

# COVID-19 (2019-nCoV): Containment & Mitigation Planning

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### **Agenda**

- PAN CAP Planning Assumptions
- Role of Countermeasures
- Key Federal Decisions
- Current Containment Response Posture
- Triggers Containment to Mitigation
- Risks, Gaps and Challenges



# 2018 FEMA Pandemic Crisis Action Plan (PANCAP) Assumptions

- ✓ HHS Will Be Appointed As The Lead Federal Agency; leading Whole of Gvt
- ✓ Infectious Diseases With Pandemic Potential Will Emerge With Little Or No Warning
- ✓ Universal Susceptibility will significantly degrade timelines & efficiency of response
- ? A Pandemic Will Last 18 Months Or Longer, With Multiple Waves Of Illness
- ✓ Delay between emerging infectious disease outbreak & characterization of outbreak
- ✓ Direction, spread, & severity difficult to characterize in early stages Outbreak
- ✓ POTUS will issue one/more declarations, Stafford/National Emergency to maintain operational capabilities (E.G., Mass Care, Logistics) in region experiencing pandemic.



# 2017 HHS Pandemic Influenza Plan Update Role of Medical Countermeasures (MCMs)

"Whereas vaccines are the most effective MCMs to reduce the overall public health impact of influenza pandemics, other MCMs are critically important to mitigate emerging pandemics before effective vaccines become available."

"Such other measures are an essential part of a comprehensive mitigation response at different stages of the pandemic to protect diverse at-risk populations. These countermeasures include:

- antiviral drugs and other therapeutics,
- diagnostic tests,
- personal protective equipment (respiratory protective devices, face shields, gowns, and gloves), and
- mechanical ventilators.



### **Key Potential Federal Decisions**

FEMA Pandemic Influenza Crisis Action Plan 2.0 (Jan 2018)

- ✓ HHS Secretary declares a Public Health Emergency.
- POTUS declares a National Emergency.
- POTUS makes Stafford Act Declaration.
- HHS determines a need for supplemental funding.
- HHS provides funding to states.
- ✓ HHS/Department of Homeland Security (DHS) issues border measures & travel health notices & warnings
- POTUS consideration of State Emergency Declaration requests



## Key Potential Federal Decisions FEMA Pandemic Crisis Action Plan 2.0 (Jan 2018)

- HHS, in coordination with education departments & state health authorities, recommends Non-Pharmaceutical Interventions (NPI) such as school dismissals & cancellations of mass gatherings.
- HHS distributes Strategic National Stockpile (e.g., antiviral drugs, ventilators, etc.)
- Depending on the resource, HHS/interagency/NSC prioritize distribution of essential resources
- NSC considers international donation/sharing of vaccine & other medical countermeasures request(s)
- HHS/DHS/DoD leverages Defense Production Act authorities
- Federal coordinated management of critical supply chain shortfalls

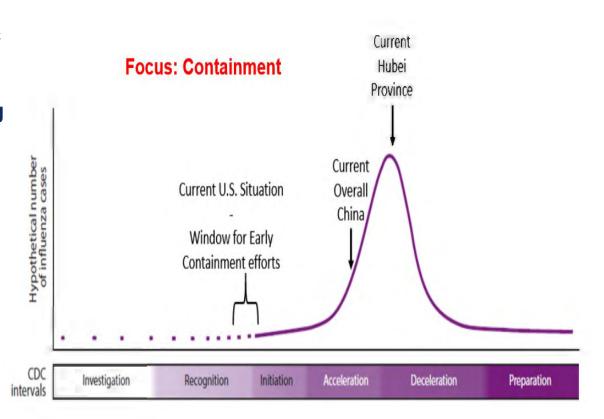


## COVID-19 Current Containment Posture (Phase 1C)

#### **Containment:**

Buys time to prepare healthcare systems & public for onset of disease;

- Development of medical countermeasures including diagnostics, therapeutics, vaccines, PPE
- Allow characterization of disease transmission & severity, to guide public health recommendations
- Prepare healthcare providers & systems for potential surge (surge staffing, PPE sparing, reducing worried well visits)
- Begin outreach to SLTT Authorities to prepare for mitigation





### **Aggressive Containment (Phase 2A): Triggers**

- 1. Evidence of increased transmission in US & assessment of public health resources may include outbreak clusters
- Proposed Trigger: 3 generations (For Discussion) of human-tohuman transmission in the multiple noncontiguous U.S. locations
- Proposed Trigger: Detection of nCoV infections in the U.S. with no epidemiologic link to travel or other infected persons concurrent in more than 3 US locations
- Consideration can be given to regional triggers and decisions, depending on the epidemiology, severity and public health resources

