

Appendix A

Abbreviations and Acronyms

ASPR	Assistant Secretary for Preparedness and Response
CAT	Community Assessment Tool
CDC	Centers for Disease Control and Prevention
CSC	crisis standards of care
ED	emergency department
EMS	emergency medical services
EMTALA	Emergency Medical Treatment and Active Labor Act
EOC	emergency operations center
HMDO	health and medical delivery organization
HHS	U.S. Department of Health and Human Services
HPA	Healthcare Preparedness Activity
HSEEP	Homeland Security Exercise and Evaluation Program
IOM	Institute of Medicine
MAA	mutual aid agreement
MAC	multi-agency coordination
MAPP	Mobilizing for Action through Planning and Partnerships
MOA	memorandum of agreement
MOC	model of care
MOU	memorandum of understanding
NIMS	National Incident Management System
NPLI	National Preparedness Leadership Initiative
ORISE	Oak Ridge Institute for Science and Education
POD	point of dispensing
VA	Veterans Affairs

Appendix B

Definition of Terms

Alternate Care Site

A designated building, facility, or location for the provision of healthcare within the framework of an alternate care system.

Alternate Care System

A "system" of healthcare delivery set up for the provision of medical care during a medical surge that has overwhelmed the existing healthcare system. It involves the redirection of noncritical patients to nonhospital healthcare facilities (e.g., existing clinics and urgent care settings) as well as considers the opening of a healthcare site apart from the existing healthcare facilities. What the "system" strategy attempts to do is to determine how the capacity as well as capabilities or services provided at existing facilities could be enhanced.

Alternate Care System Options

The range of healthcare strategies available to a community from which to select in order to safely alter the provision of care during heavy surge.

Capability

The range of services a healthcare provider offers.

Capacity

The maximum number of people for which a healthcare provider can deliver its range of services.

Coalition

A structured arrangement for cooperation and collaboration between otherwise unrelated groups or organizations, in which each group retains its identity, but all agree to work together toward a common, mutually agreed-upon goal.¹

¹ From What is a Coalition?, Minnesota Department of Health. Available at http://web.archive.org/web/20130407153749/http://www.health.state.mn.us/divs/hpcd/chp/hpkit/text/team_what.htm

Core Partners

The sectors (e.g., public health, healthcare) and their subsectors (e.g., health departments, hospitals) that play an active role in the day-to-day delivery of healthcare and, therefore, are directly involved in the community's model of care.

Crisis Standards of Care

Guidelines developed before disaster strikes to help healthcare providers decide how to administer the best possible care when there are not enough resources to give all patients the level of care they would receive under normal circumstances.²

Essential Healthcare Services

Healthcare services that are prioritized (i.e., given top priority) during a disaster or emergency to meet the demand of heavy surge.

Healthcare Functions

Subservices of a facility's healthcare services. For example, imaging is a healthcare service. However, several subservices are offered within this service, such as x-rays, mammograms, and magnetic resonance imaging. For the purposes of the *Framework*, these subservices are referred to as *functions* of the service.

Healthcare Provider

Any agency, department, or organization in your community that provides healthcare services.

Hospital Preparedness Program (HPP)

A program managed by HHS/ASPR that provides leadership and funding through grants and cooperative agreements to states, territories, and eligible municipalities to improve surge capacity and enhance community and hospital preparedness for public health emergencies.

Medical Surge

The ability to provide adequate medical evaluation and care during events that exceed the limits of the normal medical infrastructure of an affected community (through numbers or types of patients). Medical surge encompasses the ability of healthcare organizations to survive

² From *Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response*, Institute of Medicine, 2012.

a hazard impact and maintain or rapidly recover operations that were compromised (a concept known as medical system resiliency).³

Medical Surge Capacity

The ability to evaluate and care for a markedly increased volume of patients—one that challenges or exceeds the normal operating capacity.⁴

Medical Surge Capability

The ability to manage patients requiring unusual or very specialized medical evaluation and care. Surge requirements span the range of specialized medical services (expertise, information, procedures, equipment, or personnel) that are not normally available at the location where they are needed.⁵

Model of Care (MOC)

A concept used to describe how community healthcare providers deliver care during specific situations to meet the needs of their patients. This model can represent day-to-day patient care or the provision of care during moderate or heavy surge situations. A MOC includes (1) a diagram of patient flow through various community healthcare providers and their supporting partners and (2) a narrative description of this patient flow.

MOC Diagram

A graphic illustration of the points of patient care from entry to exit within a healthcare delivery system.

MOC Narrative

A written description of the interconnected sequence of events in a community's healthcare delivery system.

Moderate Surge

An increase in patients and healthcare demand that can be managed within existing facility capabilities and capacities without disturbing or curbing day-to-day services.

³ From *Medical Surge Capacity and Capability: A Management System for Integrating Medical and Health Resources During Large-Scale Emergencies*, U.S. Department of Health and Human Services, 2007.

⁴ Ibid

⁵ Ibid

Noncore Partners

The sectors (e.g., emergency management, government, support services) and their subsectors (e.g., law enforcement, mayor's office, faith-based organizations, community service organizations) that do not play an active role in the day-to-day delivery of healthcare and, therefore, are not directly involved in the community's model of care.

Planning Team

A group of subject matter experts who have undertaken a planning mission and who have a direct stake in the outcome of the effort.

Public Health Emergency Preparedness (PHEP) Cooperative Agreement

A program administered by CDC's Office of Public Health Preparedness and Response, Division of State and Local Readiness to help public health departments strengthen their abilities to respond to all types of public health incidents and build more resilient communities.

Sector

A key stakeholder within the preparedness and response community whose components (subsectors) share similar characteristics. For example, healthcare is considered to be a *sector* whereas hospitals, primary care providers, long-term care agencies, urgent care centers, and similar healthcare providers are considered to be *subsectors* of the healthcare sector.

Subsector

See "Sector"

Trigger

An incident or set of circumstances that causes activation of a predeveloped system or plan that is designed to diminish the impact of the event or circumstances (e.g., an alternate care system, an emergency response plan).

Appendix C

Sample Model of Care Narrative

Community Demographics

Sample City¹ is a mid-sized city with a population of 65,000 (an additional 3,000 join us daily at the community college). It is located in a primarily rural area and is approximately 26.5 square miles in size in Mock state. The city is bordered on the east by the Red River, and its other borders are surrounded by rolling farmland. One railroad line runs north to south through the city; two interstate highways intersect the middle of the city.

Major threats of damage to the city come from tornadoes, winter snowstorms, and occasional river flooding.

The economy of the region is primarily agrarian based. A majority of the population is White, nonHispanic. Percentages of other races are African-American, 10%; Hispanic, 4%; and other, 3%. Approximately 33% of the population lives at, or below, the poverty level.

Sample City is surrounded by small townships that generally depend on volunteers and health facilities in the city for healthcare. The public health department, emergency services, and healthcare sectors tend to work well together in planning for emergencies, and provide equitable care to community members.

Core Partners and Their Capacities

Sample City² has two hospitals:

- Metropolitan Hospital, a not-for-profit center, is located slightly north of downtown and is a teaching hospital and is associated with the University of Mock State in Metro Sample (large urban) City. It is a Level 1 trauma center with 238 staffed beds and approximately 1500 employees consisting of both professional staff and support staff. The emergency department (ED) has 10 beds. The hospital has 10 operating suites, a 10-bed critical care unit, and a large Interventional Radiology program. The hospital also can perform magnetic resonance imaging (MRI) and computerized axial tomography (CAT) scans. Metropolitan stays at 92% to 96% occupancy all year. At times during

¹ Names of cities, hospitals, and other entities in this narrative are fictitious.

² Core Partners are the sectors (i.e., public health, healthcare) and their subsectors (e.g., health departments, hospitals) that play an active role in the day-to-day delivery of healthcare and, therefore, are directly involved in the community's MOC.

Community Planning Framework for Healthcare Preparedness

influenza season, measures are instituted to do Fast Track (rapid assessment and treatment of minor illness and injury) in the ED.

- Suburban Hospital, located in the southwest quadrant of the city, also is a teaching hospital and associated with the same university as Metropolitan. It is supported by county funding to provide healthcare for populations without health insurance and the city's homeless population. This hospital is designated as a Level 2 Trauma Center with 130 inpatient beds and approximately 980 employees including professional and support staff. The ED has 22 beds. The hospital has 6 operating suites, a 10-bed critical care unit, and the ability to do CT Scans. Suburban Hospital has remained at above 96% capacity for several years and has repeatedly requested funding for capital expansion, but has not received that funding.

Emergency medical services (EMS) is operated by a private firm. It consists of 10 ground ambulances and 2 air ambulances under contract for direction and control of Metropolitan Hospital, which has 1 helipad.

Sample City Public Health Department operates a community clinic for the uninsured and underinsured. They offer routine immunizations (approximately 10 patients per day), WIC (300 clients) and TB Control (10 to 20 per week) as well as a walk-in clinic (20 clients/day) for minor illness and injury. The Department also has an Ask-a-Nurse telephone line that operates from 9:00 a.m. to 5:00 p.m., Monday through Friday, and reports a volume of 20 to 35 calls per day.

The city has two independent urgent care centers that are each open 13 hours a day and report patient volume of 40 to 100 (flu season) per day. They each have one physician on duty at all times, two RN's, one laboratory and radiology tech (each for 8 hours only) and three patient care techs with overlapping shifts. Each center reports that it does fluid replacement therapy, suturing and simple fracture management during routine days.

Sample City has 30 physician practices of varying size, with none larger than four physicians. All report they are booked most of the day, every day.

Two privately owned dialysis centers operate in the city and provide for 6-day-a-week dialysis of patients. Each patient takes from 3 to 5 hours for dialysis, and each center is at 88% to 92% capacity on a continuing basis. Fresenius owns both centers.

The community also has a mental health clinic that is privately owned and run by a psychiatrist and clinical psychologist. They report a client base of ~ 400 patients who seek care on a routine basis—leading to a weekly volume of 40 to 50 clients.

Community Planning Framework for Healthcare Preparedness

Two skilled-nursing facilities with a patient volume of 60 each operate in the community. They report being at 78% to 85% capacity on a routine basis. One of the facilities has a five-bed Alzheimer's locked unit.

Three assisted living facilities within the city report that a capacity for up to 15 clients each and are at 80% to 85% capacity on a routine basis. They provide food, laundry service, and cleaning service for their clients and monitor their medications.

The surrounding communities have physician practices, and one critical access hospital operates in a community 40 miles to the north of the city. The critical access hospital usually sends three to five patients a week to Metropolitan Hospital.

Sample City does not have a medical examiner³ but does have an elected coroner who uses one of the three local funeral homes to determine cause of death in suspicious cases. The coroner is a part-time official who has been in this position for over 10 years and works closely with the state and local police. One funeral home has the ability to do cremations.

Noncore Partners and Their Capacities

Sample County Emergency Management Agency (SCEMA)⁴ has jurisdiction over both the county and the city. SCEMA has a politically appointed Emergency Manager and a building dedicated as a functional emergency operations center (EOC). This building also has space available to staff a joint information center (JIC).

