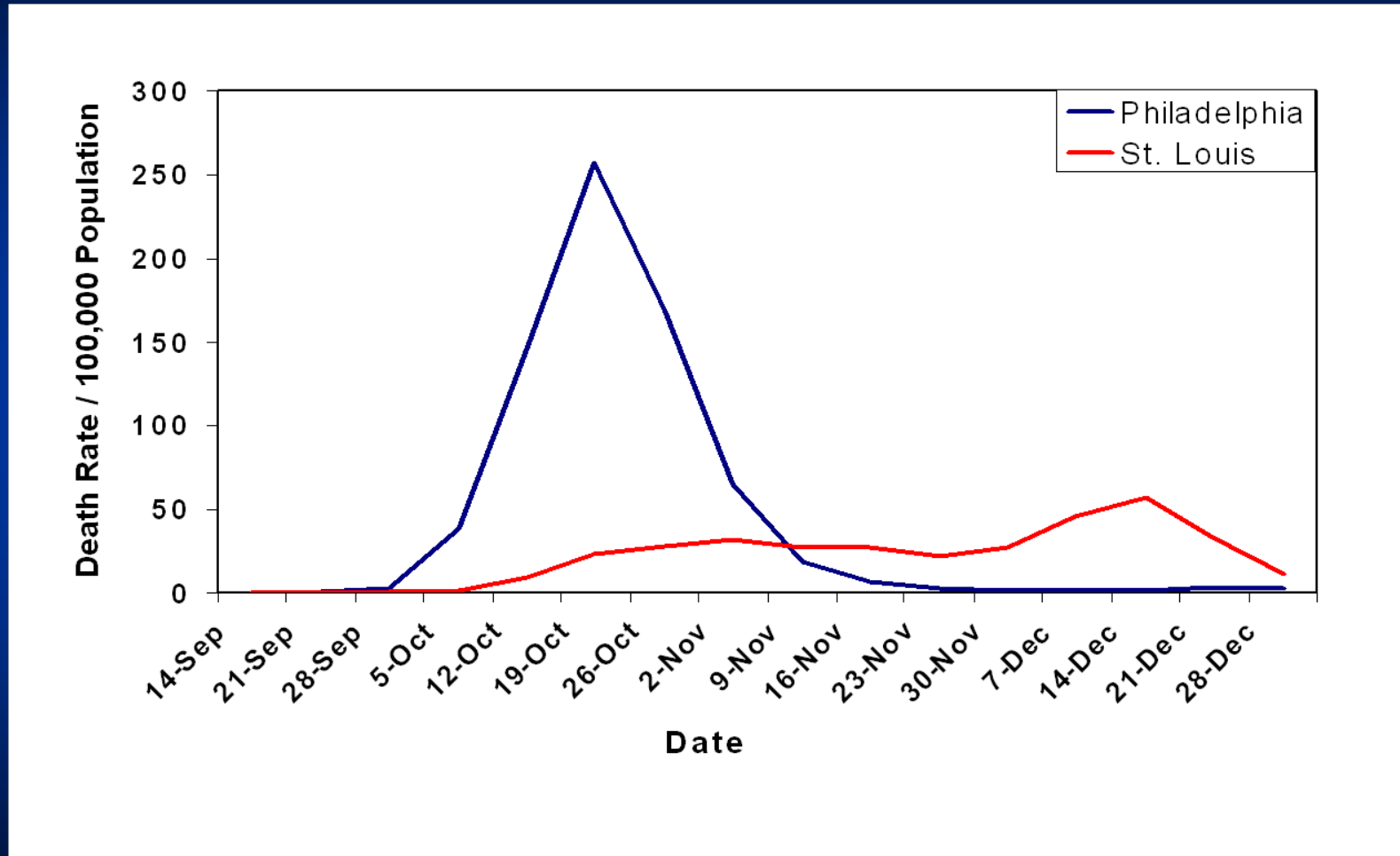
EARLY

1918 Pandemic Outcomes by City

| City | First Cases | Death Rate |
|---------------|--------------------|------------|
| Boston | 8/27/18 | 5.7 |
| Philadelphia | By 9/11/18 | 7.4 |
| New Haven | Week of 9/11/18 | 5.1 |
| Chicago | 9/11/18 | 3.5 |
| New York | Before 9/15/18 | 4.1 |
| Pittsburgh | Mid-9/18 | 6.3 |
| Baltimore | 9/17/18 | 6.4 |
| San Francisco | 9/24/18 | 4.7 |
| Los Angeles | "Last days 9/18" | 3.3 |
| Milwaukee | 9/26/18 | 1.8 |
| Minneapolis | 9/27/18 | 1.8 |
| St. Louis | Before 10/3/18 | 2.2 |
| Toledo | "First week 10/18" | 2.0 |

Death rate from influenza and pneumonia / 1000 population: "Causes of Geographical Variation in the Influenza Epidemic of 1918 in the Cities of the United States," *Bulletin of the National Research Council*, July, 1923, p.29.

