



An Innovative Strategy to Provide Services to Ill People and Reduce Demand on Medical Facilities during a Severe Pandemic

Background

The impact of a severe influenza pandemic could be overwhelming to hospital emergency departments, clinics, and medical offices if large numbers of ill people simultaneously seek care. Current surge planning guidance largely focuses on improving “supply” of medical care services to reduce surge on hospitals and other medical facilities during a pandemic. However, it’s critical that more planning be focused on reducing “demand” for such emergency and hospital services during a pandemic. One way to achieve this is by more appropriately matching patient needs with the various types of care, in order to divert the mildly ill and the worried-well from hospitals and emergency departments during a severe pandemic.¹

Learning from Experience: The H1N1 Influenza Pandemic

CDC’s initiative to develop a coordinated, national network of triage lines was largely inspired by the success of the Minnesota Flu Line, which was implemented during the 2009 H1N1 pandemic influenza response. Minnesota public health officials established the statewide hotline as an alternative to face-to-face care. Registered nurses staffed these telephone lines and triaged callers using an established protocol. They provided advice to callers about when and where they should seek care, and counseled callers on how to provide homecare to ill family members. Nurses staffing the line also provided access to antiviral medication prescriptions for those callers who met certain criteria. The Minnesota Flu Line served the needs of more than 27,000 callers between Oct. 21, 2009 and March 31, 2010 and is estimated to have prevented around 11,000 in-person healthcare visits to emergency departments, clinics and doctors’ offices.²

Flu on Call™ Project Description

Based on lessons from the 2009 H1N1 pandemic, the Centers for Disease Control and Prevention (CDC), in collaboration with the National Association of County and City Health Officials (NACCHO) and the Association of State and Territorial Health Officials (ASTHO), launched an effort to explore the acceptability and feasibility of using a national, coordinated network of triage telephone lines during a pandemic.

Through these triage lines, healthcare providers assess the health status of callers, match callers with the most appropriate care sites (e.g. hospital emergency department, outpatient, home), provide clinical advice, and provide access to antiviral medications, where appropriate. CDC, NACCHO, and ASTHO sought to create this coordinated national network by integrating existing telephone hotlines, including those of poison control centers (PCCs), nurse advice lines, United Way 2-1-1 information lines, and others.¹ As a result, the Nurse Triage

Line Project was launched in September 2011 and in 2013, the project was renamed **Flu on Call™** to better reflect that a range of healthcare professionals, not only nurses, would implement the tele-triage system.

To develop and implement **Flu on Call™**, CDC convened a core project team of representatives from NACCHO, ASTHO, the Oak Ridge Institute for Science and Education (ORISE), the American Association of Poison Control Centers (AAPCC), United Way Worldwide/2-1-1, the Department of Veteran Affairs (VA), the Health Resources and Services Administration (HRSA), and the Public Health Management Corporation (PHMC). This core project team has worked together to conduct research, convene stakeholder meetings, design, participate in, and evaluate simulation exercises, present findings at national conferences, and develop an operational plan for **Flu on Call™**. In addition to developing a core project team, CDC has formed key partnerships with health plans and professional health care organizations.

The project is currently focusing on the development and implementation of plans and system capabilities with poison control centers and call centers identified by the American Association of Poison Control Centers (AAPCC) and United Way Worldwide/2-1-1. CDC continues to explore the feasibility and acceptability of developing a national call center model to improve access to antiviral medications over the telephone to symptomatic callers, if appropriate. Additionally, CDC, ASTHO, and NACCHO are working with state and local health departments to better understand how this work can be incorporated into existing surge plans.

NACCHO & ASTHO Advisory Groups

To ensure that **Flu on Call™** adequately incorporated state and local perspectives, ASTHO and NACCHO each formed ancillary advisory bodies made up of state and local members, respectively. The ASTHO Advisory Committee is made up of state health officials, state epidemiologists, PCC representatives, and other state public health staff. The NACCHO ad hoc **Flu on Call™** workgroup includes two PCC representatives and seven local health representatives; the workgroup works closely with NACCHO's Antiviral Dispensing Project workgroup.