Sample City has an elected mayor, city manager, and seven city board members who oversee budgetary and regulatory matters. The mayor has the authority to make emergency decisions for the city with the support of the board members.

Several faith-based and community-based organizations operate in Sample City: the Salvation Army, Goodwill Enterprises, American Red Cross, Meals on Wheels, and the Jewish Educational Alliance. Several of these organizations provide transportation to and from medical

³ A coroner or medical examiner is considered a core partner even though he/she doesn't handle "live" patients because, in a serious public health emergency, fatality management is critical to protecting the lives of others in the community.

⁴ Noncore Partners are the sectors (i.e., emergency management, government, support services) and their subsectors (e.g., law enforcement, mayor's office, faith-based organizations, community service organizations) that do not play an active role in the day-to-day delivery of healthcare and, therefore, are not directly involved in the community's MOC.

appointments. Some provide daycare services for the elderly. Some provide meals for the elderly and the homeless.

Sample City has two schools (kindergarten through grade 12) and a community college. These schools each have cafeterias and gymnasiums that may be suitable for an alternate care site. They also have large parking lots that could be used as sites for the distribution of medical countermeasures (e.g., vaccines, antiviral medications). These schools also have school nurses, but the nurses are shared between school districts.

Patient Flow

An individual seeking care in Sample City has five potential options for entering the city's healthcare system: call the Ask-a-Nurse telephone line, call 9-1-1, go to their primary care physician, go to an urgent care center, or go directly to a hospital ED. These options are described below.

Ask-a-Nurse Telephone Line

If the individual seeks care during the course of a weekday, he/she can call Sample City Health Department's Ask-a-Nurse telephone line. The nurse answering the call will triage the patient to determine the appropriate level of care. The answering nurse has the option of transferring the call directly to 9-1-1.

9-1-1

The individual dials 9-1-1 and speaks to an operator who dispatches EMS to triage the patient to the appropriate level of care, which might include the ED, hospitalization, or home care.

Primary Care Physician

The individual calls or drives or is driven to their primary care physician's office to be triaged to the appropriate level of care, which might include the ED, hospitalization, or home care.

Urgent Care Center

The individual drives or is driven to an urgent care center to be triaged to the appropriate level of care, which might include the ED, hospitalization, or home care.

Hospital ED

The individual drives or is driven either by EMS or another entity to the hospital ED to be triaged to the appropriate level of care. The patient may be treated and released to home care or sent to an inpatient unit (medical, surgical, or critical care) of the hospital where he/she will be treated until ready for a lower level of care, such as home health, assisted living, skilled nursing, or rehabilitation. If the patient dies in the hospital, he/she will be transferred to the Sample City Morgue for post mortem care.

Appendix D

Case Study: Development of an Alternative Care System

Overview

In an effort to systematically address the challenges of a medical surge situation, a team of representatives of Summit County, Ohio, made the decision to develop a comprehensive alternative¹ care system², rather than identifying individual alternate care sites. Through this process, a range of options were researched and developed, with the intent of meeting the needs of the community during a medical surge situation by providing varying levels of education and care. The options range from public education and the use of a public call-center, all the way to standing up a full-scale hospital for influenza patients.

This systematic process included a comprehensive, county-wide resource assessment, development of discipline-specific profiles and assumptions, and a general education component on the capabilities of affected disciplines. The process also provided an opportunity for community partners to exchange information and learn about the roles and responsibilities of each discipline on a day-to-day basis.

A stakeholder workshop proved instrumental in identifying advantages and disadvantages of each potential option, and also helped determine which option(s) would be implemented at the time of a medical surge event. The input of key decision makers helped facilitate the county-wide integration of this model into the Summit County Emergency Operations Plan, with each option further developed with respect to its implementation within the community.

The Process

The Summit County team undertook a seven-step process to develop an alternate care system and identified an estimated timeframe to complete each step. These steps and corresponding timeframes for completion along with the subtask undertaken by Summit County are provided below.

¹ Summit County planners use the term *alternative care system* whereas the authors of the *Framework* prefer to use the term *alternate care system*. All other instances of *alternative* used in this case study have been changed to *alternate*.

² *Development of an Alternative Care System, A Workbook for Community Planners Preparing for Medical Surge* prepared by the Summit County Health District, Summit County Emergency Management Agency, and Akron Regional Hospital Association. Available at <http://www.scphoh.org/PDFS/PDF-EmergPrep/ACS%20WORKBOOK%20TEMPLATE%20-No%20PP.pdf>.

Develop a Framework

Based on weekly meetings, this task took approximately 4 weeks to complete. Summit County planners undertook six subtasks to complete this task as described below.

Establish the Planning Team

The Summit County planning team included representatives from the Emergency Management Agency (EMA), hospitals, and public health, as well as a scribe to capture information as it was processed over the scope of the entire project.

Summit County has a long history of collaboration on initiatives, which allowed for the development of a strong and cohesive planning team. A key component to the success of the planning team was keeping the team small. The smaller team was able to accomplish more, there was greater availability for meetings, the members had a solid knowledge base of community resources, and if specific information was required for a certain task, the members knew where to go for information.

The public health representative acted as the lead of the planning team.

Lesson Learned

Keeping the planning team small was a very effective strategy.

Establish the Mission of the Alternate Care System

The mission statement, as well as goals and objectives, were developed over a span of two meetings to allow time to work through the process of identifying those components. Summit County's mission statement was to identify and provide varying levels of healthcare outside the existing hospital infrastructure in response to a medical surge situation.

Develop Goals and Objectives of the Alternate Care System

Summit County's goal was to develop an alternate care system to be used when medical surge capacity in the local healthcare system has been challenged and/or exhausted. Summit County recognized the need to have the alternate care system be a community-wide decision. In that effort, Summit County planners decided to hold a stakeholder workshop to bring together key decision makers for input on how the development of the alternate care system would occur.

Establish Frequency of Planning Team Meetings

Summit County's planning team met every other week, based on availability and the necessary timeframe for planning a large stakeholders' meeting.

Determine the Date and Location for the Stakeholder Workshop

Summit County held their stakeholder workshop in September 2008 in Chautauqua, New York over a 2½-day period, with approximately 55 people in attendance. The month of September was chosen based on the availability of the majority of invited participants, as well as weather conditions. The location was chosen because Chautauqua is approximately 150 miles from Summit County, and experience has shown that the best results are yielded when participants are at a sufficient distance that they cannot return home or back to work on a daily basis. The location also provided important opportunities for networking outside the work environment. Summit County's finances were grant-supported.

Establish the Timeframe for the Project

Summit County began working on this project in November 2007. The planning team established a time frame of November 2007 to September 2008 to accomplish all of the tasks identified above.

Develop Discipline Profiles

This task took approximately 4 months to complete.³ Summit County planners undertook seven subtasks to complete this task as described below.

Establish Objectives for the Profile Development Process

Summit County developed three objectives related to the profile development process:

- Identify disaster assumptions pertinent to each discipline, based on a pandemic influenza situation.
- Identify resources that will be available during a pandemic influenza situation.
- Identify at what point resources will be exhausted during a pandemic influenza situation.

³ Disciplines are the core and noncore partners discussed in the *Framework*.

Identify Disciplines to Profile

Summit County developed profiles for the disciplines listed below. Information was gathered in face-to-face meetings, one per discipline, using an informal, open-ended approach.

- Public health
- Hospitals
- Dispatch/communication centers
- Fire/EMS
- Law enforcement
- Home healthcare
- Primary care physicians' offices
- Urgent care centers
- American Red Cross Blood Services
- Social service agencies (including: Children's Services Board; Area Agency on Aging; Summit County Board of Mental Retardation/Developmental Disability; Alcohol, Drug and Mental Health Board; Department of Jobs and Family Services; Haven of Rest [homeless shelter]; International Institute)

Lessons Learned

- Getting long-term care facilities to the table was difficult because of the disparate and complex nature of that industry.
- Committing resources and time was difficult for primary care physicians, but potential for reaching this group exists through the Office Managers' Association.
- Social service agencies proved to be such a diverse group with such widely varying characteristics that the Summit County planning team decided to meet again separately with the larger social service agencies to ensure that their information was appropriately captured.

Community Planning Framework for Healthcare Preparedness

- Summit County identified the following additional disciplines to be profiled: the court system; sheriff's office; incarceration facilities; probation department; faith-based organizations; dialysis centers; and schools.

Determine Invitees from Disciplines

Based on the disciplines identified in the above task, executive-level representatives were invited to the discipline profile development meetings. Representatives from EMS /fire, law enforcement, and dispatch were invited from small, medium, and large jurisdictions in the county. Each of the three health departments in the county sent representatives from their Environmental Health, Nursing, Epidemiology, and Administration divisions. Hospitals were represented by the Akron Regional Hospital Association, which developed the regional hospital pandemic influenza guidelines. The larger social service agencies were represented, and it was subsequently determined to meet again with that group because of the widely divergent focus of the numerous social service agencies in the county.

Address the Logistics of the Discipline Profile Meetings

Summit County's discipline profile development meetings were all held at the Summit County Emergency Operations Center (EOC), which provided an opportunity for agencies unfamiliar with the EOC to gain an understanding about its role and function and view it firsthand. The duration of each discipline's meeting was approximately 2 hours, and two meetings were held per day. Invitations to the profile development meetings were sent out via email.

Develop Questions to Ask of Each Discipline Being Profiled

General information was obtained about individual agencies, including the services they provide, hours of operation, and general availability of resources (human and material). In addition, the following information was gathered:

- How they communicate with their clients and staff.
- At what point internal resources would be exhausted and the steps they would take then.
- How an absenteeism rate of 40% for 10 to 14 days would impact the daily function of their agency.
- Whether they have a continuity of operations plan (COOP) and/or a pandemic influenza plan in place.

Community Planning Framework for Healthcare Preparedness

- Feasibility of just-in-time training.
- Impact of social distancing recommendations.

Identify Experienced Facilitators to Conduct Discipline Profile Meetings

Summit County used members of the planning team as facilitators, which helped provide continuity throughout the discipline assessment process and subsequent profile development.

Create Discipline Profiles

The planning team gathered general resource information about each discipline prior to meeting with them, so that the information could be confirmed by those in attendance, rather than "starting from scratch." Summit County developed assumptions for the following disciplines:

- Public health
- Hospitals
- Law enforcement
- Fire/EMS
- Social service agencies
- Schools

Develop the Options Document

This task took 3 to 6 months to complete. Summit County planners undertook two subtasks to complete this task as described below.

Research Existing Alternate Care Site Plans and Develop a Rationale for Developing an Options Document

Summit County researched *The Prospect of Using Alternative Medical Care Facilities in an Influenza Pandemic*.⁴ Additional information was gathered from other sources.

⁴ Clarence Lam, Waldhorn R, Toner E, Inglesby T, O'Toole T. The Prospect of Using Alternate Medical Care Facilities in an Influenza Pandemic. *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science*, Volume 4, Number 4, 2006.

Establish Potential Levels of Care Outside the Hospital Setting

Summit County created an options document detailing potential levels of care outside the hospital setting (see Attachment on page 241).

