

Definitions

■ Isolation

- Separation of ill persons with contagious diseases
- Often in a hospital setting, could be at home

■ Quarantine

- Restriction of persons who are not ill but presumed exposed, usually in the home or a designated facility

Definitions

- **Social Distancing**

“social measures to decrease the frequency of contact among people in order to diminish the risk of spread from communicable diseases”

- **Infection Control**

“hygienic measures to decrease spread of infectious pathogens”

Background & Assumptions

- **Pandemic Influenza**
 - **Novel virus, fully susceptible population, efficient and sustained human to human spread**
 - **Epidemic over a large geographic area affecting a large proportion of the population**
 - **“1918-like” pandemic would result in 2 million deaths in US**

Background & Assumptions (2)

- **Vaccine (pandemic strain) likely delayed**
- **Antivirals may be insufficient quantity, ineffective and/or difficult to distribute in a timely way**

CDC Quarantine Stations & Jurisdictions



Pandemic Influenza: Prevention of Importation (Proposed Interventions)

- **Trigger: human to human transmission overseas of novel influenza strain**
- **Possible control measures**
 - **Closing Ports of Entry**
 - **Funneling of flights/screening/isolation and quarantine of arriving passengers**
 - **Screening/isolation and quarantine at POEs**
 - **Exit screening**

Possible Screening Measures*

- **Travelers questionnaire**
 - **Visual inspection**
 - **Interview**
 - **Fever (temperature screening)**
 - **Specimen collection and testing (secondary)**
- * **Effectiveness unknown; dependent on clinical syndrome and other factors (eg time of flight)**



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

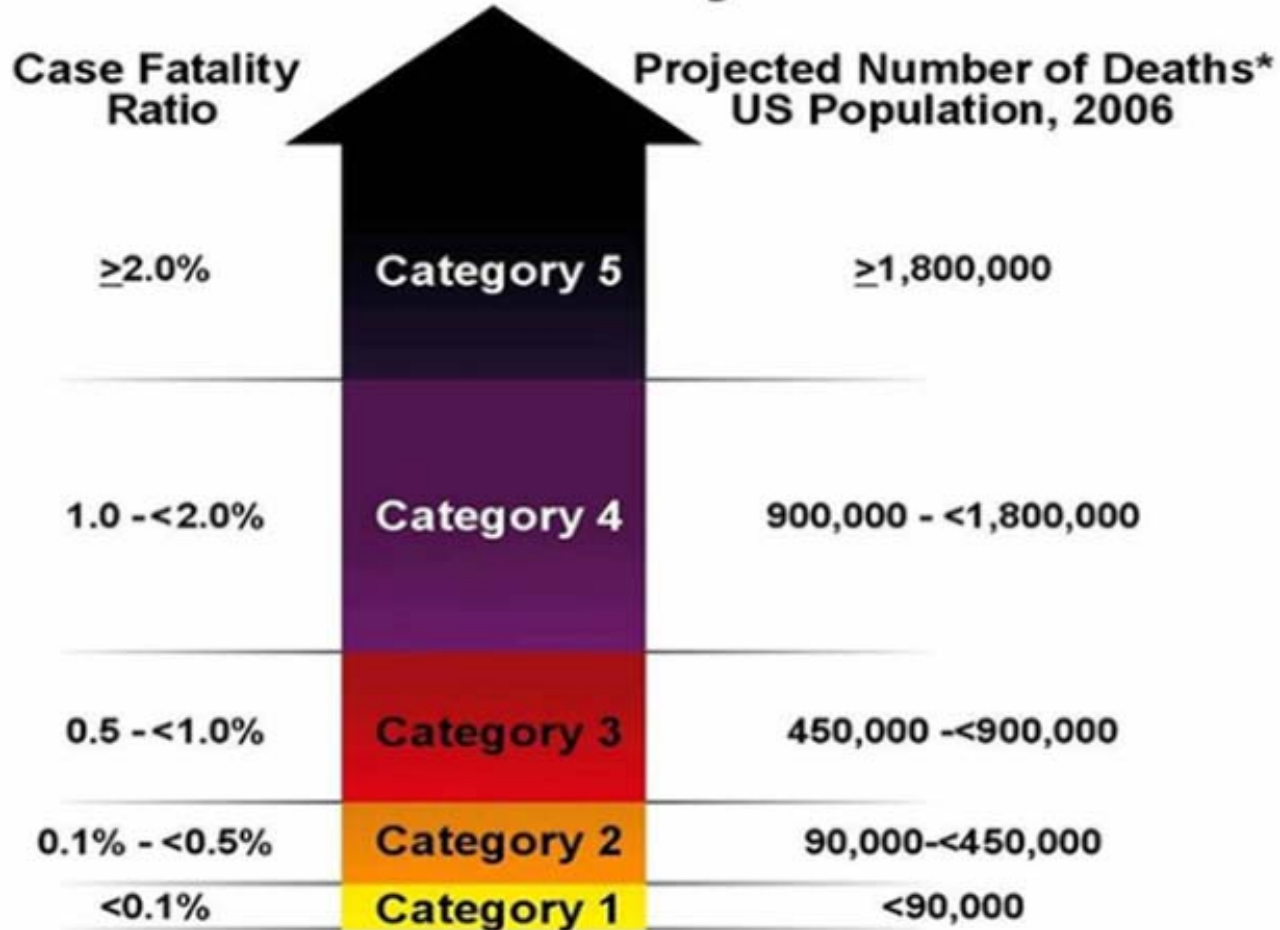
Early, Targeted, Layered Use of Nonpharmaceutical Interventions



