

COYOTE CRISIS CAMPAIGN:  
2007 COMMUNITY PANDEMIC INFLUENZA PREPAREDNESS PLANNING

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1. Category: The 2007 Coyote Crisis Campaign (CCC) focus on pandemic flu preparedness encompasses the following categories listed by the American Medical Association (AMA) – Centers for Disease Control (CDC) Congress on Health System Readiness announcement of January 16, 2007:

- Medical surge capacity,
- Community mitigation strategies,
- Emergency healthcare delivery,
- Alternative care sites,
- Critical community infrastructure maintenance, and
- Business community and private sector involvement

## 2. Community Description:

a. Community – CCC stakeholder sites are in different parts of Maricopa County, Arizona, although a number of partners are located in states as far away as Hawaii and Maryland. It is important to note that CCC is in its infancy and, as such, not all entities within the County participate. Instead, the organizations have self-selected to build a collaborative model that invites anyone to the table to work on crisis/disaster preparedness.

The population of Maricopa County is 3,648,545. As a prime tourism destination, the Valley of the Sun is honored to host more than 6,000,000 visitors each year. Maricopa County was the fastest growing county in the nation in the 1990s, and is the fourth largest county in the nation in terms of population. The population is primarily Caucasian (77.6 percent), with 24.9 percent Latino (a portion of the Latino population also declares other race/ethnicity), 3.7 percent Black, and 1.8 percent Native American. By the year 2025, it is estimated more than 30 percent of the population in Arizona will be Latino, and the Native American population will have doubled, although similar figures for Maricopa County were not able to be identified.

The Valley's average unemployment rate is 4.1 percent. Approximately 82.6 percent of the population has a high school diploma or more education. However, almost one-third of the population is below the 200 percent poverty rate. There are pockets of poverty, with the uninsured and underinsured prevalent in the landscaping, resort, restaurant, and other industries.

There are a number of large employers in the Valley. Many of the companies in CCC have national links to sister or other corporate headquarters. For example, Scottsdale Insurance Company (1,300 employees) is part of Nationwide Insurance Company (35,000 employees); this is important because the companies are setting paradigms in pandemic flu planning for their counterparts and corporate offices. A number of the large employers in the Valley are well-recognized for their close work with the military, genetics' scientists (the Translational Genomics Research Institute), academic research programs, and biotechnology programs.

b. Public Health Infrastructure – Arizona Department of Health Services (ADHS) carries out its responsibility for public health emergency preparedness, through the Bureau of Emergency Preparedness and Response. ADHS focus areas of emergency public health planning include: overt and covert bioterrorism response planning, the strategic national stockpile, the "Cities Readiness Initiative," the hospital surge capability and capacity plan, behavioral health – crisis management, isolation and quarantine, risk communication plans, the bi-national plan, emerging infectious disease outbreaks, Severe Acute Respiratory Syndrome, Mass Vaccination/Prophylaxis, management guidelines for suspicious powders, chemical/hazardous materials response plan, smallpox, flooding, wildfires, power outage, Biowatch Consequence Management, dirty bomb/radiological, ingestion pathway, and pandemic influenza. The Bureau facilitates and coordinates state and regional committees on response and preparedness activities, working with the Arizona Department of Homeland Security, Arizona Healthcare and Hospital Association, Indian Health Services, hospitals, the Arizona Association of Community Health Centers and individual community health centers, Metropolitan Medical Response Systems and fire departments, the Arizona Department of Public Safety and local police, state and local emergency management, and region poison control centers. Pertaining to pandemic flu planning, there is integration and collaboration between local and state public health structures; the primary response is sustained at the local levels (local health departments will carry out the components of the pandemic flu response in their communities) with coordination and support from ADHS.