Prepare for the Stakeholder Workshop

This task was completed concurrently with the tasks outlined above. Summit County planners undertook eight subtasks to complete this task as described below.

Establish Mission, Purpose, Goals, and Objectives

Summit County's mission was to identify and provide varying levels of healthcare outside the existing hospital infrastructure in response to a medical surge situation. The purpose of the workshop was to bring together pertinent decision makers from public health, hospitals, health care, fire, law enforcement, emergency medical services, the emergency management agency, special needs organizations, dispatch centers, businesses, the community, elected officials, schools, faith-based organizations, the Medical Reserve Corps, the Medical Society, and state partners to identify and address issues associated with alternate care during an influenza pandemic in Summit County, Ohio. The goal was to develop an alternate care system to be used when medical surge capacity in the local healthcare system has been challenged and/or exhausted. The objectives were divided into pre-workshop, workshop, and post-workshop segments.

Confirm the Date, Time, Location, Transportation, Food, and Reimbursement Issues

Summit County chose late September to have a 2½-day workshop in Chautauqua, New York, which was approximately a 2-hour drive from Summit County. Historically, Summit County has found that active participation and commitment from stakeholders have been enhanced when the location has been far enough from home base to discourage participants from returning home after each day. The location that Summit County chose also provided opportunities for recreation and networking.

Develop a List of Invitees

The planning committee identified specific individuals from selected disciplines to be invited to the workshop. The individuals were selected on the basis of their authority to speak for their agency/organization, and for their history of active participation in these types of discussions. To meet the objectives of the workshop, the planning team did not allow an invited individual to send a representative on their behalf. If an invited individual could not come, the planning team selected another representative.

Lesson Learned

Despite advance planning, some high-level decision makers were not available, and Summit County identified additional disciplines that should have been invited, such as legal, home healthcare, hospice, court system, and the American Red Cross.

Invite Participants

Multiple methods were used to invite participants, starting with direct, personalized phone calls in which the goals, objectives, and time commitment of the workshop were detailed. A standardized invitation was mailed to participants 3 to 4 months prior to the event, along with information on the venue, reimbursement issues, and a registration form. Follow-up phone calls were made to confirm commitment. The goals, objectives, and time commitment were detailed in all modes of communication.

Identify Tools to Use at the Workshop

Summit County worked with the Oak Ridge Institute for Science and Education (ORISE) to develop the facilitation tools that were used at the workshop, such as laptops, projects, flipcharts, and portable microphones.

Create an Agenda for the Workshop

The planning team worked with CDC and ORISE to develop the agenda. Based on a 2½ day workshop, the agenda included an introduction of the project, introduction of the participants, review of the purpose and objectives, sharing of the discipline-profiling process, educational information regarding pandemic influenza and the scope and function of the Emergency Management Agency, an introduction of the options document, facilitation of small group breakout sessions, and the final decision of the group.

Assign Breakout Sessions

Participants were assigned to one of four breakout groups to ensure there was adequate representation of each discipline in each workgroup. Summit County attempted to have representatives from the following disciplines in each workgroup: law enforcement; dispatch; EMS/fire; hospitals; physicians; faith-based organizations; schools; and public health. Given the limited number of attendees, some disciplines were not represented in each group. Summit County used ORISE staff to facilitate the breakout sessions.

Lessons Learned

- Stronger representation was needed from hospital senior management and representatives from Akron Public Schools.

Community Planning Framework for Healthcare Preparedness

- More representation was needed from long-term care facilities, elected officials, and other community partners.

Prepare Documents Needed for the Workshop

Summit County prepared participant notebooks with the documents needed for the workshop, such as community profiles, discipline profiles, meeting agenda, and participant list.

Conduct the Workshop

The timeframe to complete depends on the goals and objectives of the workshop and the availability of participants and financial resources. Summit County planners undertook two subtasks to complete this task as described below.

Hold the Workshop

Summit County hosted a pre-workshop dinner at the hotel the night before the workshop began to allow time for networking and information sharing. During the workshop, breakfast and lunch were provided for the participants in the meeting room. The planning team did not participate in the breakout sessions to avoid dominating the groups and skewing the outcome of the decision-making process. Additionally, since the breakout sessions were facilitated by ORISE staff, the planning team was able to serve as a resource for information specific to Summit County.

Establish a Method for Deciding on Alternate Care System Options

Following the breakout sessions, each workgroup shared the advantages and disadvantages that had been identified for each option. The larger group decided which identified options would be further developed. Identification of future planning efforts to be implemented was shared.

Lessons learned

- Consider convening discipline-specific small groups to allow for feedback within each discipline prior to the large group facilitation process.
- Identify specific large-group facilitation tools to ensure each stakeholder has a voice in the decision-making process.

Conduct Follow-Up Activities After the Planning Workshop

This task is an ongoing process. Summit County planners undertook seven subtasks to complete this task as described below.

Reassess the Planning Team Mission and Membership

Following the workshop, the planning team determined that the mission did not change, and identified the need to include hospital emergency preparedness personnel on the planning team.

Create Specific Subcommittees to Address Disadvantages

Prior to 2001, Summit County developed the Domestic Preparedness Task Force (DPTF), which is a subgroup of the Summit County Emergency Management Executive Committee. Currently a number of subcommittees under the DPTF work on target capabilities related to U.S. Department of Homeland Security planning and response capabilities. Existing DPTF subcommittees include law enforcement, public health, public information, mortuary care, and mental health. The alternate care system planning team created the following subcommittees that were not currently operating under DPTF:

- Legal
- Transportation
- Hospital
- Public health and hospital
- Triage
- Social service

Mission statements were developed and individuals were assigned to subcommittees. The majority of individuals assigned had attended the stakeholders' meeting, and several were brought in from the community.

Assign Disadvantages for Each Option to Subcommittees

As an example, the Legal Subcommittee established in Summit County met on a quarterly basis to address legal issues, which pertain to each of the options. Participants included not only local representatives, but state-level legal personnel as well.

Identify Any Additional Profiles That Need to be Created

Following the stakeholders' meeting, Summit County profiled the following disciplines:

- Faith-based organizations
- Court system
- Social service agencies
- Healthcare

Lesson Learned

Additional disciplines that will need to be profiled include long-term acute care hospitals, large outpatient care centers, long-term care facilities, and hospice.

Facilitate Subcommittee Meetings to Address Disadvantages

The Hospital Subcommittee met weekly, the Public Health and Hospitals Subcommittee met biweekly, the Legal Subcommittee met quarterly, and the Triage Subcommittee met every 6 weeks. Other committees met according to time lines set forth by DPTF.

Develop Alternate Care System Plan Document

This task is currently ongoing. Summit County will be creating for the Summit County Emergency Operations Plan an alternate care system appendix to Annex H: Medical Care, with tabs to identify the process to follow for the seven individual options.

Reconvene Stakeholders for Alternate Care System Report-Out

This task is currently in process for Summit County.

Develop Education and Training on the Alternate Care System and Exercise the Alternate Care System

This task is ongoing. Summit County planners undertook three subtasks to complete this task as described below.

Develop and Implement an Education and Awareness Program

This task is under development. This education will provide an overview of the alternate care system, how decisions will be made, and how resources will be allocated.

Develop and Implement a Training Program

This task is under development. This training will provide more detailed information regarding the operations of the various options that have been identified by the community.

Develop and Implement an Exercise Program

This task is under development.

Attachment – Proposed Summit County Alternate Care System Options (A Summary)

Listed below are the eight alternate care system options proposed by Summit County.⁵

1. **At-Home Independent Care**: This is self-sufficient independent care at home. From a public health as well as a medical perspective, Summit County will encourage self-isolation at home as well as enhance the ability of self-sufficient persons to do so.
2. **An Alternate Site for Isolation of Influenza Patients**: This is the "motel environment" for patients requiring minimal medical care. Alternate care facilities will be used to isolate infectious influenza patients based on the premise that separating them from noninfectious patients will be useful and possible.
3. **Expanded Role for Outpatient Care Facilities**: This concept ties in with the Neighborhood Emergency Help Center (NEHC), which is part of the Modular Emergency Medical System (MEMS). By utilizing existing outpatient facilities, this model may facilitate the rapid distribution of routine vaccines and medications, and treatment of minor injuries and illnesses (e.g., hydration) for both influenza and noninfluenza patients.
4. **Care for Recovering, Noninfluenza Patients**: This is the "step-down" method for patients not yet able to be discharged from the hospital to home. Recovering noninfluenza patients may be discharged from the hospital to "step-down" facilities (e.g., long-term care [LTC], rehabilitation [rehab] facilities) until they are well enough to return home.
5. **Rapid Patient Screening and Triage Inside the Hospital Emergency Department**: This is a take on the MEMS model. Persons seeking care will be screened and triaged at the hospital emergency department (ED). Patients in critical condition will be treated in hospitals, and those with noncritical illnesses and injuries will be transferred from the ED to an outpatient facility where treatment would be restricted to four areas: hydration, bronchodilators, antibiotics, and pain management.
6. **Rapid Patient Screening and Triage Outside the Hospital Emergency Department**: This is a take on the MEMS model. All persons with influenza-like-illnesses (ILI) will be directed to primary triage sites for initial assessment. These sites will be set up physically separate from the hospital in order to minimize exposure of hospitalized patients to influenza. Critically ill patients will be transferred to hospitals. Noncritical patients will be discharged from the

⁵ Adapted from *The Prospect of Using Alternative Medical Care Facilities in an Influenza Pandemic*

Community Planning Framework for Healthcare Preparedness

triage facility to home, provided with supportive care, or transferred to other healthcare facilities based on the community's established pandemic response protocol.

7. **Mobile Hospital:** This is similar to Carolinas MED-1. The Carolinas MED-1 unit cost approximately \$1.5 million (using grant funds) and was used during the Katrina response. This model is also very similar to the standardized modular hospitals used by the U.S. Armed Forces.
8. **Overflow Hospital for Influenza Patients:** This is similar to a model used in Pennsylvania during the 1918 pandemic. An overflow hospital will be set up to provide care for acutely ill influenza patients who would otherwise be admitted to the hospital. This site will replicate a full range of hospital services; however, the services provided may change as resource availability changes.

Appendix E

Alternate Care System Options

Overview

CDC-HPA worked with Summit County, Ohio; Maricopa County, Arizona; and Oregon HPP Region 2 to discuss how to best develop an alternate care system for their communities. Using a modified version of the options presented in *The Prospect of Using Alternative Medical Care Facilities in an Influenza Pandemic*, representatives of these communities, with assistance from CDC-HPA and ORISE, thoroughly discussed each option through facilitated discussion. The information presented in this appendix represents a compilation of discussions with these three communities.

Each option presented in this appendix includes detailed information on the following topics:

- Description of the option
- Course of action needed to be taken to implement the option
- The impact of the option (i.e., what it accomplishes)
- Assumptions that are made when using the option
- Who is involved in implementing the option
- Where the option is used
- When the option is used
- Why the option should be used
- How the option is implemented
- Resources and tools that need to be developed in order to implement the option
- Advantages and disadvantages to using the option

NOTE: These options were developed for managing surge during an influenza pandemic, but they may work for other scenarios likely to impact your community or may be modified for use under those scenarios.