Excess P&I mortality over 1913-1917 baseline in Philadelphia and St. Louis

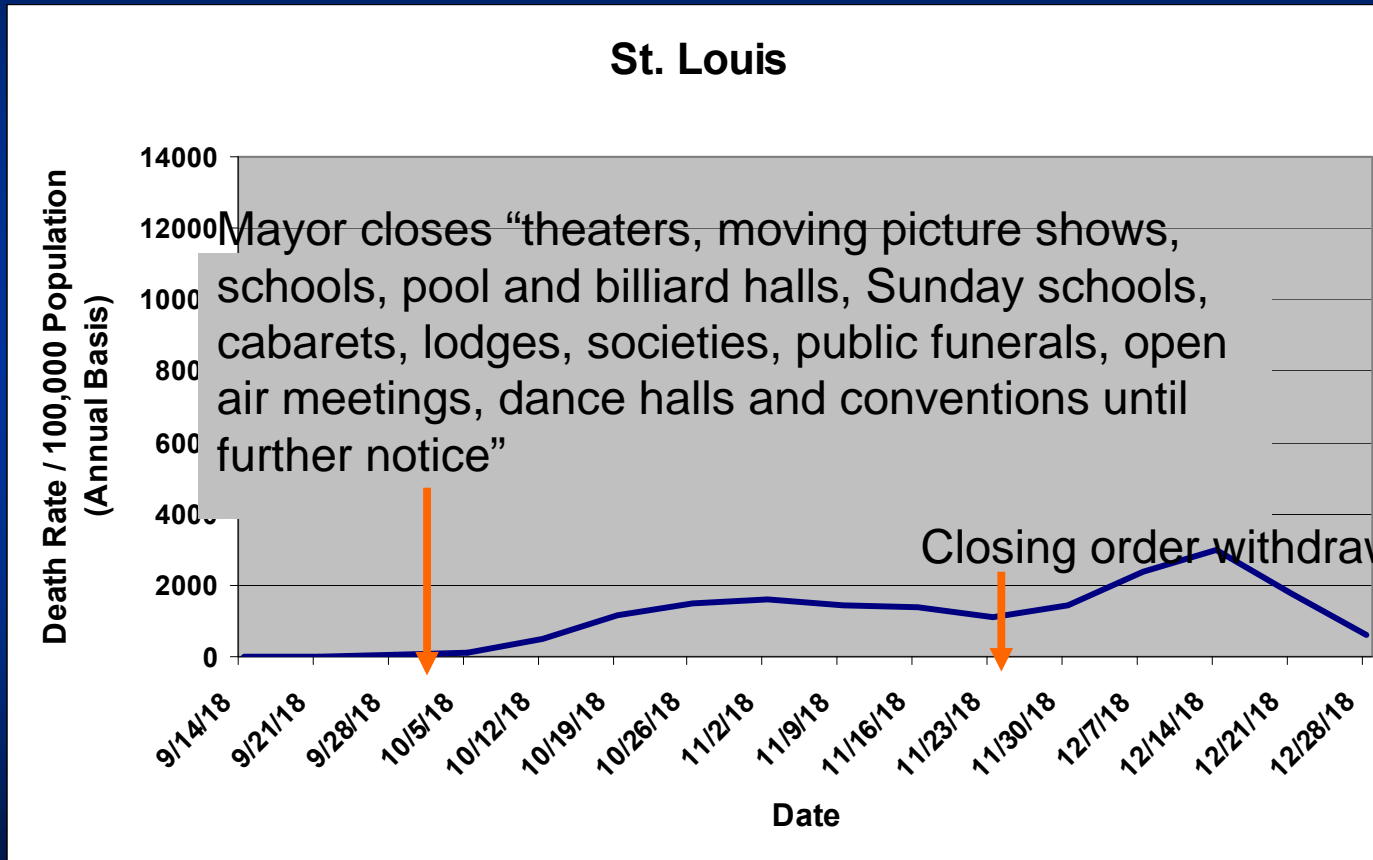


Source: Hatchett, Mecher, & Lipsitch. Public health interventions and epidemic intensity during the 1918 influenza pandemic. PNAS Early Edition. April 6, 2007