Maricopa County Department of Public Health (MCDPH) provides public health services for the residents of Maricopa County by diagnosing and treating communicable disease, mobilizing efforts to prevent the spread of disease, and providing health education to promote health behaviors. Five divisions perform numerous essential public health services: 1) Public Health Clinical Services (sexually transmitted disease, tuberculosis, refugee, Hansen's Disease, and health care for the homeless), 2) Disease Control and Prevention (public health emergency management, epidemiology/data services, vital registration, and community health nursing/immunizations), 3) Community Health (health promotion and education, oral health, nutrition services, family health, and tobacco use prevention), 4) Professional and Technical Services (information technology, public information, planning, compliance and risk management, and facilities management), and 5) Administration (budget and finance, procurement, grants management, and human resources).

c. Health Care Delivery System – In Maricopa County, there are 28 general hospitals, 89 skilled nursing facilities, five Level I Trauma Centers, one predominant pediatric trauma center, one Burn Center, and one predominant psychiatric facility. There are three healthcare systems in CCC, encompassing four of the hospitals, two of the Level I Trauma Centers, the one Burn Center, and the one key psychiatric facility. There are 12 state designated back up burn and burn satellite centers, and three state designated infectious disease centers. These are Scottsdale Healthcare, Maricopa Integrated Health System (MIHS), and Mayo Clinic. Linked partners include Bethesda Naval Medical Center, the National Institutes of Health, and Bethesda Suburban Hospital.

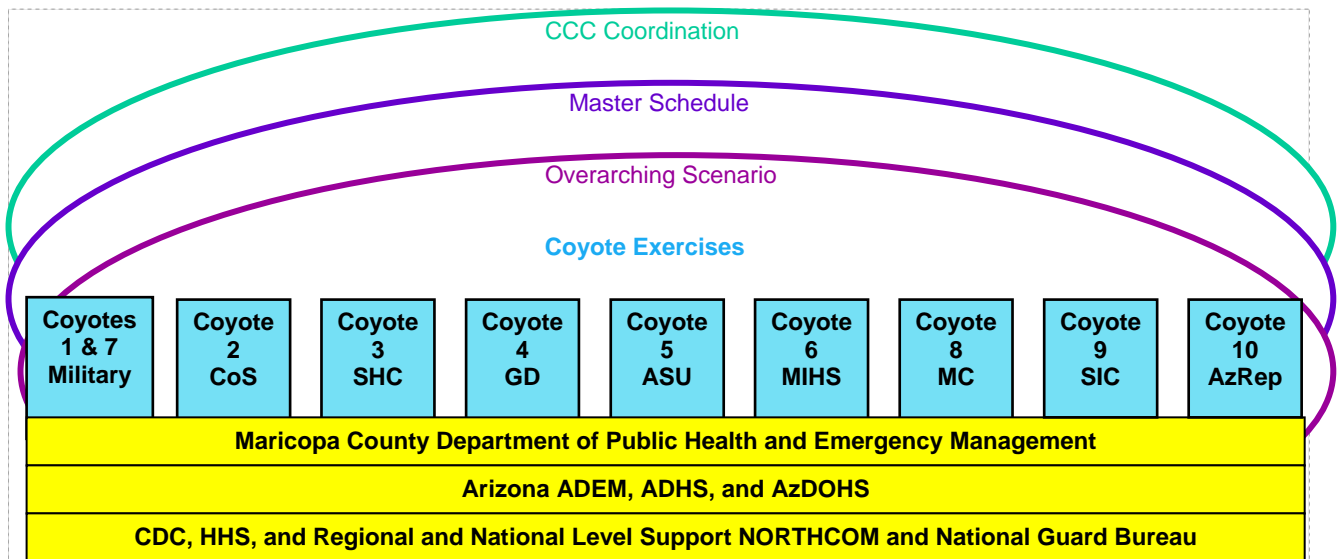
Scottsdale Healthcare is a community-based healthcare system, with two tertiary care hospitals and a third scheduled to open in 2007. Scottsdale Healthcare provides emergency and Level I Trauma services, two high-volume outpatient surgery centers, a Pediatric and Neonatal Unit, inpatient and outpatient services, and cancer treatment. Scottsdale Healthcare presently has 509 med/surg beds, 89 ICU/CCU beds, 74 postpartum beds, 20 NICU, 9 CCN, 16 rehab, 5 LDRP, and 20 ped beds (total capacity 742 beds). Scottsdale Healthcare served 256,424 patients with outpatient and inpatient services in 2006. In addition, Scottsdale Healthcare is one of the state burn satellite/back-up programs and one of three state designated infectious disease centers.