Option 1: At-Home Independent Care

Description

This is self-sufficient independent care at home. From a public health as well as a medical perspective, local public health and healthcare will encourage self-isolation at home along with as well as enhance the ability of self-sufficient persons to do so. The general public may have questions and/or concerns, and may need information on providing care at home. Persons may also need information on whether to go to the hospital or another care facility, or to remain at home. Risk communication to residents will be of paramount importance in empowering personal responsibility for these residents and/or their caregivers.

Course of Action

The identified agencies will enhance the ability of self-sufficient persons and/or caregivers to provide independent care at home in order to decrease the surge on healthcare. They will help people determine when and how to stay home and when to seek outside care. To accomplish this course of action, the following subactions must be taken.

This action will be initiated (when) _____. It will be accomplished by (how) _____.

What Does This Option Do?

- Decreases the number of people who present to the hospital
- Enhances the ability for providing self-sufficient care at home (i.e., provides support services)
- Helps people determine whether to seek care at an outside facility
- Keeps people from infecting one another

Assumptions

- People will stay at home
- People will be honest about their symptoms and situations (i.e., people will be informed and objective)
- People will have the information and resources necessary to provide care at home
- The media will provide one single, credible message
- People will trust the information that is being disseminated to them
- Care providers will get the same message

Community Planning Framework for Healthcare Preparedness

- Information will be relevant to specific areas in the region
- Support services will not include direct medical care
- Support services will be individualized per scenario
- The virus strain will be sensitive to antivirals
- A means of communicating with people to accurately assess whether they can recover at home or must be admitted to healthcare will be available

Who Does This Option Involve?

Individuals

- Recovered patients (children and adults) and their family members
- Assisted living facility residents
- Mildly/moderately ill patients (with no significant risk factors)

Agencies

- Assisted living facilities
- Call lines
- Commercial business and industry
- Communication technology companies
- Community health clinics
- Dispatch
- Educational settings with dormitories
- Emergency medical services (EMS)
- Existing outpatient, walk-in, and ambulatory care facilities, and urgent care centers
- Faith-based organizations
- Home health
- Hospital emergency departments (EDs)
- Meals on Wheels
- Media
- Medical Reserve Corps (MRC)
- Mental health/developmental agencies

Community Planning Framework for Healthcare Preparedness

- Occupational health clinics
- Post office
- Primary/private care providers (PCP)
- Public health
- Public works (e.g., water)
- Senior services
- Social services (e.g., case workers)
- State

Where is This Option Used?

However home is defined—homeless shelter, college dormitory, prison, group home; if they do not have a home, find resources (such as a hotel) to provide them a home.

Avenues for Disseminating Information

- Bulletin boards
- Businesses
- Busses
- College campuses/schools
- Internet
- Parks
- Podcasts
- Radio stations
- Rest areas
- Social media
- Tourist destinations

When is This Option Used?

Triggers may be different for each community; localities may not want to wait on the state because many times they can move faster than the state.

Initiate

- As early as possible to provide the most benefit
- Once the media starts reporting the disease
- As soon as relevant authorities know that the outbreak is starting (e.g., cases are identified in another country)
- At the first appearance of influenza, based on school absenteeism and laboratory reports
- When someone is hospitalized or dies from the disease
- When ED wait times are high
- When hospital beds reach a high capacity

End

- This should continue throughout the event; it should not end
- Ending is dependent on the virulence of the virus

Why Use This Option?

At-home independent care

- Keeps people out of the healthcare system
- Increases the number of people who stay at home
- Reduces the risk of getting or transmitting influenza
- Enhances the ability of people to provide self-sufficient care at home (provide support services)
- Helps people determine whether to seek care at an outside facility
- Empowers people to take action and remain independent (and provide a mental benefit)
- Protects medically fragile citizens
- Reduces patient discomfort; most people are more comfortable in their own home
- Uses resources efficiently when patients who are not sick enough to require hospitalization, stay home and take care of themselves

How is This Option Implemented?

Planning

- Conduct preplanning for hotline technology and prepare scripting for call lines
- Coordinate efforts between agencies and businesses; educate employers and commercial businesses and use them to help distribute messages
- Integrate with the incident command system (ICS) and joint information center (JIC) to deliver consistent, reliable, and current messaging between all sectors, agencies, and the media
- Identify appropriate spokespersons to disseminate pre-determined recognized and trusted messages to various demographics of the population
- Practice risk communication via the media and online
- Ensure the identified agencies have plans in place and have trained and exercised in carrying out the plans; practicing during the influenza surge each year can help make this option feasible

Education

- Educate the public before and during the pandemic that they will be safe and will be able to care for themselves (and their families) at home; people often think they will receive better care and have less risk of getting worse at a medical facility
- Encourage influenza-like-illness (ILI) preparedness prior to the pandemic, particularly for those who are generally at high risk for influenza
- Use community organizations (e.g., faith-based organizations) to educate the public about call line resources and to prevent calls to 9-1-1

Triage

- Determine transport triage guidelines to determine whether patients should be transported to the hospital or stay at home
- Develop guidelines to ensure PCP offices can consistently triage patients over the phone

Patient Care

- Develop a "Flu Buddy" or "Neighborhood Watch" system—a neighborhood point person contacts people daily and helps decide who needs to access care

Community Planning Framework for Healthcare Preparedness

- Develop patient recordkeeping and tracking mechanisms
- Set up a "flu line" to field calls to call centers; this should be started at the beginning of the event (this should be a dedicated line even during nonemergency time)
- Modify reverse 9-1-1 to provide daily calls to help check on people at home alone

What Resources and Tools Need to be Developed?

- Antiviral distribution plan
- Communication tools for hearing impaired; multilingual tools and messages
- Education plans for infection control and self-care at home
- "Flu Facts" mailers/direct mailings initiated by the state through the JIC; information that comes directly to people puts less burden on them to search for information
- Flyers and messages that have both state and local public health department seals for business to print and post
- Memoranda of agreement (MOAs), memoranda of understanding (MOUs), mutual aid agreements (MAAs)
- Patient diagnosis and treatment algorithms developed by CDC, modified at state level, then distributed to local community/stakeholders
- Patient tracking/identification system
- Risk communication plan
- Scripts for call centers
- State level website with the correct message—gives people a reliable source to access information
- Social media tools—"people are not just going to use phones"
- Supplies for home care distribution (e.g., thermometers)

What are the Advantages to Using This Option?

- This option builds a culture of self-care, community, and individual responsibility, and decreases the burden of worried well by providing consistent information
- This extends the definition of a home caregiver (i.e., spouses, adult children, church members); patients have less stress in familiar environments and with familiar caregivers
- This option is cost effective; it reduces healthcare costs at facilities

Community Planning Framework for Healthcare Preparedness

- Because this option is technology-driven, the burden on the healthcare system and stress on first responders are lessened
- Static healthcare will benefit from this option because it removes the total reliance on medical staff
- Keeping people at home and out of public places (social distancing) provides good infection control
- This option could save lives
- This option does not drain the healthcare system of supplies because people in these situations are responsible for their own supplies

What are the Disadvantages to Using This Option?

- You cannot guarantee that people will actually stay at home; people may return to workplaces before they are well
- Some people may think this goes against their free will
- This option is disadvantageous for anyone who lives alone (possibly more for the elderly), or for people without telephones (i.e., homeless)
- This option relies on patient honesty
- Some people may not be able to accurately communicate their symptoms to determine whether they need to stay home or access healthcare—literacy and culture could affect this
- People who need care may self-diagnose incorrectly and stay at home inappropriately; this could result in delayed treatment and/or excess deaths
- Costs could increase for patients who wait to present at a facility until they are severely ill
- Not being able to work due to caring for sick family members is an economic concern for the public
- This could be a financial disadvantage for PCP offices
- This option is labor intensive and makes monitoring patients difficult
- Providing support services, such as antiviral distribution, could be taxing to agencies; this option will take public health staff and others away from regular day-to-day programs to help with home care initiatives

Community Planning Framework for Healthcare Preparedness

- You will see an increased need for mental health services to help relieve stress and anxiety caused by the negative connotation of self-isolation/quarantine and the need for fatality management
- Emergency medical technicians have concerns regarding patient abandonment—if people request to go to hospitals, a medical person will have difficulty going against their wishes
- This option relies on technology
- 9-1-1 and other call centers could be inundated
- Coordinating and staffing call centers with individuals qualified to triage patients will be difficult. Legal issues must be considered
- Messages provided to the public may lack credibility. Also agencies providing mixed messages or incorrect information about influenza is a risk
- The public could be overwhelmed by the information provided

Option 2: An Alternate Site for Isolation of Influenza Patients

Description

This is the "motel environment" for patients requiring minimal medical care. Alternate care facilities will be used to isolate infectious influenza patients based on the premise that separating them from noninfectious patients will be useful and possible. These sites will be intended to support patients who would otherwise remain at home but are unable to do so (e.g., they are unable to care for themselves; they are ill and share a residence with an immunocompromised individual). Food, laundry service, and other necessities will need to be provided to persons housed in these alternative care facilities.

Course of Action

The identified agencies will separate infectious influenza patients requiring minimal medical care who cannot be cared for at home. To accomplish this course of action, the following subactions have to be taken.

This action will be initiated (when) _____. It will be accomplished by (how) _____.

What Does This Option Do?

- Sets up an alternative site to house and support influenza patients requiring minimal medical care

Community Planning Framework for Healthcare Preparedness

- Dedicates a facility for isolating infectious influenza patients

Assumptions

- People will be honest about their symptoms and situations (i.e., people will be informed and objective)
- Businesses will be involved and will cooperate
- Facilities will be provided for minimal influenza care (supportive care) only
- Facilities will not be provided for quarantine
- Critical infrastructure will continue to operate
- Influenza patients can be housed together
- Adequate resources (including staff) will be available to run this facility
- Staff will communicate with patients
- A good definition of an influenza patient will be available

Who Does This Option Involve?

Individuals (Infectious Influenza Patients)

- Persons requiring minimal care but who cannot be supported at home
- Injured persons who do not want to go home

Exclusions

- Persons who do not have influenza
- Influenza patients with complications
- Persons with another communicable disease
- Immunocompromised individuals
- Persons in correctional facilities

Agencies

- American Red Cross
- Clinical staff—RN, MD (in case a diagnosis is needed)
- Community-based organizations
- Community halls

Community Planning Framework for Healthcare Preparedness

- Community health clinics
- Dial-a-Bus transportation system
- Dispatch
- Emergency management
- EMS
- Existing outpatient, walk-in, and ambulatory care facilities, and urgent care centers
- Faith-based organizations
- Fire departments
- Home health
- Homeless shelters
- Hospital EDs
- Incident Command System (ICS) overhead team
- Information centers/lines
- Media
- Medical Reserve Corps (MRC)
- National Guard armories
- Occupational health clinics
- Primary/private care providers (PCP)
- Public health
- Sanitation/waste disposal management
- Security
- Senior services
- Social services (e.g., case workers)

Important Questions

- Who has authority to set up this center?
- What is their liability?