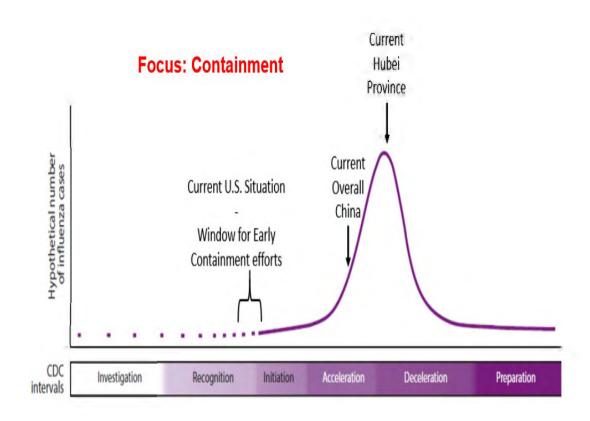


## COVID-19 Aggressive Containment Posture (Phase 2A)

#### **Aggressive Containment:**

Continue to buy time to prepare healthcare systems & public for onset of disease;

- Implement progressive model screening, containment, home quarantine & self-health monitoring and transition from mostly Federal to primarily State & Local health focus
- Public messaging/education key
- Development of medical countermeasures including diagnostics, therapeutics, vaccines, PPE
- Allow characterization of disease transmission & severity, to guide public health recommendations
- Prepare healthcare providers & systems for potential surge (surge staffing, PPE sparing, reducing worried well visits)





# Transitioning From Aggressive Containment to Community/Full Community Mitigation (Phase 2B/C): Triggers (1 of 2)

- 1. Evidence of increased transmission in US & assessment of public health resources
- Proposed Trigger: Greater than 3 generations (For Discussion) of human-to-human transmission in the multiple (3) noncontiguous U.S. locations
- Proposed Trigger: Established widespread transmission of disease in the United States
- Proposed Trigger: Detection of nCoV infections in the U.S. with no epidemiologic link to travel or other infected persons concurrent in more than 3 US locations
- Proposed Trigger: Evidence that public health systems for containment are inadequate to accommodate the volume of work
- Consideration can be given to regional triggers and decisions, depending on the epidemiology, severity and public health resources



# Transitioning From Aggressive Containment to Community/Full Community Mitigation (Phase 2B/C): Triggers (2 of 2)

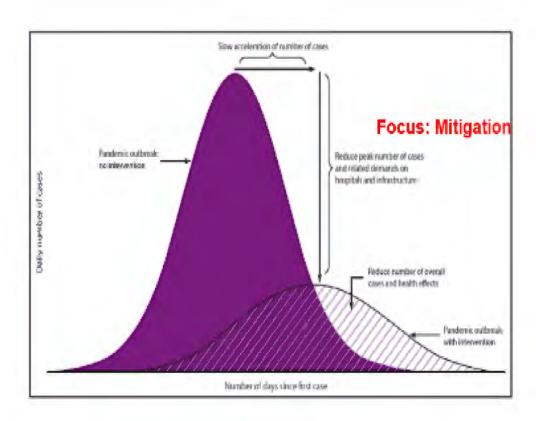
- 2. Significant Transmission in Other Provinces in China Should be Managed with Monitored Home Restrictions of Persons Traveling from China
- Proposed Trigger: Increased rates of NCoV-associated illness in persons residing in provinces other than Hubei provinces, such that the relative risk of travel to Hubei versus other provinces is similar
- 3. Significant transmission in other countries should be managed initially with self-monitored home restrictions of travelers from those countries
- Proposed Trigger: A country other than China with significant human-tohuman nCoV transmission where authorities implement city, province, or region closure and movement restriction due to nCoV disease impact or associated societal disruption



## COVID-19 Community Mitigation & Full Domestic Mitigation Measures/Efforts (Phase 2B/C)

### **Mitigation Measures:**

- Phased/Layered approach using healthcare, pharmaceutical, & nonpharmaceutical interventions (NPI)
- Goal: Reduce peak number of cases to minimize impact on hospitals, preserve functioning infrastructure, mitigate impact on the economy and functioning society
- Public messaging focused on assurance and education
- Support community response to extent possible to mitigate illness, suffering, and death
- NPI: Social distancing, school closures, minimizing mass gatherings, & communications/public engagement
- Adjust public health measures with changes in epidemiology & risk
- Implement broader community- & healthcare- based mitigation measures





### Risks, Gaps & Challenges

- No/Limited Therapeutic Options Or Vaccines
- Economic Impacts/Feasibility Of Mitigation Measures (Travel Restrictions And Commerce)
- Challenges Of Maintaining Public Trust And Impact Of Disinformation
- Diagnostic Testing Limited To Public Health Labs, Vs. Hospitals, Clinics, Or Point-of-care
- Limited National Supply Of PPE & Dependence Of Foreign Suppliers...RX's, etc.
- State & Local Compliance & Public Health Capacity
- Limited Private Sector Hospital Surge & Isolation Capacity (Location Dependent)
- Insufficient Provider Readiness (Education, Training, Equipment)