Liberty Loan Parade
Sept 28, 1918

St. Louis



TARGETED



Residences

Workplace / Classroom Social Density

Offices

Hospitals

Elementary
Schools

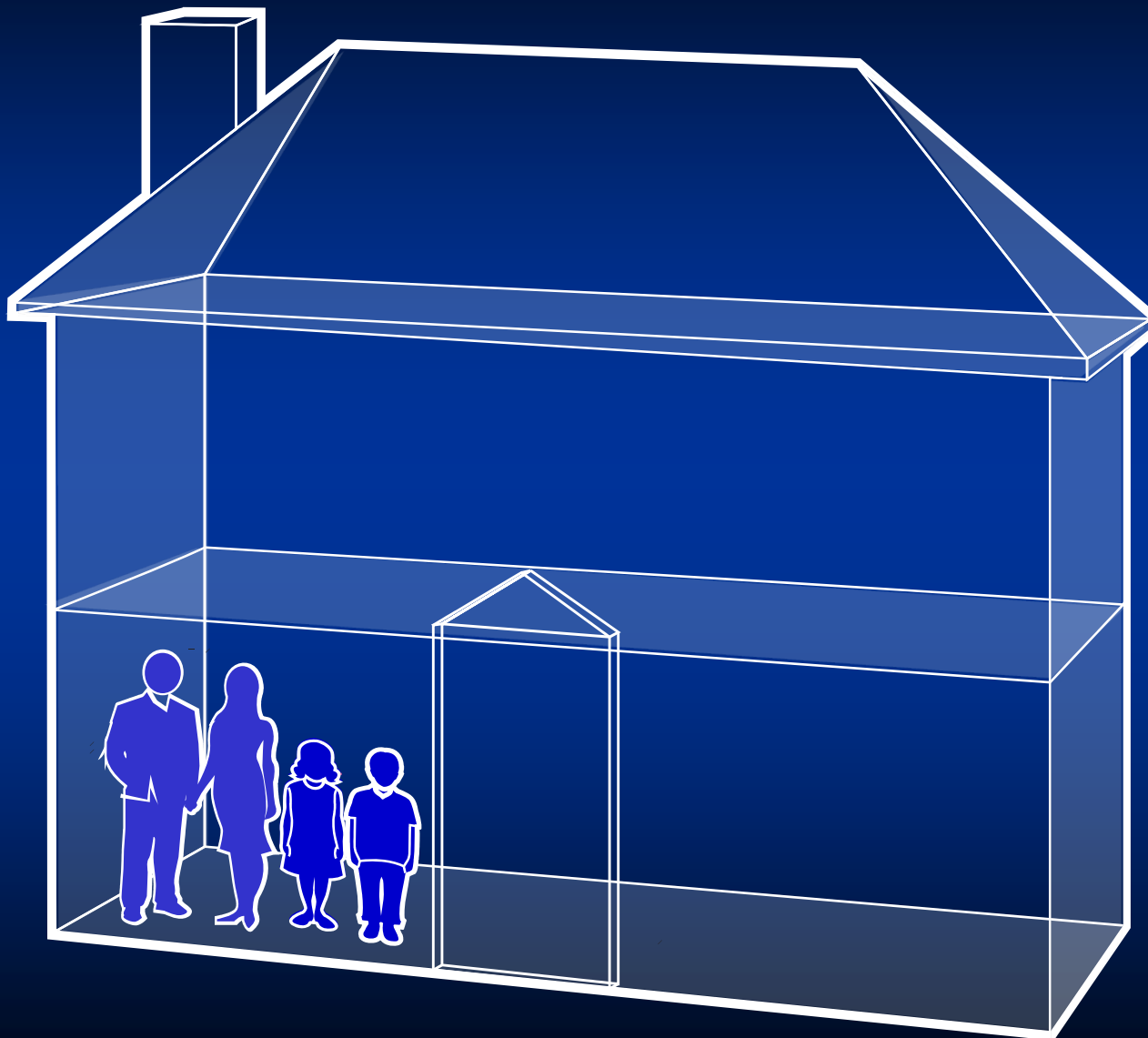
7.8 feet

11.7 feet

3.9 feet

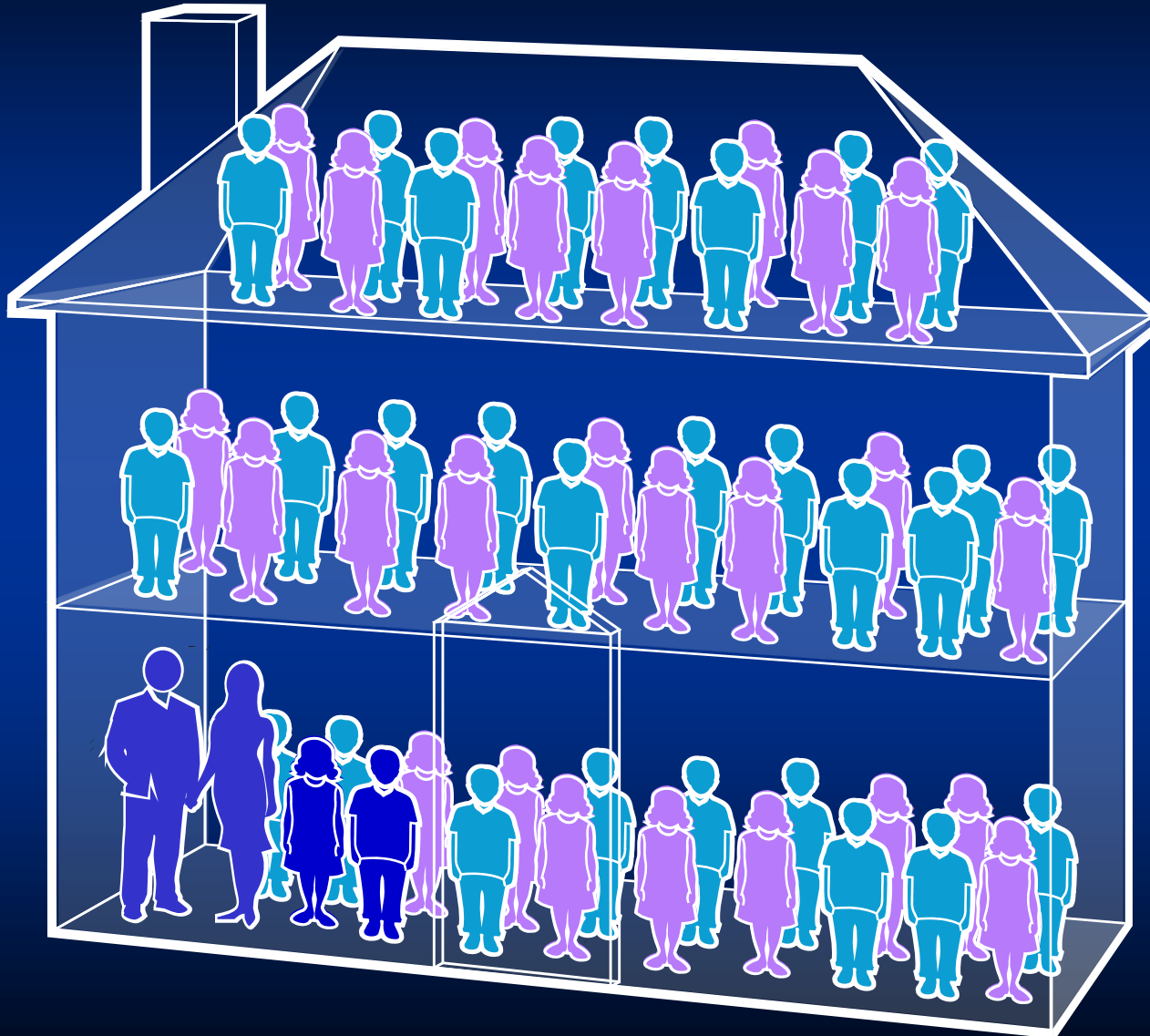
16.2 feet

Spacing of people: If homes were like schools



