

Communication Options to Mitigate Pandemics

White Paper

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Communication during a Pandemic

The effects of a pandemic, like other disasters, natural or man-made, can be mitigated by effective communication among crisis management personnel and with the public.

The need for rapid, reliable, consistent, effective and efficient communications is critical. In addition, particularly in a pandemic, the ability to target messages only to those affected is critical in avoiding panic and misspent resources.

Communication is critical throughout these activities:

- ✓ **Information Dissemination** – Provide information to both the public and healthcare workers regarding prevention and treatment options.
- ✓ **Inoculation/Drug Disbursement** – Direct the public to inoculation centers if required.
- ✓ **Identification** – Rapidly identify individuals or areas affected.
- ✓ **Exposure Notification** – Notify those who may have been exposed to an infectious agent.
- ✓ **Mobilization** – Direct first responders, health care workers, etc. to affected areas and inoculation centers. Update medical teams and government agency personnel on the situation as it unfolds.
- ✓ **Quarantine** – Notify individuals of quarantine status or contaminant situations.

Problems with other Media

- ✓ Notification by conventional wide dispersion media (television, radio, newspaper, etc.) may induce panic or a hypochondriac effect in the general population that ties up scarce health care workers or infrastructure.
- ✓ Door hangers, while feasible in an earlier age when there were no other alternatives, are impractical today due to the lengthy distribution time and cost. Also, changed lifestyles mean that front doors may not be opened for several days at a time.
- ✓ Distribution of faxes and e-mail does not assure message delivery to medical professionals or the public. As evident during Hurricane Katrina, these options are not available to masses of population.

The use of **Interactive Voice Response (IVR) technology permits nearly instantaneous automated message delivery** to healthcare workers, first responders and the public.

IVR technology is more than a simple outdial message. With the capabilities of speech recognition, text-to-speech, geo-coded mapping and the ability to link to databases in real time, IVR provides high volume interactive communications.

Existing Technologies

All of the following communication programs exist, are currently in use, and should be applied during a pandemic.

Public Information Hotline – A toll-free number the public calls to receive information as to treatment precautions, affected areas, etc. Such a service reduces panic and prevents a wasteful taxing of healthcare resources.

Dynamic Locator Program

The Dynamic Locator Program (DLP) is an automated, geographically-based inbound telephone information service which allows a caller to find the nearest location of a particular resource. By simply calling a toll-free number, individuals can be advised of the closest inoculation center, emergency shelter, Red Cross post, dry ice depot or other critical resource.

Callers can either speak or touch-tone enter their zip code to activate the system, or they can enter the phone number from which they are calling. The DLP then identifies the closest resource site using an advanced GIS mapping function and a user-defined radius. The system will search a particular area (for example, a five mile radius) and provide the addresses of the three closest locations, as well as directions on how to get to each location. If no locations are found within the particular area, then the radius is automatically increased until a match is made.

Site locations and directions are loaded into the system as text files and geographic coordinates by email to a secure web site. These text files are then converted to voice files using TFCC's innovative text-to-speech (TTS) technology. With TTS, an administrator can make information on hundreds of locations available to callers without ever having to record a single voice message.

What makes TFCC's Dynamic Locator Program so innovative is that it gives the administrator the ability to add or remove locations as needed, on the fly, via TFCC's secure web site. Changes propagate across the system immediately, so if a shelter reaches maximum capacity or an inoculation center runs out of vaccine, they can be removed from the list. Likewise, as new centers open they can be added to the list.



Health Care Information Hotline – A non-published number may be held exclusively for use by health care professionals to provide automated updates. Medical professionals can call in to such an automated system; enter a recognition code, and receive work assignments, report availability or report on a situation.

First Responder/Medical Team Mobilization. Profiles of first responders and medical personnel can be stored in a searchable database, allowing for profile-based notification.

Geocoded Mapping – An affected area can be designated on a web based map. The geocoded mapping system will identify the residents and businesses in that area by address, generate a list of phone numbers, and deliver a targeted message to that area.

Call Filtering – Agencies need to be prepared for the massive volume of incoming calls that will be generated during a pandemic. By using offsite Interactive Voice Response Units (IVR) with agency toll free numbers, calls can be directed to correct in-house staff/volunteers or to outsourced human resources. Many calls can be addressed using automated IVR, making more live agents available to take the calls only they can handle.