PREPTalks
New perspectives for emergency managers

Discussion Guide

The Next Pandemic: Lessons from History

PrepTalks Discussion Guides are companion documents to PrepTalk video presentations and question-and-answer (Q&A) sessions. When used together with the videos, these guides help translate the research and expertise showcased in each presentation into action steps to improve disaster preparedness.

John Barry: The Next Pandemic – Lessons from History

Barry's PrepTalk showcases lessons learned from both the 1918 and 2009 influenza pandemics. He provides guidance on what emergency managers can do to work with public health and elected officials to implement measures that can save lives and, as importantly, avoid ineffective measures that can lose community trust. John Barry is a best-selling author of the 2004 book "The Great Influenza: The Story of the Deadliest Pandemic in History," a study of the 1918 pandemic. The National Academies of Science named it the year's outstanding book on science or medicine. His article for the Smithsonian, "How the Horrific 1918 Flu Spread Across America" https://www.smithsonianmag.com/history/journal-plague-year-180965222/ provides a summary of that deadly pandemic.

Partners for the Discussion

Influenza viruses can mutate and cause a pandemic in any given year. As Barry says, "The boss is the virus. We have no way of knowing if the next [pandemic] will be exceedingly mild, or like 1918, or worse."

> A large pandemic is going to strike everybody pretty much at the same time, so you're not going to get help from the outside. Each community is going to be pretty much on its own.
>
> *John M. Barry*

Responding to an influenza pandemic will require coordination and communication with the whole community. We encourage you to discuss preparedness and response measures with a wide array of partners, including members of emergency management agencies, public health officials, and members of your community's health care coalition (or healthcare organizations if a formal coalition does not exist). The National Association of County and City Health Officers (NACCHO) maintains a directory of local health departments at www.nacchhol.org/membership/lhd-directory. Outreach should also include schools, businesses, and nonprofit and volunteer organizations, including the Red Cross, Voluntary Organizations Active in Disaster, and the Medical Reserve Corps.

After watching Barry's presentation and the Q&A session, use this Discussion Guide and additional resources to ensure your pandemic preparedness plans reflect the most current guidance.

FEMA · IAEM International Association of Emergency Managers · NEMA National Emergency Management Association · NHSC National Homeland Security Consortium · Center for Homeland Defense and Security, Naval Postgraduate School

Discussions should include:

1) planning for medical countermeasures (vaccines and antiviral drugs);
2) plans to recommend personal nonpharmaceutical interventions (NPIs), including social distancing, personal preventive acts such as handwashing, and community-level NPIs, such as school closings;
3) medical and mortuary surge capacity; and
4) communications for prevention and response actions.

This discussion is especially timely as the Department of Health and Human Services Centers for Disease Control and Prevention (CDC) issued a 2017 update to its Community Mitigation Guidelines to Prevent Pandemic Influenza – United States.

Discussion Prompts

Topic One: Plan for the Next Pandemic

In his PrepTalk, Barry outlines the potential severity of a pandemic and stresses the importance of testing plans with realistic exercises. Barry also highlights the important role of elected leaders and being honest with the public.

> Planning does not equal preparation. [Plans need to be tested] with table top games [and they] have to be taken seriously. People at the top have to be invested in it.
>
> *John M. Barry*

- Ensure all appropriate parties are familiar with influenza basics (https://www.cdc.gov/flu/keyfacts.htm), and understand the difference between seasonal flu and an influenza pandemic (https://www.cdc.gov/flu/pandemic-resources/basics/faq.html).
- Have you discussed detection, assessment, and notification with your healthcare system providers? Is your pandemic influenza plan updated to align with CDC's new Pandemic Severity Assessment Framework (PSAF) (Figure 1 below), including both the initial assessment period (first 3-4 weeks) and the refined assessment period when more data becomes available (4-8 weeks)?
- Authors of the PSAF emphasize that "decision makers should also consider additional factors that are relevant to their individual communities, regions, and states when formulating guidance for interventions. These considerations include factors such as access to adequate health care and public health interventions among the affected population, the demographic make-up, the presence of vulnerable populations, or the population density." Does your plan include an up-to-date community profile?
- Does your pandemic influenza plan outline the roles and responsibilities of different organizations within your jurisdiction? Are all individuals aware of their roles and familiar with the plans? Use the process outilined in in Comprehensive Planning Guide 101: Developing and Maintaining Emergency Operations Plans as a guideline for the planning process.