Project Milestones

Summarizing lessons learned during the 2009 H1N1 pandemic – ASTHO and NACCHO jointly developed a summary document, *Report on the Role of Flu Information and Triage Lines in Reducing Surge in Healthcare Facilities and Increasing Access to Antiviral Medication during the 2009 H1N1 Pandemic*. This report describes the operations of nurse triage lines that triaged callers and provided antiviral medications during the 2009 H1N1 influenza pandemic. Also included were those examples and lessons learned that were instrumental in shaping **Flu on Call™**. The report also provides clinical protocol templates, information identifying outstanding policy, legal, medical, and nursing practices, and recommendations for resolving these issues.

Legal Report – NACCHO, ASTHO, and CDC partnered with legal experts from the Arizona State University Sandra Day O'Connor College of Law to produce an exploratory report, *National Nurse Triage Line Project: A Review of Legal and Policy Issues*. The report identifies the legal and policy challenges related to establishing a national triage line system that can effectively handle mass use during major emergencies. The report suggests viable solutions based on existing interpretations of law and practice, and offers lessons learned from prior emergencies. The report provides multiple examples of broad federal, state, and local laws, although it does not address jurisdictions' specific legal provisions. Public and private actors are encouraged to independently assess their particular legal infrastructure consistent with key issues identified in the report.

National-Level Stakeholders Meeting – On March 20, 2012, CDC hosted the Nurse Triage Line Project Stakeholders Meeting in Atlanta to introduce the project concept to stakeholders and to explore its feasibility and acceptability. Ninety representatives from federal, state, and local public health agencies, several healthcare professional associations, health insurers, emergency managers, and poison control centers attended the meeting. Other participants include triage line subject matter experts and other community call centers, public health law professionals, and public policy leaders. During this meeting an additional component of what is now **Flu on Call™** was introduced: an opt-in mobile text messaging service designed to promote antiviral medication adherence. NACCHO, CDC, and Voxiva, Inc., a mobile technology company, are currently refining this system’s infrastructure, updating messaging content, and exploring service enrollment strategies.

Community Stakeholder Meetings – In March and May 2013, NACCHO, ASTHO and CDC convened two community stakeholder meetings in Seattle, WA, and Portland, ME, respectively. The objectives of these meetings were to: 1) Explain the Nurse Triage Line (now, **Flu on Call™**) project, and its current progress to state and local colleagues and solicit their input; 2) Understand current state and local plans for pandemic surge mitigation and how the Nurse Triage Line (**Flu on Call™**) could be integrated into existing surge plans; 3) Discuss how Nurse Triage Line (**Flu on Call™**) implementation might impact and augment state and local preparedness plans; 4) Examine opportunities, as well as barriers and challenges, related to the project implementation; 5) Understand how best to coordinate a network of triage lines with community stakeholders; and 6) Develop a summary of needed resources, key issues/challenges, and potential solutions.

Approximately 40 – 80 key stakeholders attended each meeting. Attendees included representatives from local health departments, state health departments, 2-1-1 centers, poison control centers, local nurse triage lines, healthcare coalitions, emergency management services, and others.

Simulation Exercise (SIMEX) - In winter 2013, NACCHO and ASTHO staff and workgroup members participated in the planning, implementation, and evaluation of the PCC/2-1-1 SIMEX in El Paso, Texas. NACCHO and ASTHO participated in core team planning calls led by CDC, along with other stakeholder organizations. Two NACCHO staff and two ASTHO staff participated in site visits to the El Paso Health Department, which houses the 2-1-1 Center, and the West Texas Regional Poison Center in January 2013.