Maricopa Integrated Health System (MIHS) includes Maricopa Medical Center, the Arizona Burn Center, the Comprehensive Healthcare Center, the McDowell Healthcare Clinic, 10 community-oriented family health centers, a psychiatric services center, two behavioral health centers (inpatient, although one is outpatient as well), and an attendant care program. MIHS is the health care safety net for citizens of Maricopa County. MIHS provides care for all that enter its doors. Annually, MIHS has nearly 20,000 inpatient admissions and 300,000 outpatient visits. In addition, Maricopa Medical Center is a premier training center for the nation's physicians. The medicine, surgery, pediatrics and ob/gyn programs, in particular, contribute to the body of knowledge of patient care.

Mayo Clinic is the first and largest integrated, not-for-profit group practice in the world with locations in Arizona, Minnesota, and Florida. In Arizona, Mayo Clinic serves more than 100,000 patients each year, focusing on adult specialty and surgical care in more than 65 disciplines. Mayo Clinic Hospital has 208 licensed beds, including 172 medical/surgical beds, 20 ICU/CCU beds and 7 rehabilitation beds. Located in northeast Phoenix, the hospital provides inpatient care to support Mayo's outpatient locations in Scottsdale, Phoenix, Fountain Hills and Glendale. Mayo Clinic Hospital's Emergency Department provides 24-hour service to the surrounding community.

3. Planning Process: Coyote Crisis Campaign (CCC) is a distributed exercise, where each organization executes its exercise separately, yet each is able to leverage resources of other partners. However, there are aligned technologies and electronically connected systems to enable interoperability of communications. There is centralized planning, marketing, and scheduling. There is one overarching scenario, based on the World Health Organization’s six phases of pandemic flu, that provides the foundation for exercises; the theme is pandemic flu in 2007. There are four broad-based objectives that drive the partnership that are described later in the narrative.

Ten key stakeholder and partner organizations serve on an Executive Committee responsible for coordinating CCC: the City of Scottsdale (Coyote 2), Scottsdale Healthcare (Coyote 3), General Dynamics (Coyote 4), Arizona State University (Coyote 5), Maricopa Integrated Health System (Coyote 6), Mayo Clinic (Coyote 8), Scottsdale Insurance Company (Coyote 9), the Arizona Republic (Coyote 10); partners include Maricopa Departments of Public Health and Emergency Management, and ADHS. Coyotes 1 and 7 are military branches that will not be exercising to pandemic flu due to their roles in it. The Chair of the Executive Committee is the Vice President of Strategic Development for Scottsdale Healthcare, although all stakeholders have equal position in the collaborative model. The model is depicted below.



CCC Planning occurs through four “Cells”-- Planning, Technology, Public Information Officer, and VIP Coordination. With the exception of the Planning Cell, which meets frequently, the Cells and Executive Committee meet monthly. It is through this year-long planning that relationships develop, information and resources are shared, problems are identified, and solutions/technologies are created. Key issues in planning that have arisen pertain to 1) rigorous compliance with local, county, state, and federal policies, procedures, and chains of command, which can change, 2) funding; since each organization brings its own resources to the table to the level it is able, and there are often limited funds and/or restrictions on the use of money (military and government, in particular), there is a shortage of funds to help with materials and events, 3) it can be difficult to align major crisis event planning cycles, and 4) prioritization of border security and the War preclude clear direction for the military in terms of their roles in pandemic flu. These challenges are addressed on a continuing basis, and every effort is made to accommodate new information and in-kind and other resources available.