Pandemic Severity Index

- **Designed to enable the estimation of the severity of a pandemic on a population**
- **Mitigation interventions can be matched to the severity of the pandemic**

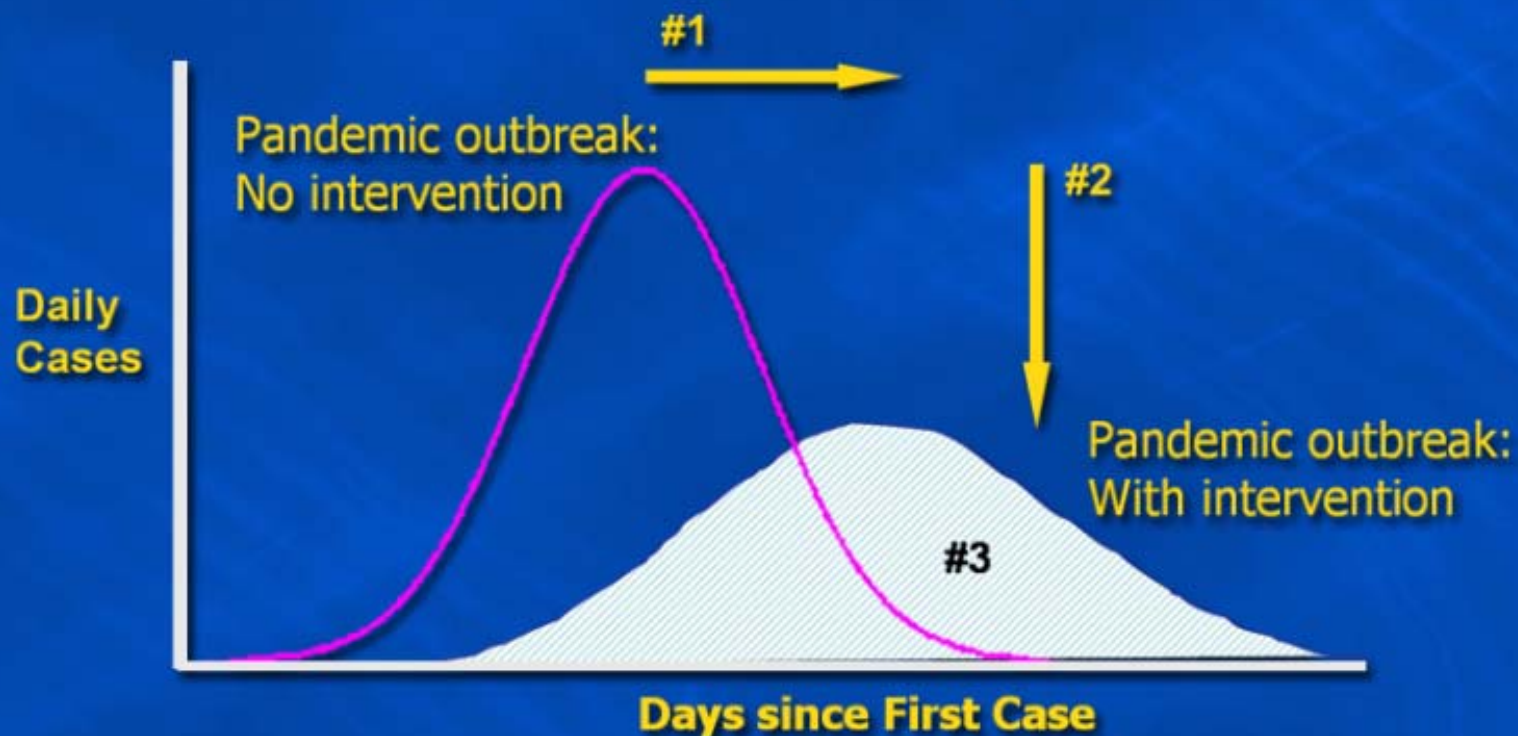
Pandemic Severity Index



* Assumes 30% Illness Rate

Community-Based Interventions

1. Delay disease transmission and outbreak peak
2. Decompress peak burden on healthcare infrastructure
3. Diminish overall cases and health impacts



Basis for Interventions

- **Evidence from 1918 pandemic**
- **Epidemiologic studies**
- **Modeling**
- **Common sense**

Community Strategy

- **Isolation and treatment of ill persons**
- **Voluntary home quarantine of household contacts**
- **Dismissal of students from school and child care and social distancing**
- **Workplace/community social distancing**

Targeted Layered Containment (TLC):

The sum likely to be greater than the parts...

Community Strategies by Pandemic Flu Severity

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

Triggers

- **Timing of initiating interventions influences effectiveness**
 - **Historical evidence from 1918 pandemic**
 - **Models**
 - **Common sense**

Initiation of Interventions

- **Alert:** Notification of critical systems and personnel of their impending activation
- **Standby:** Initiate decision-making processes for imminent activation including mobilization of resources and personnel
- **Activate:** Implementation of the pandemic mitigation measures

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

Summary

- **Nonpharmaceutical (Community) interventions may be effective in mitigating influenza pandemic at ports of entry and in the community**
- **Planning at state and local levels should incorporate and plan for npi to help curb the spread of infection in an influenza pandemic**