*Based on avg. 2,600 sq. ft. per single family home

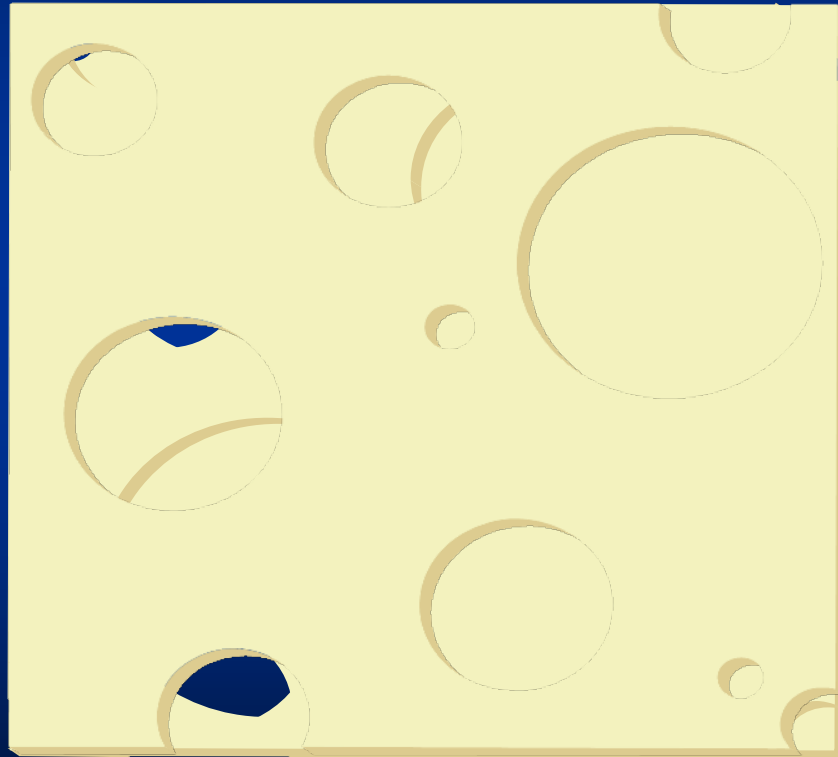
Spacing of people: If homes were like schools