Where is This Option Used?

- Campsites
- Church buildings
- Closed military bases
- Convention centers
- Fairgrounds
- Dormitories or similar bed facilities
- Hotel/motel
- Long-term care facilities
- Same-day surgery centers
- School gyms
- Vacant buildings

When is This Option Used?

A trigger should be established to initiate this process [the ACS] before hospitals reach 100% capacity. Also, this option needs to be short term; it may not have the staff capacity and training to be sustained throughout the event.

Initiate

- When numbers of patients presenting at the hospital and ED wait times begin increasing
- When hospital surge capacity is exceeded and resources are overwhelmed
- When the first people are isolated because the disease is very contagious
- At the first confirmed case in the state; start of an outbreak
- When someone is hospitalized or dies from disease—then start preparation
- When spikes in influenza-like-illness (ILI) occur in schools
- After a national emergency is declared

End

- When the conditions that called for its initiation end
- When the incident commander declares its termination

Community Planning Framework for Healthcare Preparedness

- When hospital surge begins subsiding
- When the number of new cases drops

Why Use This Option?

Infectious patient centers

- Minimize exposure of noninfectious people to influenza
- Reduce surge to the healthcare system from patients requiring minimal care
- Preserve critical services for the severely ill
- Reduce hysteria and preserve mental health benefits

How is This Option Implemented?

- Develop JIT training materials
- Issue a formal declaration to trigger altered standards of care and make sure state legislation supports infectious patient centers off healthcare sites; be careful with legalities of practicing medicine off a medical care site for clinics and hospitals (Medicare, COBRA, liability insurance)

Partnerships

- Communicate with and establish MOUs/MOAs/MAAs with businesses to provide facilities and resources; coordinate with the American Red Cross
- Establish relationships with social service, volunteer, vulnerable population, and other community organizations to assist with staffing and support

Planning

- Determine who approves use of this option, how to stand it up, and who runs it; incorporate the ICS
- Involve public health, hospitals, clinics, and emergency management agencies to identify appropriate sites, the scope of care, capabilities, staffing needs, needed resources, and management requirements
- Identify and address issues surrounding transportation services, security, recordkeeping and tracking, and reimbursement
- Obtain community buy-in and conduct public education
- Understand legal issues regarding isolation during a public health disaster

Triage

- Define the appropriate types of patients for this option; establish criteria to determine who goes to the hospital, who stays home, and who goes to this facility; determine criteria for the "ill and unable to be supported at home" (i.e., infected, symptomatic, share residence with an immunocompromised individual, have developmental disability and/or ill family members)
- Direct individuals to these sites by call centers and media messaging
- Train triage staff at the hospital to redirect those not meeting admission standards

Patient Care

- Use parish nurses, medical students, or lower-level staff to provide basic care; identify who will supervise them
- Plan for patients who progress to needing acute care
- Plan for personal needs of patients, such as food, linens, showers, and child and pet care

What Resources and Tools Need to be Developed?

- Media and risk communication plan
- MOUs/MOAs/MAAs with facilities
- Patient recordkeeping and tracking system
- Patient triage algorithms/decision-trees
- Training and education for social service agencies for how to provide palliative care and how to use existing emergency supplies
- Volunteer database including MRC, retired physicians, and those who have been through CERT (for citizens)

What are the Advantages to Using This Option?

- This option is flexible. Bringing up, and then scaling down and returning the facility to its former use is easy
- This option keeps infected people out of the hospital and reduces transmission to noninfected or medically fragile patients
- This facility has only one type of patient

Community Planning Framework for Healthcare Preparedness

- This option provides a step-wise approach that may facilitate patients going home faster, and provides an alternative to home care for those who live alone
- This option provides a higher level of care than at-home independent care; patients can be redirected to other care options, if needed
- This option is cost-effective and ethical
- The burden on the healthcare system is reduced because this option requires fewer resources, and uses existing resources more efficiently
- Nonmedical personnel and volunteers can help provide care
- Hotels are good facilities for minimal care because they are secure, accessible, have a basic infrastructure in place, and have isolated rooms

What are the Disadvantages to Using This Option?

- The current environment makes implementing this option impossible
- Determining compensation/reparations to businesses is difficult; getting buy-in and establishing agreements is time consuming and requires coordination
- This option could lead to a stigma for the facility used ("flu hospital")
- The community could perceive that this is second-rate care or a "dumping ground"
- People have a negative connotation of isolation and quarantine
- Noninfected travelers in the hotel are at risk of being exposed unless they change hotels
- Infection control will be difficult
- Public health does not have experience in leading an inpatient facility, but healthcare may be too busy to lead this
- Huge differences exist between jurisdictions, and identifying a lead agency for the facility is difficult
- This option is resource intensive; no existing infrastructure is in place to provide staff and supplies so resources will need to be provided
- No protocol is in place for treating patients who require acute care while at this facility
- People who may need this option may have co-morbidities—these groups could be difficult to care for
- Recordkeeping and patient tracking will be difficult
- Securing the facility will be difficult

- This option could surge mortuary services

Option 3: Expanded Role for Outpatient Care Facilities

Description

This concept ties in with the Neighborhood Emergency Help Center (NEHC), which is part of the Modular Emergency Medical System (MEMS). By utilizing existing outpatient facilities, this model may facilitate the rapid distribution of medical care services, routine vaccines and medications, and treatment of minor injuries and illnesses (e.g., hydration) for both infectious and noninfectious patients.

These sites will be used as triage sites to and from the hospital. This option might entail the use of outpatient surgery centers or hospital satellite facilities. It may be possible to cancel or postpone elective outpatient surgeries and testing procedures, if warranted, to provide care to those in need of treatment, vaccinations, and/or medication.

Course of Action

Existing outpatient facilities will provide care to patients with minor injuries and illnesses in order to preserve critical hospital resources for the most severe patients. To accomplish this course of action, the following subactions must be taken.

This action will be initiated (when) _____. It will be accomplished by (how) _____.

What Does This Option Do?

- Supports and manages patients with minor injuries and illnesses, including distribution of routine medication and vaccines, hydration, intravenous antibiotics, and short-term symptom monitoring
- These facilities may also be used as triage sites to and from the hospital

Assumptions

- Providers and existing facilities agree to these roles
- The role of the outpatient clinic in antiviral distribution and treatment will be unknown (i.e., treatment, prophylaxis, or both)
- People without insurance can be treated during an emergency
- Administration of antivirals will be standardized among outpatient clinics
- Local public information officers will be on site to direct patients to the right places

Who Does This Option Involve?

Individuals

- Patients with minor injuries and illnesses seeking care and those seeking medication (including routine distribution of vaccine and possibly antivirals)
- Patients who are cost-conscious
- People with transportation, who are ambulatory, and who are not home-bound

Agencies

- Community outreach centers
- Emergency management
- Existing outpatient, walk-in, ambulatory care facilities, and urgent care centers
- Free clinics
- Hospitals
- Media
- Primary/private care providers (PCP)
- Public health
- Retail pharmacies—minute clinics
- Rural health centers
- Student health centers

Where is This Option Used?

- Existing facilities
- Mobile medical clinics
- University healthcare centers (student health centers)

When is This Option Used?

Initiate

- As early as possible—should be proactive, not reactive
- When directed by the command center

Community Planning Framework for Healthcare Preparedness

- When ILI spikes are observed in hospitals and 9-1-1 calls
- When surge on hospital capacity is observed
- When traffic has increased at healthcare facilities

End

- When patient counts start receding
- When healthcare systems can again handle the patient load and provide adequate care for patients

Why Use This Option?

Outpatient care facilities

- Redirect the surge on the healthcare system and hospitals to preserve critical services for the severely injured
- Support patients with minor injuries and illnesses outside of the hospital
- Facilitate the distribution of vaccines and medications outside of the hospital
- Provide patients easier access to healthcare
- Use an existing documentation system

How is This Option Implemented?

Planning

- Increase sites' equipment capabilities
- Involve Dial-a-Bus and other transportation agencies to transfer patients between facilities, and plan for hard copy recordkeeping
- Consider expanding facility hours to 24-hour operation
- Consider expanding staff roles
- Plan for postponing/eliminating elective procedures; train and exercise staff in carrying out clinic emergency plans for service disruption

Triage

- Develop a triage phone line that provides a decision tree for future steps to take in treating patients; provide standard scripting to ensure consistency
- Plan for expanding staff training for triaging patients, including staff who work in specialized surgery centers

Community Planning Framework for Healthcare Preparedness

- Determine triage criteria (e.g., acute patients triaged to centers providing critical care)
- Plan for redirecting a system that typically quickly refers everyone to the ED (e.g., redirecting maternity patients to women's centers or a different area of the facility to avoid illness)

Community Education

- Educate the public pre-event through branded websites and media cooperation
- Secure buy-in from for-profit agencies; consider that they will need help from outside agencies
- Secure buy-in support from involved agencies to direct patients to/from facility; involve call centers and use media messaging to direct individuals to these triage sites
- Ensure that the communication plan includes outreach aimed at all age groups (age-based competency)

Coordination

- Determine who the lead agency for implementing this option will be (i.e., hospital, public health); plan for coordinating through ICS
- Establish MOUs/MOAs/MAAs with outpatient clinics to provide staff and facilities; also establish triggers for when this is needed
- Identify different capabilities of various clinics; consider a color-coding system of services provided or to clarify different tiers

What Resources and Tools Need to be Developed?

- Available pool of just-in-time training
- Cross training for healthcare workers functioning outside of their normal roles
- Geographic Information System (GIS) capabilities to help direct people to appropriate care
- Infection control plan
- MOUs/MOAs/MAAs and financial agreements with vendors and security companies
- Patient education materials indicating what services are provided and where
- PPE for volunteers (drivers)

Community Planning Framework for Healthcare Preparedness

- Risk communication plan and message mapping tools for the media
- Signs far from the facility's entrance specifying who can or cannot be seen and who can or cannot receive vaccine
- Standardization of when and how vaccination is going to occur
- Transportation plan
- Triage tools and algorithms

What are the Advantages to Using This Option?

Efficient Use of Existing Infrastructure

- Using existing communication channels and infrastructure eases logistics, and makes this a cost-effective option
- This option improves standardization of operations within the healthcare system; patient recordkeeping and tracking is easier
- This option effectively uses existing capabilities of urgent care and PCPs
- Using existing facilities resolves "sticky" reimbursement issues
- The draw on other healthcare resources is limited because these facilities are already staffed; just-in-time training needs are reduced

Appropriate Care

- This option successfully provides medical care to the community
- Existing facilities can be designated for one type of care (either influenza or outpatient, not both)
- This option provides adequate levels of care (e.g., intravenous [IV] fluids) to keep nonacute people out of the hospital and keep them from calling 9-1-1/EMS
- Patients may be treated faster using this option
- People are more comfortable when using a familiar system, rather than one created for the event; this will create credibility if it is effective

What are the Disadvantages to Using This Option?