4. Narrative: Pandemic flu is an impending disaster that has devastating potential consequences in terms of organization economies; labor and leadership; and constituencies, patients, clients, and customers. Pandemic flu does not recognize organizational differences or geographical boundaries; it will affect all organizations and all levels of government. National, regional, and state prioritization of the threat served as the impetus for the decision to focus CCC on pandemic flu in 2007.

CCC is founded on the belief that military and civic personnel must become accustomed to working together, establish processes, build relationships, and continue to constantly test and refine operational efficiencies. In the event of a crisis/disaster, this familiarity and common understanding will help to avoid experimentation during the worst possible weeks of an outbreak and under the worst possible conditions.

The objectives of CCC are to a) provide a community service benefit by inviting broad participation in an event supporting effective disaster/crisis/emergency response training; b) leverage community, government, military and other public resources for effective disaster management coordination through multi-jurisdictional interoperability; c) demonstrate effective communication through coordination of CCC Stakeholders' individual communication efforts and exercising coordination and dissemination of public information to the region; and d) align CCC exercise process and plans with available local, tribal, county, state and federal response plans. The innovation of CCC rests with its:

- Alignment of government, military, healthcare, private industry, AND academic institution exercises;
- Year-long planning, utilizing one over-arching scenario and theme;
- Focus on interoperability of communications;
- Ability to create new technologies or interface existing technologies;
- Capacity to leverage resources and expertise distributed among organizations; and
- Open invitation to involve all participants interested in supporting exercises.

One of the resources that have proven instrumental to planning has been an algorithm provided through MathEcology, a company that has been contracted to generate forecasts of labor shortages/bed capacity use for the CDC and the Department of Defense. Through relationships with the military, CCC was able to gain authorization to use the algorithm, and MathEcology – now a participant in CCC – generously offered to conduct customized predictions based on stakeholder characteristics. The information is based on specific assumptions, derived from the CDC and altered for particular high risk factors that may be prevalent in some organizations, such as higher rates of labor shortages in hospitals due to heightened exposure to infected populations.

Assumptions utilized by the CCC are:

- 30 percent infection rate for the general population
- 40 percent infection rate for school-aged children
- 20 percent infection rate for working adults
- 2.5 percent mortality rate of those infected
- 40 percent of labor force will not be at work
- 6-week epidemic “waves”

Another resource that has proven to be highly beneficial for planning is the Washington, D. C. based National Guard Bureau's drill planning video that describes a hypothetical move of the pandemic flu into the southwestern part of the country. Using the theoretical scenario, a ship carrying various breeds

of poultry is traveling from Asia to Brazil, infecting crewmembers. From Brazil, the infection spreads to Mexico and across the Arizona border. Based on the World Health Organization's phases of pandemic flu, CCC organizations are asked to consider the elements of their pandemic flu plans to be enacted during four stages of flu progression:

- In March 2007, CCC is in Phase 5 (Continuing Pandemic Alert Period). There are large clusters of human to human transmissions and the virus is becoming better adapted to humans. There are 300 dead in South America and cases reported in Mexico.
- A few weeks later, CCC remains in Phase 5. There have been 1,000 deaths in Mexico.
- A few weeks later, CCC is in Phase 6 (Pandemic Period), with the first wave of pandemic flu.
- During Coyote Week, CCC is experiencing its second wave of the pandemic flu.

CCC exercise planning occurs through the Planning Cell and the Executive Committee. Underpinning CCC planning is each organization's internal planning (information is then shared to elevate and enhance all stakeholder efforts). CCC requests from organizations that they develop a "functional group" to address the four moves noted above based on instruction and internal pandemic flu plans. While tailored to each organization, for a healthcare system, the composition of function groups might consist of hospitality, security and safety, operations (including infectious disease experts), public relations, and communications/information technology. Once these functional groups have recommended actions, CCC requests that leadership be convened to discuss and finally approve policies and practices.