Figure 1

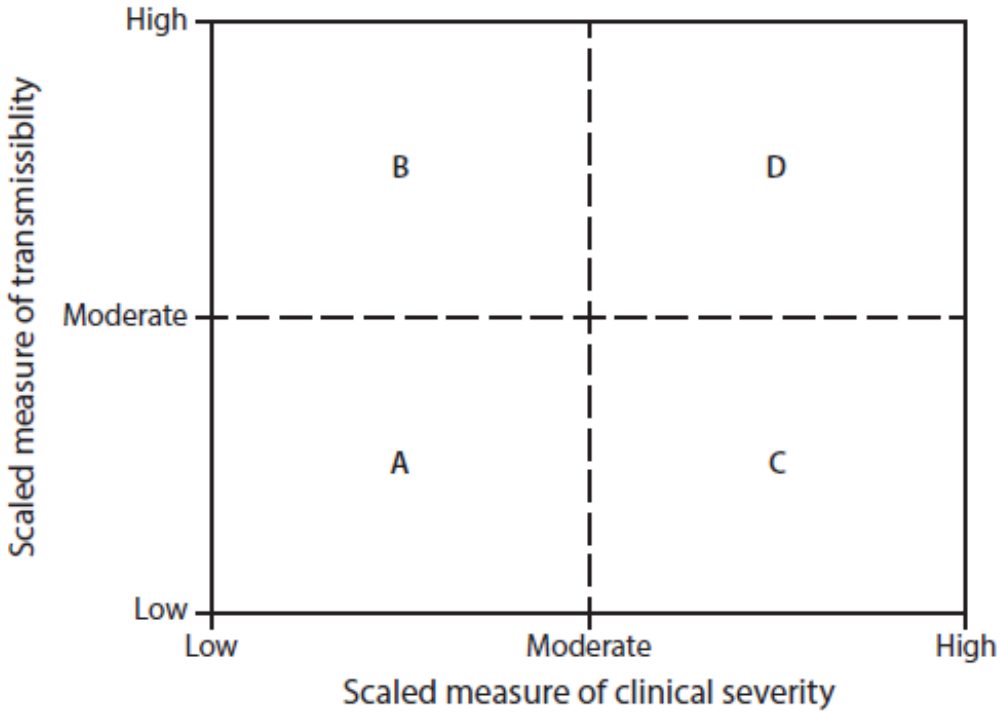

Figure 1: Pandemic Severity Assessment Framework for the initial assessment of the potential impact of an influenza pandemic. Source: CDC: Community Mitigation Guidelines to Prevent Pandemic Influenza – United States, *https://stacks.cdc.gov/view/cdc/45220 p. 12.*

- Review the CDC's Public Health Preparedness Capabilities: National Standards for State and Local Planning with your healthcare partners and assess the related National Preparedness System Core Capabilities.
- Review your jurisdiction's plans for vaccine dissemination. Does it include increased locations for points of distribution and staffing plans, including volunteers?
- Infection from the influenza virus also weakens the immune system and makes people susceptible to secondary infections, including bacterial pneumonia. Do your hospitals have surge capacity plans, including beds, supplies, staffing, and transportation for the sick? Do you have surge capacity for mortuary services?
- Because pandemics can come in waves (the 1918 pandemic had three waves of infection), plans should include strategies for sustained efforts.

> In a moderate pandemic in the United States there would be somewhere between 60 [million] and 100 million people sick enough to require medical care.
>
> *John M. Barry*

- Have you conducted a community level tabletop to exercise and evaluate your plan? The Homeland Security Exercise and Evaluation Program provides guidelines for developing effective exercises. https://www.fema.gov/hseep

Topic Two: Medical Care

Barry discusses the demands on the medical care community during a pandemic and the potential scale of people needing medical care.