## **BACK UP SLIDES**



### **PANCAP** Phasing to White House Paper Crosswalk

Phase	1C	2A	2В	2C
Operational Phase	Near Certainty or Credible Threat	Activation, Situational Assessment, and Movement	Employment of Resources and Stabilization	Intermediate Operations
CDC Interval	Recognition	Initiation	Acceleration	
Triggers	Confirmation of multiple human cases or clusters with virus characteristics indicating limited human transmission and heightened potential for pandemic Determination of a Significant Potential for a Public Health Emergency	Demonstration of efficient and sustained human-to-human transmission of the virus     Declaration of a Public Health Emergency     Sustained human transmission (3° generation) and exportation of cases without China nexus	Increasing number of cases or increasing rate of infection in U.S. Healthcare system burden exceeds State resource capabilities National healthcare supply chain management unable to surge production and/or distribution to meet demand State/local request for assistance that requires federal coordination Increasing private-sector request for assistance to support cross-sector operations More than 3 generations of human-to-human transmission in multiple noncontiguous U.S. locations Evidence that public health systems in multiple U.S. locations are unable to meet the demands of achieving containment efforts or providing care	Increasing rate of infection in United States indicating established transmission, with long-term service disruption and critical infrastructure impacts     Industry business continuity plans cannot be executed due to insufficient personnel leading to significant disruption across sectors     Presidential Stafford Act declaration     State/local request for assistance that requires federal coordination
nCoV Containment/ Mitigation Strategy	Current Posture	Aggressive Containment	Transitioning from Containment to Community Mitigation Efforts	Full Domestic Mitigation
	Develop MCM including diagnostics, therapeutics, vaccines, PPE     Characterize disease transmission and severity to guide public health recommendations	Prepare healthcare providers and systems for potential surge (staffing, PPE sparing, reducing worried well)	Pharmaceutical intervention including diagnostics, therapeutics and vaccines  Social distancing, school closures, minimizing mass gatherings, and communications/public engagement  Adjust public health measures with changes in epidemiology and risk  Implement broader community- and healthcare-	Support community responses to extent possible to mitigate illness, suffering and death     Preserve functioning of critical infrastructure and mitigate impact to economy and functioning of society     Reduce peak number of cases and impact on hospitals/infrastructure

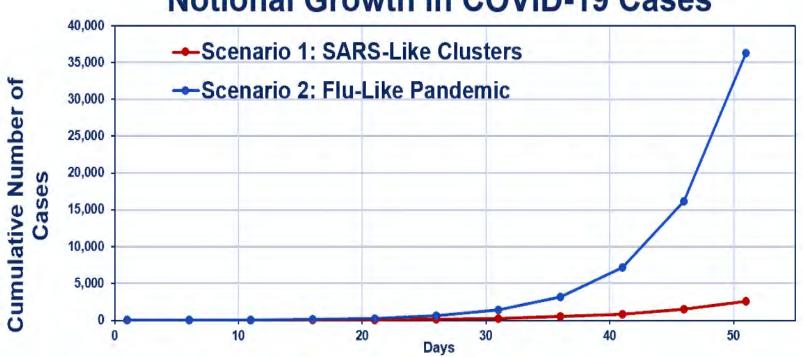
based mitigation measures





### Scenarios: Cluster (SARS) vs. Flu Like Pandemic





<sup>\*</sup>The curves represent levels of containment effectiveness

### U.S. Government Response to SARS-CoV2 Decision Tree

### Trigger Sustained human-to-human transmission (third generation) and exportation of cases in an area or nation, not the United States. Containment (Current Posture) **Trigger** Greater than three generations of human-to-human transmission, or detection of

cases in a community without

epidemiological links, in a single U.S. jurisdiction with evidence that public health or healthcare

systems in that jurisdiction are

unable to achieve and maintain

containment while providing

quality care.

**Aggressive Containment** 

Community Mitigation (Single Jurisdiction)

**Trigger**Greater than three ge

Greater than three generations of human-tohuman transmission, or detection of cases in a community without epidemiological links, in a single U.S. jurisdiction with evidence that public health or healthcare systems in that jurisdiction are unable to achieve and maintain containment while providing quality care.

Trigger

Greater than three generations of human-tohuman transmission, or detection of cases in the community without epidemiological links, in two or more non-contiguous jurisdictions with evidence that public health and healthcare systems in those jurisdictions are unable to achieve and maintain containment while providing quality care.

Transition to Containment or Pre-Epidemic Posture

Trigger

Greater than three generations of human-to-human transmission, or detection of cases in the community without epidemiological links, in two or more non-contiguous jurisdictions with evidence that public health and healthcare systems in those jurisdictions are unable to achieve and maintain containment while providing quality care.

**Community Mitigation** 

(Multiple Jurisdictions)

Community Mitigation (Single Jurisdiction)

Community Mitigation (Multiple Jurisdictions)

#### **Triggers**

- Seasonality
- Availability and Distribution of Vaccines, Therapeutics
- Reinfection
- Fluctuation of Scale & Severity

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