Implementation

- The logistics required for this option are complicated; issues with transportation, parking, and security will be perceived

Community Planning Framework for Healthcare Preparedness

- This option could be a revenue shortfall for ambulatory surgery centers
- This option increases the probability of patient-selective behavior (i.e., for-profit clinics may not see the uninsured) and reduced hours of service
- Command and control will be less efficient because of facilities being in separate locations, and the likelihood that providers will refuse to follow incident command will increase
- Multiple facilities will need bilingual assistance
- Using multiple facilities increases the probability of having multiple triggers
- This option could confuse patients

Supplies

- The potential for supply chain disruption and supply rationing (i.e., vaccine for priority populations) is increased
- Access to equipment and medications is uncertain
- Acute care staff and supplies may be redirected to support the hospital

Patient Care

- Standardizing treatment options and recordkeeping across healthcare systems is difficult
- The potential for disease transmission is increased by using this option
- This option requires clear-cut criteria for entry—can patients reliably determine whether they are acutely ill?
- Facilities have varying technical skills and treatment options (e.g., does a colonoscopy clinic transformed into an acute care center have the technical skills to take care of the patients?)

Option 4: Care for Recovering Noninfluenza Patients

Description

This is the "step-down" method for patients not yet able to be discharged from the hospital to home. Recovering noninfluenza patients may be discharged from the hospital to "step-down" facilities (e.g., long-term care [LTC], rehabilitation [rehab] facilities) until they are well enough to return home.

Course of Action

Noninfectious patients, not ready to be sent home, will be discharged from the hospital and transferred to "step-down" facilities (e.g., long-term care [LTC], rehabilitation [rehab] facilities). To accomplish this course of action, the following subactions must be taken.

This action will be initiated (when) _____. It will be accomplished by (how) _____.

What Does This Option Do?

- Pandemic: Provides temporary care for recovering noninfectious influenza patients; provides step-down facility for noninfectious influenza patients who still need care
- Earthquake: Provides temporary shelter for recovered patients who have no home to be discharged to

Assumptions

- Elective surgeries will be cancelled
- Facilities will have
 - Time to prioritize patients
 - Space available
- Facilities and staff will cooperate and be willing and able to expand their role beyond usual capacity and capabilities
- Licensing will allow for this
- Medical transportation for these patients will be available
- Patients/families will be able and willing to move

Who Does This Option Involve?

Individuals

- Noninfectious patients, not yet ready for home discharge
- Noninfectious patients, whose home is not ready for them (e.g., family members at home are sick)

Agencies/Entities

- American Red Cross
- Assisted living
- Existing outpatient, walk-in, ambulatory care facilities, and urgent care centers
- Home health
- Home social service agencies
- Hospitals
- Long-term care and rehabilitation facilities
- Meals on Wheels
- Outpatient pharmacies
- Public transportation agencies
- School buses
- Schools of nursing
- Specialized care facilities (e.g., ear, nose, and throat [ENT])
- Surgery clinics
- Veterinary hospitals
- Women's centers

Where is This Option Used?

- Ambulatory surgery centers
- Cruise ships/hospital ships/river cruise ships
- Long-term care facilities
- Outpatient rehabilitation/physical therapy
- Space in dental offices but need technical staff
- Step-down facilities—need beds, staff, oxygen, resources, water, waste/sewage, hygiene

When is This Option Used?

Initiate

- Immediately
- When the number of influenza cases in the hospital and ED increases
- When ICS is activated to manage the influx of patients

End

When this option is no longer needed; when demand begins to diminish—plan for demobilization

Why Use This Option?

"Step-down" facilities

- Free up hospital beds
- Serve as a step-down unit for recovering noninfectious influenza patients
- Separate noninfectious influenza patients from influenza patients in the hospital

How is This Option Implemented?

Planning

- Design a staging area for people who are being discharged and establish MOUs/MOAs/MAAs with step-down facilities and transport services to provide staff and resources
- Determine appropriate sites on the basis of their capacity and capability, and plan appropriate nonclinical support services
- Determine where to "step-down" children and recovering homeless patients
- Develop a plan for expanding the level of care in the community (i.e., if overflow occurs in the hospital, put up tents for additional patients)
- Incorporate emergency plans, particularly if services will be disrupted (e.g., elective procedures cancelled, noncritical patients no longer transported); train and exercise agency staff in carrying out emergency plans
- Provide guidelines for acquiring and dispensing medications at this site

Education

- Provide just-in-time training for the step-down facilities' staff and other patient caregivers
- Provide public education before and during the event
- Secure buy-in from agencies to support this option and direct patients to and from these facilities
- Coordinate information provided to the public by the media and agencies to ensure consistency, reliability, and currency

Patient Care

- Plan for a likely change in standards of care—long-term care facilities may be able to take higher numbers and hospitals may be able to discharge patients sooner
- Identify the type of patient appropriate for a step-down facility; establish criteria for discharging "noninfected patients not yet ready for home discharge"
- Abandon patient tracking for homeless persons
- Standardize medical records to keep up with patient tracking

What Resources and Tools Need to be Developed?

- Communication plan, including media messaging; hospital public relations plan
- Supplement for discharge papers and protocol
- Education for patients, family members, and caregivers (including case managers)
- Infection control plan
- Materials management plan—IVs, oxygen, food, water
- MOUs/MOAs/MAAs
- Rule changes for patient ratios
- Screening/triage document for infectious versus noninfectious patients; patient tracking piece for people who present a public health hazard
- Security plan
- Training for staff who will need to expand their role; just-in-time training
- Transportation plan

What are the Advantages to Using This Option?

Impact on the Healthcare Sector

- This option ensures patients do not go home too early only to be readmitted into the healthcare system because of complications
- This option frees hospital staff and beds for influenza patients and offers an immediate solution to the surge on the hospital
- Patients who cannot afford long-term care could be released to these step-down facilities
- This option uses existing infrastructure – staff, space, and supplies; this reduces costs and the burden on outpatient care facilities
- The supply chain is already in place to use this option

Patient Care

- Separating influenza-infected patients from noninfected persons reduces exposure to influenza
- This type of facility provides better care than some of the other options

What are the Disadvantages to Using This Option?

Standard of Care

- The staff available may not be qualified to treat more advanced patients, which could increase the opportunity for error and put patients at risk
- The lack of medical supervision presents concerns about the quality of care at these facilities
- The risk of patient readmission is high; what happens to patients who need to return to the hospital, if the hospital is full?
- These patients still require a high level of care that would be difficult to provide at other locations
- Who is responsible for patients when they are discharged to a step-down facility?

Impact on Healthcare Sector

- This could actually extend patients' overall stay in the healthcare system—patients may stay in the step-down facility longer
- This does not seem practical as people are regularly discharged straight to home

Community Planning Framework for Healthcare Preparedness

- This option increases further demand on the command center
- This option interferes with standing orders in long-term care facilities
- Hospitals do not have flexibility of having extra beds for patients

Implementation

- Patient tracking will be difficult and electronic medical records may present a patient care issue if no standard for recording patient information is in place
- This option requires a lot of transportation, and a new discharge system to replace the current one
- There may need to be a screening process for discharging patients to this facility; standard patient criteria must be set
- Facilities may have supply issues if their regular resources are disrupted
- This option is personnel intensive and requires staff buy-in; it also requires just-in-time training
- This option requires preparedness planning in step-down facilities
- This option is logistically challenging; for example, long-term care residents cannot be discharged—the long-term care facility is their home
- Procedures are needed for limiting patient interactions in these facilities (to limit exposure)

Legal and Regulatory Concerns

- This option would create legal issues; patient criteria may be challenged
- The Emergency Medical Treatment and Active Labor Act (EMTALA) makes this option difficult; EMTALA needs to loosen up if a federal emergency is declared

Costs

- Patients who worsen and require more transportation are at a financial disadvantage
- This option is not more cost effective than the other options; it is not a viable option for Region 2
- This option presents reimbursement questions

Community Support

- Patients may refuse to leave the hospital
- Using veterinary clinics may be perceived negatively by the public
- This option is confusing and stressful for families
- This option does not account for mental health and homeless patients who do not want to go to the facility

Option 5: Rapid Patient Screening and Triage Inside the Hospital Emergency Department

Description

Persons seeking care will be screened and triaged at the hospital ED. Patients in critical condition will be treated in hospitals, and those with noncritical illnesses and injuries will be transferred from the ED to an outpatient facility where treatment would be restricted to four areas: hydration, bronchodilators, antibiotics, and pain management.

This model will need to be used in conjunction with Option 3—Expanded Role for Outpatient Care Facilities: Ambulatory/Basic Care.

Course of Action

Hospitals will use their ED to screen and triage patients seeking care in order to determine their course of treatment (i.e., hospitalization versus outpatient care). To accomplish this course of action, the following subactions must be taken.

This action will be initiated (when) _____. It will be accomplished by (how) _____.

What Does This Option Do?

- Ensures primary triage of patients in the ED (critical and noncritical)
- Treats critical patients in the hospital
- Transports noncritical to outpatient facilities

Assumptions

- Criteria will be established to define "critical" versus "noncritical"
- Additional staff will be required
- Transportation will be available for transferring noncritical patients to acute care centers
- Space will be available in the hospital for critical patients
- Acute care facilities will be available to care for nonacute patients
- Consistent messaging will be available; media will cooperate
- This option can be implemented only if combined with Option 3: Expanded Role for Outpatient Care Facilities – Ambulatory/Basic Care
- A place to transfer patients will be available

Who Does This Option Involve?

Individuals

All individuals entering hospital ED

Agencies

- Dispatch
- Emergency management
- Existing outpatient, walk-in, ambulatory care facilities, and urgent care centers
- Hospital EDs
- Medical Reserve Corps (MRC)
- Mental health
- Primary/private care providers (PCP)
- Public health

Where is This Option Used?

- Hospital EDs
- Outpatient facilities

When is This Option Used?

Trigger points for outpatient centers will have to be set up before this option can be enacted.

Initiate

- When 9-1-1 calls increase
- After a media alert
- When influenza-like-illness (ILI) spikes

End

(Many community members who considered this option thought that patient screening and triage inside the hospital ED is a normal, day-to-day activity. As a result, this option does not end.)

Why Use This Option?

Rapid screening and patient triage inside the hospital ED redirects healthcare system/hospital surge and, thereby, preserves critical services for the severely injured

How is This Option Implemented?

Planning

- Coordinate efforts between all facilities (including outpatient facilities for Option 3: Expanded Role for Outpatient Care Facilities – Ambulatory/Basic Care)
- Create a plan for additional staff
- Suspend Emergency Medical Treatment and Active Labor Act (EMTALA)

Education

- Educate community partners (e.g., public health departments, EMS staff)
- Educate staff and the public prior to event; include education on altered standards of care

Triage

- Use ED staff and additional support agencies to triage patients to the hospital or an outpatient facility; provide just-in-time training for rapid triage protocols
- Allow ED nurses to make decisions about patients' conditions; ED nurses can act as leads and provide guidance

Community Planning Framework for Healthcare Preparedness

- Ensure the process addresses all medical concerns; it would not work well to separate ILI and non-ILI patients because the attack rate and incubation period make the groups indistinguishable
- Establish triage criteria and protocols to rapidly define "critical versus noncritical"

What Resources and Tools Need to be Developed?