A vaccine for the new virus causing the pandemic will likely take 5-6 months to develop.

- Plans should include ways to detect, assess, and treat patients on a massive scale.
- In addition, plans should include methods to prioritize and disseminate the vaccine once it is produced. It is also important to remember that a vaccine for pandemic influenza will likely be limited (seasonal flu vaccines range from 10 percent to 60 percent effective).

> We really need a universal vaccine. West Nile [virus] used to get more funding than vaccine research for Influenza. The highest death toll annually for West Nile in the U.S. was 284 people. Seasonal Influenza kills between 3,000 and 56,000.
>
> *John M. Barry*

Topic Three: Implement Nonpharmaceutical Interventions (NPI)

NPIs are an important part of pandemic influenza planning. Barry reminds us, however, that to be effective, NPIs require public compliance. The CDC "Community Mitigation Guidelines to Prevent Pandemic Influenza – United States" states:

Specific goals for implementing NPIs early in a pandemic include slowing acceleration of the number of cases in a community, reducing the peak number of cases during the pandemic and related health care demands on hospitals and infrastructure, and decreasing overall cases and health effects.

There are several types of NPIs. These types and recommendations for when they should be implemented are outlined in Figure 2 below.

> NPIs will do some good, [but they] have to be sustained. They will save some lives [and] lessen the stress on healthcare.
>
> *John M. Barry*