*Based on avg. 2,600 sq. ft. per single family home

LAYERED

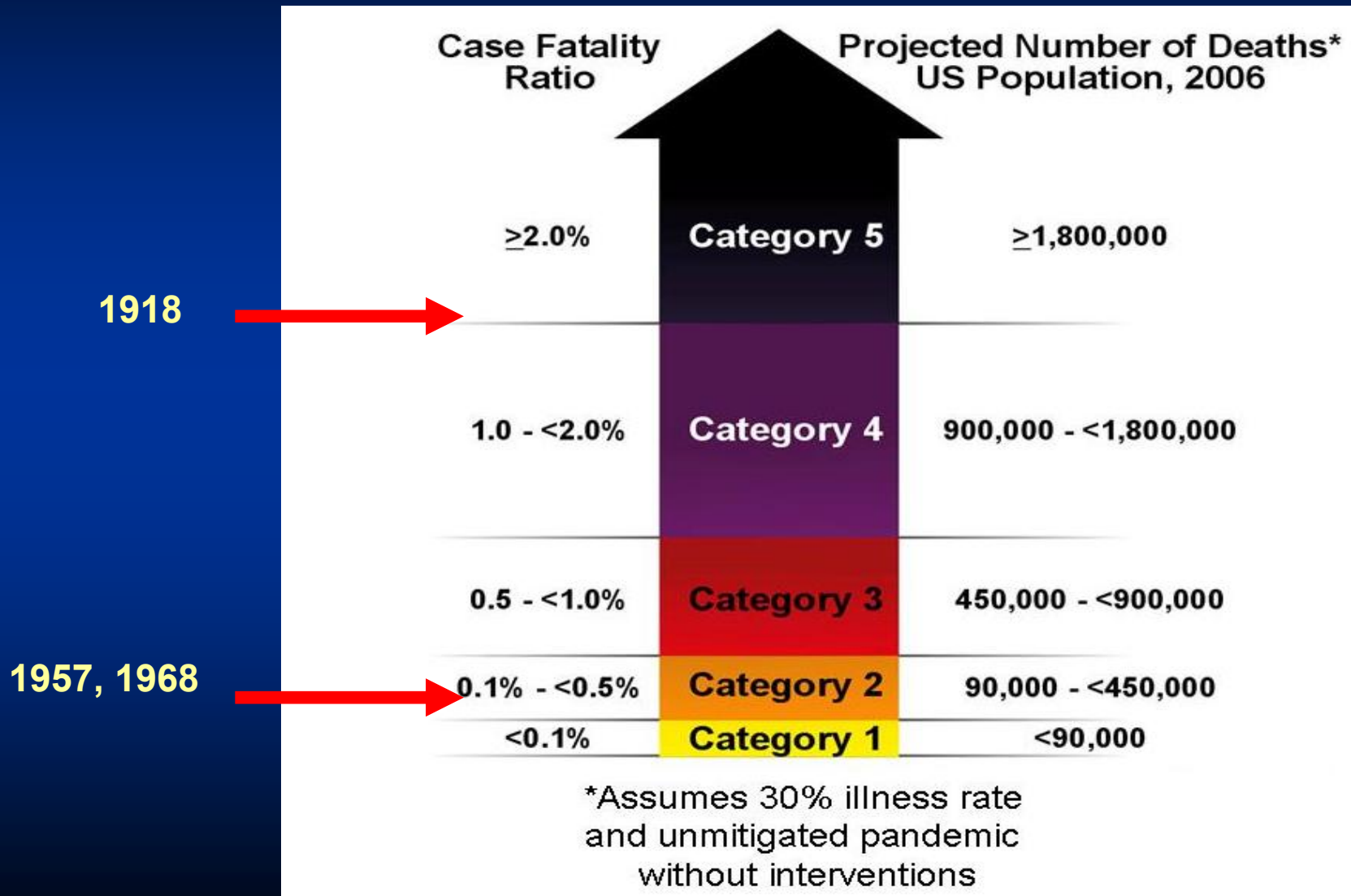
“Layered Solutions”



Pandemic Severity Index



Pandemic Severity Index



Community Mitigation Interventions

1. Asking sick people to stay home and treating them with antiviral medications
2. Asking household members of a sick person to stay home (and providing antiviral prophylaxis to household contacts, if stockpile permits and medication is effective)
3. Dismissing children from schools and closing childcare and keeping kids and teens from re-congregating and mixing in the community
4. Social distancing at work and in the community

