

Title: Deployment of the Strategic National Stockpile during the H1N1 Influenza Pandemic

Activities: Determine whether stockpile should be deployed

Stakeholders: National and subnational health authorities

Phases: Early response; Intervention

Years: 2009-2010

Countries: United States

Agent: H1N1 influenza A

Case study prepared by: Hannah Todd, July 18, 2020

Please include full case study text below this line.

In mid-April 2009, the Centers for Disease Control and Prevention (CDC) reported two confirmed cases of a new swine-origin strain of influenza A H1N1 in California. Cases had also been identified in Texas, Kansas, and New York. Experts were particularly concerned due to the cases' occurrence at an unusual time for the flu and the observed high mortality in young, healthy patients.

By April 26, 2009, there were a total of 21 cases in the United States. That same day, the United States government declared a nationwide public health emergency. Aware of the need for a intense, federally-funded response to this biological threat (with particular worry about its potential for dangerous mutation), the CDC then decided to release 25 percent of its influenza supplies from the Strategic National Stockpile (SNS) and send them nationwide to the states. SNS Personnel worked closely with state and local health department staff to identify needs and infrastructure to receive resources. Of note, the CDC made it clear that, once the materials left federal control, states were responsible for their maintenance, storage, security, and deployment. Resources deployed included antiviral drugs and personal protective equipment (e.g., masks and respirators, gowns, gloves, and face shields). Allocations were based on state populations.¹

The health crisis continued to grow, supporting the CDC's decision to deploy the SNS. By June 11, 2009, the United Nations' World Health Organization declared the first human influenza pandemic in more than four decades. From April 2009 to April 2010, the CDC estimated that there were as many as 89 million U.S. cases. Of these, there were as many as 403,000

¹ CDC. The 2009 H1N1 Pandemic: Summary Highlights, April 2009-April 2010. Updated June 16, 2010. <https://www.cdc.gov/h1n1flu/cdcresponse.htm>.

hospitalizations and 18,300 deaths. Moreover, a disproportionate number of children were affected compared to normal influenza seasons.

The deployment of the SNS in response to the H1N1 influenza outbreak was an overall success, delivering useful supplies to states in an appropriate time frame. However, this deployment, the largest to date in an emergency situation, illuminated the need for improving integration of operations of the SNS with the day-to-day medical supply chain. In particular, state and local partners were not clear on certain aspects of the supply chain.² There were also issues with materials expected by states versus those delivered and unclear/non-existent long-term storage guidelines.³ As well, the virus turned out to have a much lower virulence than pandemic planning scenarios had anticipated. More targeted use of the SNS could be facilitated by improved predictive methods that ensure the appropriate disbursement of resources.⁴

Please include case study summary text below this line.

The 2009 H1N1 influenza pandemic began in April 2009 with two reported cases in California. Concerns about the virus' virulence, severity in children, and potential for mutation led the United States to act quickly and vigorously, declaring a national public health emergency and deploying antiviral medications and personal protective equipment from its Strategic National Stockpile. Although the virus ended up being less virulent than anticipated, the resources were still well-received and illuminated areas for improvement in the future use of the SNS.

² Board on Health Sciences Policy; Health and Medicine Division; National Academies of Sciences, Engineering, and Medicine. The Nation's Medical Countermeasure Stockpile: Opportunities to Improve the Efficiency, Effectiveness, and Sustainability of the CDC Strategic National Stockpile: Workshop Summary. Washington (DC): National Academies Press (US); 2016 Oct 24. 2, The Strategic National Stockpile: Origin, Policy Foundations, and Federal Context. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK396378/>.

³ United States Government Accountability Office. Influenza Pandemic: Lessons from the H1N1 Pandemic Should Be Incorporated into Future Planning. June 2011. <https://www.gao.gov/assets/330/320181.html>.

⁴ HHS. An HHS Retrospective on the 2009 H1N1 Influenza Pandemic to Advance All Hazards Preparedness. Revised June 15, 2012. <https://www.hsdl.org/?view&did=714799>.