Figure 2

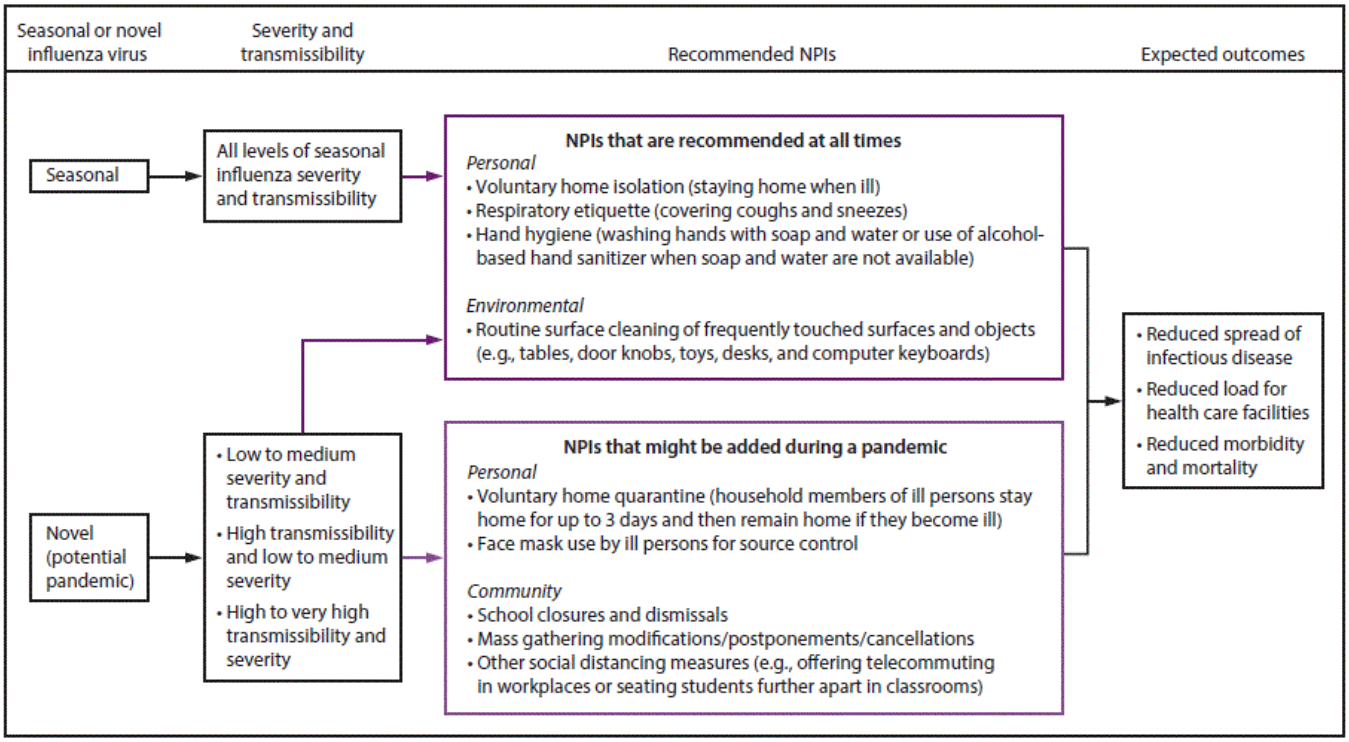

Figure 2: Phased addition of nonpharmaceutical interventions (NPI) to prevent the spread of pandemic influenza in communities. Source: CDC: Community Mitigation Guidelines to Prevent Pandemic Influenza – United States, *https://stacks.cdc.gov/view/cdc/45220 p. 12.*

For each recommended NPI discuss:

- Ways to increase public awareness and understanding of seasonal NPI behaviors, to build a foundation for additional NPI instructions in a pandemic.
- Identifying who should be involved in deciding when and how to implement potential pandemic NPI. Who has the ultimate authority to make the decision?
- How recommended potential pandemic NPIs will be implemented to optimize their effectiveness.
- The factors that might reduce the effectiveness of the NPI. For example, if schools are closed, how can we ensure that children do not diminish the effectiveness of this social distancing measure by congregating at the mall or other community location?

In their *Community Mitigation Guidelines to Prevent Pandemic Influenza – United States,* the CDC provides the following recommendations:

Voluntary home isolation: CDC recommends voluntary home isolation of ill persons (staying home when ill) year-round and especially during annual influenza seasons and influenza pandemics.

Respiratory etiquette and hand hygiene: CDC recommends respiratory etiquette and hand hygiene in all community settings, including homes, child care facilities, schools, workplaces, and other places where people gather, year-round and especially during annual influenza seasons and influenza pandemics.

Voluntary home quarantine: CDC might recommend voluntary home quarantine of exposed household members as a personal protective measure during severe, very severe, or extreme influenza pandemics in combination with other personal protective measures such as respiratory etiquette and hand hygiene. If a member of the household is symptomatic with confirmed or probable pandemic influenza, then all members of the household should stay home for up to 3 days (the estimated incubation period for seasonal influenza), starting from their initial contact with the ill person, to monitor for influenza symptoms.

Use of face masks by ill persons: CDC might recommend the use of face masks by ill persons as a source control measure during severe, very severe, or extreme influenza pandemics when crowded community settings cannot be avoided (e.g., when adults and children with influenza symptoms seek medical attention) or when ill persons are in close contact with others (e.g., when symptomatic persons share common spaces with other household members or symptomatic postpartum women care for and nurse their infants). Some evidence indicates that face mask use by ill persons might protect others from infection.

Use of face masks by well persons: CDC does not routinely recommend the use of face masks by well persons in the home or other community settings as a means of avoiding infection during influenza pandemics except under special, high-risk circumstances (https://www.cdc.gov/flu/professionals/infectioncontrol/maskguidance.htm). For example, during a severe pandemic, pregnant women and other persons at high risk for influenza complications might use face masks if unable to avoid crowded settings, especially if no pandemic vaccine is available. In addition, persons caring for ill family members at home (e.g., a parent of a child exhibiting influenza symptoms) might use face masks to avoid infection when in close contact with a patient, just as health care personnel wear masks in health care settings.