Implementing measures in a uniform way as early as possible during community outbreaks

Community Mitigation Interventions by Pandemic Flu Severity (1)

| | Pandemic Severity Index | | |
|---|----------------------------------|--------------------------------|----------------------------------|
| Interventions by Setting | 1 | 2 and 3 | 4 and 5 |
| Home | | | |
| Voluntary isolation of ill at home (adults and children); combine with use of antiviral treatment as available and indicated | Recommend | Recommend | Recommend |
| Voluntary quarantine of household members in homes with ill persons (adults and children); consider combining with antiviral prophylaxis if effective, feasible, and quantities sufficient | Generally not recommended | Consider | Recommend |
| School | | | |
| Child social distancing —dismissal of students from schools and school-based activities, and closure of child care programs | Generally not recommended | Consider: ≤ 4 weeks | Recommend: ≤ 12 weeks |
| reduce out-of-school contacts and community mixing | Generally not recommended | Consider: ≤ 4 weeks | Recommend: ≤ 12 weeks |

Community Mitigation Interventions by Pandemic Flu Severity (2)

| Interventions by Setting | Pandemic Severity Index | | |
|--|----------------------------------|-----------------|------------------|
| | 1 | 2 and 3 | 4 and 5 |
| Workplace/Community Adult social distancing <ul style="list-style-type: none"> —decrease number of social contacts (e.g., encourage teleconferences, alternatives to face-to-face meetings) —increase distance between persons (e.g., reduce density in public transit, workplace) —modify, postpone, or cancel selected public gatherings to promote social distance (e.g., stadium events, theater performances) —modify workplace schedules and practices (e.g., telework, staggered shifts) | Generally not recommended | Consider | Recommend |
| | Generally not recommended | Consider | Recommend |
| | Generally not recommended | Consider | Recommend |
| | Generally not recommended | Consider | Recommend |

Secondary Effects on Individuals and Communities

- **Individuals and Families**

- Income/job security related to absenteeism—especially prolonged absenteeism related to school closure and child minding
- Protecting children from exposure
- Continuity of Education
- Fear, worry, stigma
- Access to essential goods and services
- Home-based healthcare

- **Communities**

- Maintaining business continuity--absenteeism
- Sustaining Critical infrastructure
- Reduced availability of essential goods and services (supply chain)
- Supporting vulnerable populations

These and other consequences may occur in the absence of community-wide interventions, as a result of spontaneous action by the public.

Pandemic Influenza Planning for Businesses

Current WHO phase of pandemic alert

| | | |
|---|---|---|
| Inter-pandemic phase New virus in animals, no human cases | Low risk of human cases | 1 |
| | Higher risk of human cases | 2 |
| Pandemic alert New virus causes human cases | No or very limited human-to-human transmission | 3 |
| | Evidence of increased human-to-human transmission | 4 |
| | Evidence of significant human-to-human transmission | 5 |
| Pandemic | Efficient and sustained human-to-human transmission | 6 |

http://www.who.int/csr/disease/avian_influenza/phase/en/index.html

Workplace

% of employed saying...