Pertaining to pandemic flu, there have been a number of interesting findings that have developed as a result of planning. These findings and the "Lessons Learned" from the exercises that occur during Coyote Week (April 23 to 27, 2007) will be the critical outcomes of CCC. These will guide amelioration and correction strategies that enable the community to be prepared to the very best degree possible. Some of the outcomes that will be addressed are displayed below.

Regarding effectiveness of Medical Surge Capacity, Emergency Healthcare Delivery, Alternative Care Site Use, and Other Medically-Related Plans and Processes, the following are being/will be assessed:

- Screening of healthcare workers and other employees required at work.
- External triage, using the SARS method developed in Ontario, and transfer/distribution of patients to alternative care sites (agreements in place); clear communications to government on notification to the public on where to go (institution of "911" emergency practices).
- Automated systems to track all triaged patients and resources (including providers) in terms of location and dispositions real-time and over the course of 120 days.
- Based on the system of reporting soldier deaths in the War (display on hospital websites and other public arenas), all processes for rapid display to reunify and communicate to employers/stakeholders (such as the Universities needing to relate information internationally) and families; emergency programs in place to relieve hospital "information desks."
- Emergency provider and nurse to patient ratios in force, and temporary certification processes for community provider assistance in-hospital and at alternative care sites, with "Code Coyote" in effect to communicate with community providers on roles and where to go.
- Enhanced security, ability and processes to move/tow vehicles, and points of entry at the hospitals identified (enabling free movement for providers and staff, while limiting access to the public).
- Criteria determined for distribution of vaccines and antivirals (severely limited stockpiles), ventilators, PPEs, and other equipment that is in short supply even though the inventory may be enhanced in preparation.

- Emergency power, water, hospitality, and other infrastructure programs (such as food package distribution to staff and families) to ensure self-sufficiency and continuity.

Regarding Community Mitigation Strategies, Critical Community Infrastructure Maintenance, and Business Community and Private Sector Involvement (all including healthcare), the following are being/will be assessed:

- Pandemic flu plans, including contingency management, succession, and post-wave restart plans.
- Legal (including impound of vehicles to temporary sites, triage decisions about who receives treatment, and display of the names of dead on websites) and financial consequences of plan enactment (including subsidies for alternative care and back-up workers, overtime pay, and loss of work through social distancing and/or decisions not to go to work when directed).
- Clear and real-time communications with public health, the public, employees, and providers in place, with pre-identified spokespersons, language that is aligned with the CDC, state, county, and other government directives.
- Public communications/education on prevention and treatment strategies as well as social distancing and emergency support systems, such as food, water, and gas distribution sites.
- Police, Fire, and Emergency triage systems.
- Closure of pre-determined municipal facilities (including schools)/programs and distribution of labor and support to assist vital operations of other organizations.
- Cross-trained employees providing continuity in water, utilities, and other critical services, and communications with families for employees assigned to stay at work throughout the duration of waves.
- Company infrastructures to accommodate off-site employee work through internet connections, including on-line classes for university/college students, and to sustain communications with socially distanced employees (dispositions).
- Emergency/temporary/back-up morgue, mortuary, and medical examiner (enhanced) sites (including vehicles) and processes in place and fluid.
- New/modified chat room communications, medication distribution devices, and other technologies.

It is important to emphasize that, while tabletop exercises and rehearsals are valuable, the stakeholders have also learned that actually exercising events can be imperative to getting processes right. As such, much will be learned during Coyote Week. At the end of Coyote Week, there will be a “hot wash” to identify Lessons Learned. An After Action Report will be completed to document the Lessons Learned from planning and from Coyote Week. The information will be made available to the public through the CCC website, at [www.coyotecampaign.org](http://www.coyotecampaign.org). CCC has extended open invitations to observe during Coyote Week (April 23 to 27, 2007), and offers organizations throughout the country the opportunity to link in and align exercises as a participant, partner, or sponsor.

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