School closures and dismissals: CDC might recommend the use of preemptive, coordinated school closures and dismissals during severe, very severe, or extreme influenza pandemics. This recommendation is in accord with the conclusions of the U.S. Community Preventive Services Task Force (https://www.thecommunityguide.org/findings/emergency-preparedness-and-response-school-dismissals-reduce-transmission-pandemic-influenza), which makes the following recommendations:

- The task force recommends preemptive, coordinated school dismissals during a severe influenza pandemic.
- The task force found insufficient evidence to recommend for or against preemptive, coordinated school dismissals during a mild or moderate influenza pandemic. In these instances, jurisdictions should make decisions that balance local benefits and potential harms.

Social distancing measures: Even though the evidence base for the effectiveness of some of these measures is limited, CDC might recommend the simultaneous use of multiple social distancing measures to help reduce the spread of influenza in community settings (e.g., schools, workplaces, and mass gatherings) during severe, very severe, or extreme influenza pandemics while minimizing the secondary consequences of the measures. Social distancing measures include the following:

- Increasing the distance to at least 3 feet between persons when possible might reduce person to person transmission. This applies to apparently healthy persons without symptoms. In the event of a very severe or extreme pandemic, this recommended minimal distance between people might be increased.
- Persons in community settings who show symptoms consistent with influenza and who might be infected with (probable) pandemic influenza should be separated from well persons as soon as practical, be sent home, and practice voluntary home isolation.

Topic Four: Communicate Effectively

Barry emphasized the critical importance of risk communication during a pandemic. He described how the effectiveness of NPIs depends on public compliance. To achieve compliance, the public must trust the message and the messenger.

Based on Barry's PrepTalk and the recommendations found in CDC's Get Your Community Ready for Pandemic Influenza Using Nonpharmaceutical Interventions, discuss the following:

- How does your pandemic emergency communication plan align with the updated NPI recommendations?
- Do the strategies and messaging reflect Barry's recommendations based on lessons learned from prior pandemics?
- Have you exercised the plan to ensure that communications to the public are clear and consistent across organizations?
- How are you preparing your community now for the next pandemic?
- Who are the trusted spokespeople for specific audiences within your community and how will you ensure that elected leaders and first responders are communicating the same messages?
- Develop plans for educational outreach to the community, including business continuity planning, working with houses of worship, non-profits and faith-based organizations, and schools and day care centers.