NACCHO staff served as liaisons to local partners, including the local health department/2-1-1, local emergency management, and fire/EMS, while ASTHO served in the same role at the state level. The PCC/2-1-1 SIMEX was successful, showing how 2-1-1 Centers and PCCs can operate as a coordinated call center system to manage a surge in callers seeking medical advice and/or treatment during a severe influenza pandemic. Information gathered from this exercise has been incorporated into an early operational plan and served as a launching pad for the Seattle and Portland community stakeholder meetings.

Preparedness Summit Workshop – On April 3rd 2014, NACCHO and CDC held an all-day workshop at the 2014 NACCHO Preparedness Summit entitled, “Innovative Methods to Improve Access to Pandemic and Influenza Countermeasures”. The project team had three objectives: describe new ways of accomplishing countermeasure distribution during an influenza pandemic, discuss the value of partnerships with entities such as pharmacies, 2-1-1 centers and poison control centers, and describe how alternative countermeasure distribution methods could be integrated into state and local pandemic, medical surge, and risk communications plans.

In addition to CDC providing overview of **Flu on Call™**, state and local attendees participated in regional small group discussions to think through how they could best implement **Flu on Call™** in their communities. The workshop convened over a hundred stakeholders from dozens of state and local health departments.

211/PCC Pilot Exercises – On May 20th, the CDC held exercises to test the 2-1-1 piece of the **Flu on Call™** project; the PCC piece was tested on May 22nd. Approximately 40 volunteers, including NACCHO and ASTHO staff, received scripts and simulated patient calls to participating 2-1-1 centers, who responded to questions using pre-established protocols. Each testing phase was followed by an after-action hotwash.

211/PCC Pilot Exercises – On June 27th, the **Flu on Call™** system was tested in its entirety: volunteers were again assigned scripts and were tasked with calling 2-1-1 centers. 2-1-1 centers either provided information or transferred callers to their local poison control center. PCCs assessed callers' health using pre-established protocols and then matched them to the most appropriate form of care. This exercise showed that the **Flu on Call™** concept is viable and can be successfully managed by multiple partners.

211/PCC Site Visits – Throughout summer 2014, the core project team will make site visits to 2-1-1 call centers and poison control centers involved in the **Flu on Call™** project. ASTHO and NACCHO have extended invitations to representatives from state and local health departments located near the various sites. The purpose of these visits is to establish and/or strengthen partnerships between 2-1-1 call centers, poison control centers, and state and local health departments, to clarify understanding of the **Flu on Call™** project and stakeholder roles, to discuss potential challenges and opportunities in implementing **Flu on Call™**, and to decide on next steps.

Role of State and Local Health Departments

Given the positive feedback from public health officials, the project team will continue to work with state and local stakeholders during the preparedness (i.e. "surge readiness") phase of the project. As part of this phase, participating state and local health departments will update their pandemic influenza web-based resources so that 2-1-1 centers can easily access and share localized resources with callers. When **Flu on Call™** is activated, poison centers and 2-1-1 call centers will rely on state and local health departments for on-the-ground situational awareness and access to key public health guidance and messages. By providing timely and accurate information to 2-1-1 centers operating under **Flu on Call™**, state and local health departments ensure their communities receive the most pertinent information.

The project team is also working with state and local health departments to refine and improve operational plans and procedures.

Conclusion

Flu on Call™ is a national-level initiative that has the potential to positively impact pandemic response in communities throughout the United States. The system builds upon existing state and local planning efforts and will potentially reduce the burden on medical facilities. Through continued collaboration, **Flu on Call™** offers local and state health departments the opportunity to enhance their own pandemic influenza planning efforts by leveraging the resources and strengths of partner organizations and systems.

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REFERENCES

1. Koonin, L.M., Hanfling, D. (2013). Broadening Access to Medical Care during a Severe Influenza Pandemic: The CDC Nurse Triage Line Project. *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science*, 11(1).
2. Spaulding, A.B., Radi, D., Macleod, H., Lynfield, R., Larson, M., Hyde, T., et al. (2012). Design and Implementation of a Statewide Influenza Nurse Triage Line in Response to Pandemic H1N1 Influenza. *Public Health Reports*, 127.