**Workplace has plan for outbreak
of pandemic flu**



**Worried employer would make them go
to work if sick**



**Workplace would NOT shut down if
public health officials recommended
businesses in community do so**

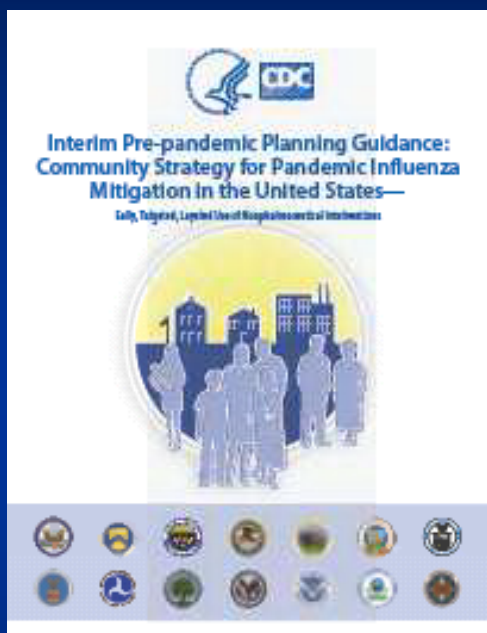


**If had to stay home from work, think they
would still get paid**



Pandemic Influenza Planning for Businesses

- **Plan for the impact on organizations and operations**
- **Plan to protect people**
- **Establish policies**
- **Allocate resources**
- **Communicate to and educate people**
- **Coordinate plans, response, and recovery**



Appendix 4 - Pandemic Influenza Community Mitigation Interim Planning Guide for Businesses and Other Employers

Purpose

This Interim Planning Guide for Businesses and Other Employers is provided as a supplement to the *Interim Pre-Pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States—Early, Targeted, Layered Use of Nonpharmaceutical Interventions*. This guide is intended to assist in pre-pandemic planning. Individuals and families, employers, schools, and other organizations will be asked to take certain steps (described below) to help limit the spread of a pandemic, mitigate disease and death, lessen the impact on the economy, and maintain societal functioning. This guidance is based upon the best available current data and will be updated as new information becomes available. During the planning process, Federal, State, local, tribal, and territorial officials should review the laws, regulations, and policies that relate to these recommendations, and they should include stakeholders in the planning process and resolution of issues.

Businesses and other employers (including local, State, and Federal agencies and other organizations) will be essential partners in protecting the public's health and safety when a pandemic occurs. This *Pandemic Influenza Community Mitigation Interim Planning Guide for Businesses and Other Employers* provides guidance to these groups by describing how they might prepare for, respond to, and recover from an influenza pandemic. When an influenza pandemic starts, public health officials will determine the severity of the pandemic and recommend actions to protect the community's health. People who become severely ill may need to be cared for in a hospital. However, most people with influenza will be safely cared for at home.

Community mitigation recommendations will be based on the severity of the pandemic and may include the following:

1. Asking ill people to voluntarily remain at home and not go to work or out in the community for about 7-10 days or until they are well and can no longer spread the infection to others (ill individuals may be treated with influenza antiviral medications, as appropriate, if these medications are effective and available).
2. Asking members of households with a person who is ill to voluntarily remain at home for about 7 days (household members may be provided with antiviral medications, if these medications are effective and sufficient in quantity and feasible mechanisms for their distribution have been developed).
3. Dismissing students from schools (including public and private schools as well as colleges and universities) and school-based activities and closure of childcare programs for up to 12 weeks, coupled with protecting children and teenagers through social distancing in the community, to include reductions of out-of-school social contacts and community mixing. Childcare programs discussed in this guidance include centers or facilities that provide care to any number of children in a nonresidential setting, large family childcare homes that provide care for seven or more children in the home of the provider, and small family childcare homes that provide care to six or fewer children in the home of the provider.¹
4. Recommending social distancing of adults in the community, which may include cancellation of large public gatherings; changing workplace environments and schedules to decrease social density and preserve

Individual, Family, and Community Response to Pandemic Influenza

Community Response

Be Prepared

Be Aware

Don't Pass it On

Keep Your Distance

Help Your Community

Faith-Based,
Community,
and Social
Gatherings

Individuals
and Families
at Home

At Work

At School

Closing Thoughts

Leadership

Imagination

Resilience

Triggers for Implementation of Mitigation Strategies by Pandemic Severity Index and U.S. Government Pandemic Stages

| Pandemic Severity Index | WHO Phase 6, U.S. Government Stage 3* | WHO Phase 6, U.S. Government Stage 4† and First human case in United States | WHO Phase 6, U.S. Government Stage 5§ and First laboratory-confirmed cluster in State or region¶ |
|--------------------------------|--|--|---|
| 1 | Alert | Standby | Activate |
| 2 and 3 | Alert | Standby | Activate |
| 4 and 5 | Standby** | Standby/Activate †† | Activate |