Figure 3

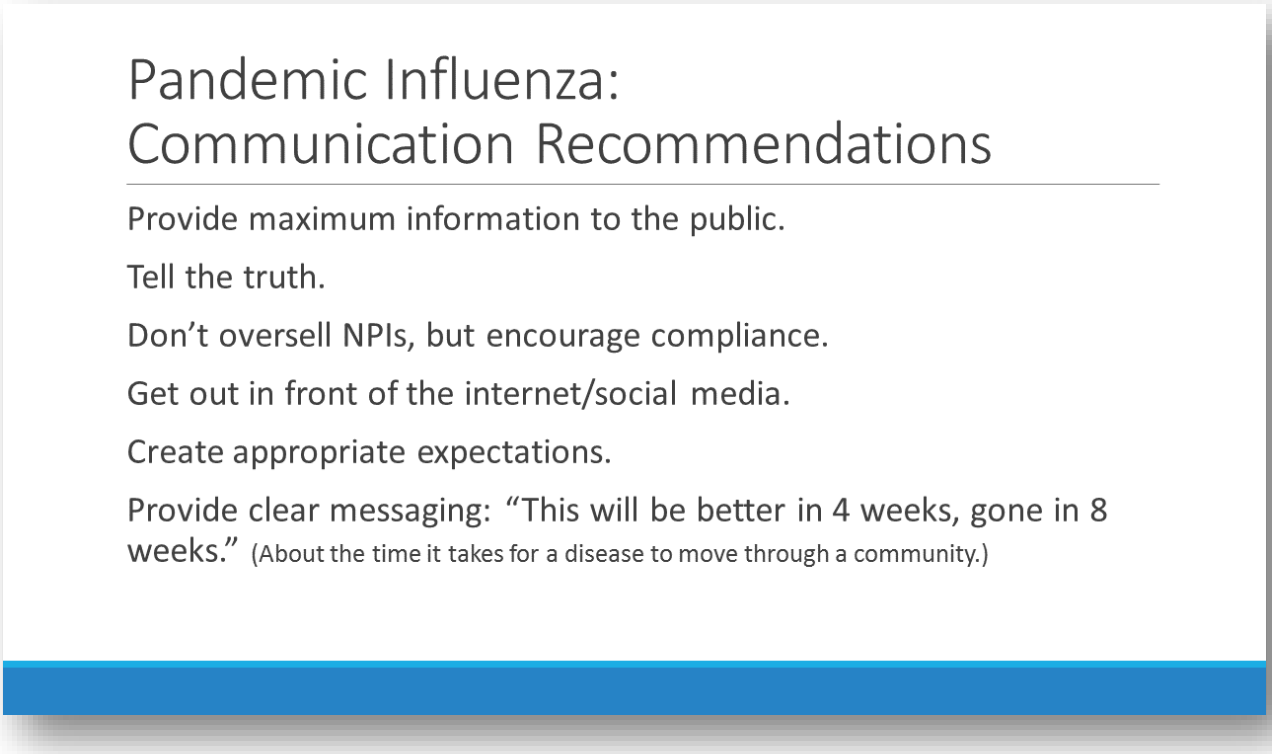

Figure 3: Pandemic Influenza Communication Recommendations. Source: John Barry

Recommended Next Steps

Create a plan and timeline with your working group to:

- Revise plans and processes as needed.
- Schedule a desktop exercise to include everyone in the decision-making process. As Barry says, this must be taken seriously, with realistically high levels of infection and death. CDC has a tabletop exercise designed for communities to test patient surge. See the Pan Flu Scramble Exercise in the resources below.
- Update your external communications plans.
- Disseminate CDC's audience-specific planning resources (included below) to the appropriate organizational leaders in your community.

Additional Resources

- NACCHO Directory of Local Health Departments: https://www.naccho.org/membership/lhd-directory
- Community Mitigation Guidelines to Prevent Pandemic Influenza – United States: https://www.cdc.gov/mmwr/volumes/66/rr/pdfs/rr6601.pdf
- CDC Pandemic Influenza Information and Resources: https://www.cdc.gov/flu/pandemic-resources/index.htm and influenza basics (https://www.cdc.gov/flu/keyfacts.htm)
- CDC Pandemic Influenza Questions and Answers: https://www.cdc.gov/flu/pandemic-resources/basics/faq.html
- Public Health Preparedness Capabilities: National Standards for State and Local Planning, Chapter 11 – Nonpharmaceutical Interventions, March, 2011: https://www.cdc.gov/phpr/readiness/00_docs/capability11.pdf
- Get Ready for Pandemic Flu:
    - Individuals and Households: https://www.cdc.gov/nonpharmaceutical-interventions/pdf/gr-pan-flu-ind-house.pdf
    - Educational Settings: https://www.cdc.gov/nonpharmaceutical-interventions/pdf/gr-pan-flu-ed-set.pdf
    - Workplace Settings: https://www.cdc.gov/nonpharmaceutical-interventions/pdf/gr-pan-flu-work-set.pdf
    - Event Planners: https://www.cdc.gov/nonpharmaceutical-interventions/pdf/gr-pan-flu-event-plan.pdf
    - Community and Faith-Based Organizations Serving Vulnerable Populations: https://www.cdc.gov/nonpharmaceutical-interventions/pdf/gr-pan-flu-com-faith-org-serv-vul-pop.pdf
    - Health Communicators: https://www.cdc.gov/nonpharmaceutical-interventions/pdf/gr-pan-flu-npi.pdf
- Pan Flu Scramble Exercise: https://www.cdc.gov/phpr/readiness/healthcare/panfluscramble.htm
- FEMA Comprehensive Preparedness Guide 101: https://www.fema.gov/media-library/assets/documents/25975
- Homeland Security Exercise and Evaluation Program: https://www.fema.gov/hseep