- Algorithm for ED for how to ramp up/down
- Hospital plan
- Just-in-time/on-the-job training for staff taking different roles
- Legal authority—EMTALA waivers
- Mental health support plan
- Rapid triage tool (individual- based and population-based care)
- Risk communication plan

What are the Advantages to Using This Option?

Planning

- This option could be cost effective
- Transportation logistics for this option are simpler; many patients will provide their own transportation
- This option is straightforward to understand
- This option uses current triage protocols; the difference in a pandemic is that noncritical patients will be sent away instead of being given a long wait
- This option is not burdened with support services because it does not involve providing meals and beds
- A system is already in place for documenting how patients flow through the healthcare system
- No additional staff training is needed because the admission process is already in place
- This option uses established facilities the public is familiar with; people will know where to go

Patient Care

- This option provides timely treatment because triage occurs right outside the hospital ED; wait times are decreased
- Resources are better allocated to patient needs
- Families staying together will be easier if this option is used

Impact on the Healthcare System

- This option gives public health and healthcare greater control over access; this helps lessen the impact on the ED and gives a coordinated look at access
- This option keeps worried well away from the hospital and reduces chaos at healthcare facilities
- Hospital admissions will be reduced by using this option; this provides a quick screening mechanism outside hospital walls
- The risk of contamination is low if this option is used; infection control is enhanced; infectious and noninfectious patients can be triaged in the waiting area of the ED

What are the Disadvantages to Using This Option?

Planning

- Ethical concerns associated with this option will arise
- Security will be needed to manage panic, but law enforcement will not be present and some facilities do not have security staff
- This is not a stand-alone option—must be combined with Option 3: Expanded Role for Outpatient Care Facilities – Ambulatory/Basic Care
- The physical location of most EDs limits the access for most environmental services, cleaning and turnover
- Using this option requires teaching staff new triage protocols
- Recordkeeping and tracking will be difficult
- The potential lack of reimbursement is a disadvantage
- This option includes the added complexity of arranging transport for patients triaged to another facility

Impact on the Healthcare System

- Having communicable people in the ED increases the burden on Infection Control in a surge situation
- This option has the risk of overwhelming the healthcare system, causing backlogs and increased wait times; it will also increase the surge on ED space and resources
- This option could increase staff and patient stress levels
- The risk for poor patient compliance with orders (i.e., seeking a second opinion) is increased

Triage

- Triage criteria may need to be revised for critical patients as hospital beds decrease in order to sustain this option
- Ill symptoms are not concrete
- This option relies on patients being honest about their symptoms

Option 6: Rapid Patient Screening and Triage Outside the Hospital Emergency Department

Description

This is a take on the MEMS model. All persons will be directed to primary triage sites for initial assessment. These sites will be set up physically separate from the hospital to minimize the impact on the hospital ED and/or exposure of hospitalized patients to influenza. Critically ill or injured patients will be transferred to hospitals. Noncritical patients will be discharged from the triage facility to home, provided with supportive care, or transferred to other healthcare facilities based on the overall ACS plan.

Course of Action

Hospitals will set up primary triage sites to minimize surge. To accomplish this course of action, the following subactions must be taken.

This action will be initiated (when) _____. It will be accomplished by (how) _____.

What Does This Option Do?

- Ensures critical patients are sent to ED
- Ensures noncritical patients are discharged to home, provided with supportive care, or transferred to another healthcare facility based on response protocols
- Provides rapid screening and assessment of symptoms

Assumptions

- Transport to/from facilities will be available
- Space will be available in the hospital for critical patients
- People will be honest about their symptoms and situations
- People will go where they are directed
- Space, staff, and equipment for triage sites will be available
- A waiver for altered standards of care (declaration) will be in place

Who Does This Option Involve?

Individuals

- All individuals with ILI
- Walking wounded

Agencies

- City government
- Community health clinics
- Dispatch
- Existing outpatient, walk-in, ambulatory care facilities, and urgent care centers
- Faith-based organizations
- Home health
- Hospital EDs
- Information centers/lines
- Media
- Medical Reserve Corps (MRC)

Community Planning Framework for Healthcare Preparedness

- Occupational health clinics
- Police
- Primary/private care providers (PCP)
- Public health
- Public works
- Schools
- Traffic control

Where is This Option Used?

Physically away from hospital EDs (sites need to be determined)

When is This Option Used?

Initiate

- When influenza-like illness (ILI) spikes in hospitals
- After a media alert
- When each hospital becomes overwhelmed
- When 9-1-1 dispatch becomes overwhelmed
- When doctors' offices keep sending people to the ED

End

When patients are redirected to off-site influenza clinics

Why Use This Option?

Rapid patient screening outside the hospital ED

- Minimizes exposure of noninfected patients to influenza
- Controls entry of ILI patients into the healthcare system
- Effectively directs patients to appropriate care

How is This Option Implemented?

Planning

- Secure buy-in from ED providers
- Establish MOUs/MOAs/MAAs with agencies/businesses to provide facilities, staff, and supplies
- Keep building restrictions on file

Triage

- Use controlled access points, and direct all patients with ILI to a primary triage site; set up special population triage
- Determine critical versus noncritical using triage tools
- Send critical patients to hospitals; send noncritical patients home (provide supportive care), or transfer them to an alternate facility
- Use outpatient resources to screen patients
- Consider developing a system that uses ambulatory care centers to screen and EMS to transport patients

Education

- Ensure information provided by the media and agencies is consistent, reliable, and current
- Use existing partnerships and media cooperation to build trust with the community so they will use the new system
- Provide pre-event public education that encourages self-isolation

What Resources and Tools Need to be Developed?

- Altered price structure process
- Alternate care facility (ACF) site plan
- Climate-controlled sites or tents for triage and staff shelter
- Communication systems
- Documentation process
- MOUs/MOAs/MAAs for equipment, resources, food, water, toilets, support services and support staff; work with emergency management

Community Planning Framework for Healthcare Preparedness

- Plan for controlling access
- Policy guidelines
- Risk communication plan
- Staff to run triage and security
- Standardized triage tool
- Things that you have to have for regulatory agencies (standards)
- Way to monitor employee health

What are the Advantages to Using This Option?

- Lesser skilled staff and volunteers are appropriate for this option
- Transportation logistics for this option are simpler; many patients will provide their own transportation
- This option is straightforward to understand
- This option applies to both small and large hospitals
- Buildings are structurally sound; they expand and contract during earthquakes
- This option could be cost effective

Patient Care

- This option provides timely treatment because triage occurs right outside the hospital ED
- Resources are better allocated to patient needs
- Families staying together will be easier if this option is used

Impact on the Healthcare System

- This option gives public health and healthcare greater control over access; this helps lessen the impact on the ED and gives a coordinated look at access
- This option is easily accessible and can handle large patient volumes
- This option keeps worried well away from the hospital, and reduces chaos at healthcare facilities
- Hospital admissions will be reduced by using this option; this provides a quick screening mechanism outside hospital walls

- The risk of contamination is low if this option is used; infection control is enhanced

What are the Disadvantages to Using This Option?

Planning

- Changing people's patterns if they are used to driving to the ED or calling 9-1-1 will be difficult; this option is different from the norm and will require a lot of communication to the public
- Employee health must be monitored
- Medical oversight (e.g., MRC, PA/NP) will be required if the triage site is not run by the hospital
- The potential lack of reimbursement is a disadvantage
- This option could be weather dependent if the triage site is a tent
- This option adds another layer of communication by having an off-site location; this will put more communication strain on the ED

Patient Care

- This could delay definitive care—patients will be irritated if they have to be triaged several times (outside triage, transportation time, evaluation at ED and prioritization)
- This will result in limited access for nonemergency patients; some patients may fall through the system
- Patient wait times may increase
- This option may confuse patients; they may be unsure about what each location does

Transportation

- EMTALA is not something that can be waived very readily
- Many traffic/public safety issues associated with having large numbers of people going to one place will occur
- Because the site is away from the hospital, critical patients (and potentially noncritical) may need to be transported; how will people flow throughout the system if they do not have transportation (i.e., they are dropped off)?
- Ambulances could not be used to transport patients to another location

Resources

- This option requires an additional physical location; building restrictions may limit the number of potential sites
- Additional staffing will be required for external triage
- This option will require additional security
- This option is resource intensive and will require several resources to set up (e.g., electrical hook-ups, restrooms, water supply, heating and air)

Triage

- Triage criteria may need to be revised to sustain this option
- Ill symptoms are not concrete
- The logistics involved in coordinating this kind of triage and recordkeeping are complicated
- There has to be standardization so all patients are triaged by the same requirements and criteria
- The potential exists for the triage site to be burdened by the worried well; this increases the likelihood of exposure to infected patients
- This option will still cause a backlog at the ED door because patients will still arrive; prioritization of patients will be occurring

Option 7: Mobile Hospital

Description

This is similar to Carolinas MED-1. The Carolinas MED-1 unit cost approximately \$1.5 million (using grant funds) and was used during the Katrina response. This model is also very similar to the standardized modular hospitals used by the U.S. Armed Forces.

Course of Action

The identified agencies will set up a mobile field hospital designed to treat critically ill patients. The facility will be dedicated to addressing conventional emergency and ambulatory patients, while some space can be dedicated to treat the critically ill or injured.

This action will be initiated (when) _____. It will be accomplished by (how) _____.

What Does This Option Do?

- Sets up a mobile field hospital
- Provides care for moderate to severe patients

Assumptions

- Individuals will have to be directed to these triage sites by 2-1-1, 3-1-1, or media messaging
- Federal assets, the Commission Corps, and military assets will not be available
- Transport to these facilities will be available

Who Does This Option Involve?

Patients

Acutely ill patients requiring traditional emergency care that would typically be treated in the hospital

Agencies

Emergency management, hospital association, and Mobile Hospital Team

Where is This Option Used?

Specific site to be determined (requires large, open area, such as a field, stadium, fairgrounds, or a parking lot)

When is This Option Used?

Initiate

- When the public health or emergency management Incident Commander calls for it to be activated.
- Multiple triggers may include
 - Media alert
 - Spike in 2-1-1 or 3-1-1 calls
 - Spike in ILI at the hospital
 - Timing of community outbreaks, dependent on location
 - Ease of set up at the onset of the pandemic

End

When the Incident Commander terminates this option

Why Use This Option?

To decrease the surge on the healthcare system

How is This Option Implemented?

- Establish MAA for media cooperation during an emergency
- Establish criteria for information relay by media and agencies to be consistent, reliable, and in real time
- Acquire funding
- Determine scope of care provided by mobile hospital
- Ensure mobile hospital infrastructure can treat acutely ill patients
- Purchase hospital and related equipment
- Establish MAAs for staffing, facility, and supplies
- Plan, train, and exercise
- Establish triage protocols for mobile hospital and EMS

What Resources and Tools Need to be Developed?

- Mobile Field Hospital Plan
- MAAs
- Risk communication plan
- Training for staff

What are the Advantages to Using This Option?

- Can locate anywhere with a large space—quickly mobilized
- Is useful for other emergencies
- Provides a place to divert people when healthcare facilities are not available
- Looks good . . . cool!

What are the Disadvantages to Using This Option?

- It is not cost effective
- It is expensive
- It requires skilled staff and draws staff from other facilities
- It requires ongoing maintenance (has to be kept up to date, has to be stored, needs to be supplied, and must be mechanically serviced periodically)

Option 8: Overflow Hospital for Influenza Patients

Description

This option describes an overflow hospital capable of a similar level of care as a Tier 1 facility without surgery or intensive care unit capabilities for acutely ill or injured patients who would otherwise be admitted to the hospital. The overflow hospital will be used as a temporary location for patients awaiting transportation to another facility and/or into the National Disaster Medical System (NDMS) or other location for definitive care. This site will replicate to the extent feasible a full range of hospital services; however, those services provided may change as resource availability changes.

Course of Action

The identified agencies will set up and provide care for critically ill or injured patients who would otherwise be admitted to the hospitals. These alternate care facilities (ACFs) would replicate a full range of hospital services (these would need to be determined as well as based on resources that may or may not be available). To accomplish this course of action, the following subactions must be taken.

This action will be initiated (when) _____. It will be accomplished by (how) _____.

What Does This Option Do?

- Designates or sets up hospitals for influenza patients
- Provides acute care to influenza patients, based on standards of care appropriate to the situation and available resources
- Creates an alternate step-down facility

Assumptions

- People will be honest about their symptoms and situations (i.e., people will be informed and objective)
- Business and the media will be involved and will cooperate
- Public health will approve this option
- The overflow facilities will be provided only for patients with influenza-like illness (ILI) symptoms
- Adequate resources will be available

Who Does This Option Involve?

Individuals

- ILI patients
- Palliative care/expectant patients

Agencies

- Community health clinics
- Dispatch
- Existing outpatient, walk-in, ambulatory care facilities, and urgent care centers
- Faith-based organizations
- Home health
- Hospital EDs
- Information centers/lines
- Media
- Occupational health clinics
- Primary/private care providers (PCP)
- Public health

Where is This Option Used?

- Closed hospital or other acute care facilities—to be determined (maybe shuttered hospitals, closed military base)

- Existing ambulatory surgery center that is taken over for this purpose; would be easier than equipping a nonfunctioning space

When is This Option Used?

You should be proactive in setting up this facility early on, prior to an influenza outbreak, if possible.

Initiate

- When 9-1-1 calls and influenza-like illnesses (ILI) increase
- When hospitals reach capacity
- When the Incident Commander sets up the overflow hospital

End

When the Incident Commander terminates this option

Why Use This Option?

Overflow hospitals separate acutely ill influenza and noninfluenza patients

How is This Option Implemented?

Triage

- Develop a plan and media tools to direct patients to the appropriate location
- Create initial triage criteria and protocols; an appropriate healthcare professional should determine if admission to the hospital is medically necessary
- Make this option available to all patients; ILI and non-ILI patients could be separated at the same facility

Planning

- All facilities should agree on a "downtime disaster medical record"
- Develop plans for acquiring and/or redirecting resources (e.g., staff, supplies, equipment); look for opportunities to take older, functioning equipment for use
- Develop partnerships and work together to recognize and create options to establish the overflow hospital; establish MOUs/MOAs/MAAs with hospitals/other care facilities/suppliers to provide facility, staff, and resources
- Identify a geographical location that is easily accessible

Community Planning Framework for Healthcare Preparedness

- Incorporate this option into facility plans, particularly if patient services will be altered (i.e., determine where to send noninfluenza patients in the facility); train and exercise staff in carrying out the plans
- Use the proper incident command system (ICS) and government authorities
- Use this option with an emergency declaration

Staffing

- Use family members to assist with nonclinical patient care, such as feeding and bathing
- Provide just-in-time training for staff
- Send staff who had the virus but have recovered to work in the influenza hospital
- Use retired, part-time, and nonclinical nurses, and partner with staffing agencies for additional personnel

What Resources and Tools Need to be Developed?

- ACS hospital plan
- Adherence to Clinical Laboratory Improvement Amendments (CLIA) for laboratories (even glucose monitoring)
- Just-in-time training materials
- MOUs/MOAs/MAAs
- Oxygen, normal hospital supplies
- Plan for caring for patients with comorbidities
- Plan for scavenging retired equipment
- Risk communication plan
- Standardized
 - ACS admission form
 - Disaster Medical Record
 - Discharge summary sheet, which includes orders
 - Downtime order forms
 - Laboratory sheets
 - Pharmacy order sheets

What are the Advantages to Using This Option?

- This option has the ability to repurpose, store, and maintain retired equipment
- This facility can take many critical influenza patients
- A new hospital in an unused building does not have to be created; an empty facility, like an old hospital, could be used
- The likelihood of infection is reduced because influenza patients can be separated from noninfluenza patients; this provides focused treatment and would be perceived better than being treated in a "hotel"
- An overflow hospital optimizes management of supplies and staff
- This option provides surge control by keeping people out of the general healthcare system

What are the Disadvantages to Using This Option?

Planning

- This option could be cost prohibitive; reimbursement may be difficult
- Integrating the health information system into this option will be difficult
- This option does not provide any additional beds
- Providing maintenance in the hospital will be difficult, and security will be required if this option is used
- The overflow hospital will need an administrator

Logistics

- Logistical disadvantages are present—need to pull a lot of resources to make this function; have to redirect supply chain
- Finding a location and equipment for an additional hospital will be difficult; most hospitals are not sitting around with a lot of extra equipment
- This option involves taking all the steps necessary to set up a hospital—financial, legal, structural (lengthy process)
- Replicating a hospital is not achievable, so this would have to be a step-down facility; no new location is going to be able to take high acuity patients

Triage

- Initial triage criteria and protocols are needed to quickly determine who is and is not infected with influenza
- ILI symptoms are not concrete so it may be difficult to triage
- People may have to be transported to a distant location

Patient Care

- Patients may have been exposed to influenza before entering the noninfluenza hospital, so this is not a fool-proof infection control method
- No mental health support is possible with this option
- This option sends patients to a hospital that may not have appropriate supportive services for comorbidities

Resources

- Staffing issues will arise—staff will need to be trained; this may take staff from existing facilities
- This option could lead to a stigma for the facility used ("flu hospital")
- This option will take too many EMS personnel out for too long on calls

Legal Concerns

- All hospitals are required to be accredited
- Regulatory issues will arise—the site lab is required to be licensed and certified and have a lab director, even with point of care

Appendix F

Alternate Care System Option Template

Use this template to help you describe other options you and your planning team may consider for your community and to be consistent with the predeveloped options provided in Appendix E.

Option: _____

Description

Course of Action

This action will be initiated (when?) _____. It will be accomplished by (how?) _____.

What Does This Option Do?

- _____
- _____
- _____
- _____
- _____

Assumptions

- _____
- _____
- _____
- _____
- _____

Who Does This Option Involve?

- _____
- _____
- _____
- _____
- _____

Where is This Option Used?

- _____
- _____
- _____
- _____
- _____

When is This Option Used?

- _____
- _____
- _____
- _____
- _____

Why Use This Option?

- _____
- _____
- _____
- _____
- _____

How is This Option Implemented?

- _____
- _____
- _____
- _____
- _____

What Resources and Tools Need to be Developed?

- _____
- _____
- _____
- _____
- _____

What are the Advantages to Using This Option?

- _____
- _____
- _____
- _____
- _____

What are the Disadvantages to Using This Option?

- _____
- _____
- _____
- _____
- _____

Appendix G

Healthcare Function Rating Template

Use this template to rate the functions of each healthcare service offered by your facility or sector.

Facility: _____

Scenario: _____

Healthcare Service: _____

Functions	Tier 1	Tier 2	Tier 3	Tier 4
Function A: _____				
Function B: _____				
Function C: _____				
Function D: _____				
Function E: _____				
Function F: _____				
Function G: _____				
Function H: _____				
Function I: _____				
Function J: _____				
Function K: _____				
Function L: _____				
Function M: _____				
Function N: _____				
Function O: _____				

Appendix H

Overview of Spectrum Health's Work on Essential Healthcare Services

OUR PROJECT

In October 2008, Spectrum Health received a grant from the Centers for Disease Control and Prevention (CDC) through the State of Michigan to develop a template on how to deliver essential health care services during an influenza pandemic.¹

The primary objective of the project was to develop a set of planning and operations guidelines that health care providers in a specific geographic region could use to identify and provide essential health care services, while also caring for large numbers of hospitalized and home-bound victims of a flu pandemic. The guidelines that have been developed will describe how communities will work together to support essential health care services (e.g., emergency departments, primary care, obstetrics, pediatrics), to describe where health services will be provided, and how communities will maintain supply lines, staffing levels and other infrastructures during an influenza pandemic. An underlying project outcome was to demonstrate how hospital emergency department (ED) overcrowding can be mitigated by screening actual and potential pandemic influenza patients and expediting their access to locally defined, optimal levels of care, such as a health care facility or an alternate care site (i.e., in-home).

Spectrum Health coordinated this project in collaboration with providers in an area of West and Central Michigan known in federal health care preparedness grant activities as Michigan Region 6. Spectrum Health, based in Grand Rapids, Michigan, is a designated Level I Trauma Center and National Disaster Medical System facility. Spectrum Health served as the lead agency and fiduciary for this project. As West Michigan's largest not-for-profit health care system, Spectrum Health provides a full continuum of care through its seven hospitals and more than 140 service sites. Moreover, Spectrum Health serves over 67 counties as the regional tertiary referral center, providing support to rural, community-based hospitals throughout West Michigan. Region 6 is well-suited for the kind of collaboration that was necessary to fulfill the primary focus of this project because it includes a large health care system, small independent hospitals, recognized community and rural health centers, well-developed local and regional emergency preparedness committees, active local health districts and private health care providers who have been engaged in ongoing joint planning activities during the last five years. Project partners utilized established volunteer coalition structures to develop new committees that were comprised of traditional health care providers, legal and ethical experts and

¹ The content of this appendix is taken verbatim from *How to Deliver Essential Health Care Services During an Influenza Pandemic*, <http://www.spectrumhealth.org/documents/CaringfortheCommunity/OurProject.pdf>

Community Planning Framework for Healthcare Preparedness

representatives from private industry and universities. Staff and subject-matter experts ensured that each project component was of the highest quality. Committees worked for the previous 10 months to: determine essential health care services for regional communities; describe how limiting services will impact communities; define and describe the ethical ramifications of these decisions; and produce final guideline documents. Work was divided among the committees (e.g., ethics, staffing, in-home care), a program medical director, a program manager, a program coordinator and an executive committee, each with measurable and defined objectives. This project demonstrates how ED overcrowding can be prevented and how essential health care services within a community during an eight-week flu pandemic cycle should be defined and maintained. The collaborative nature of the Region 6 partners (including Spectrum Health) and their commitment to cooperative efforts to benefit 1.4 million residents of this region will greatly increase the project's overall success, impact and sustainability.