H1N1 Pandemic Response Operations:
Real Time Situational Reporting Made Easy

A low cost, easy-to-implement solution using Depiction® mapping software

In any large scale operation involving multiple organizations, one of the biggest challenges is keeping track of what is happening and where things are happening. This need for real-time information-sharing is particularly evident in the current preparations for the H1N1 crisis being made by Community Health Officials throughout the world. H1N1 operations, whether they be priority-based vaccination clinics to head off the pandemic, or temporary hospital facilities to respond to it, depend heavily on real-time information-sharing and coordination among the many decision-makers involved, so that resources are managed and services are delivered in a timely and efficient manner. An immediate goal of responding and supporting individuals, agencies and organizations is thus to gain and maintain some sort of situational awareness. Further, having a "shared" situational awareness contributes significantly to a more efficient and effective overall response.

We call this "shared situational awareness" a Common Operating Picture; and as the word "picture" implies, maps are a key component. When everyone involved has a common visual and geographic representation of what's going on, communication, cooperation and coordination are enhanced.

Let's say you are responsible for a County Health District, which, in cooperation with all its partners, establishes 11 Saturday H1N1 Vaccination Clinics throughout the county to deliver approximately 30,000 doses of vaccine to priority recipients: Pregnant women, children and those who care for them; adults 25 or under and those over 25 with chronic health conditions. The facilities being used include community health clinics, hospitals, a school and even a fire station.

The Unified Command Emergency Operations Center wants frequent updates on the operational situation at each vaccination clinic. This is critically important for a number of reasons: primarily, because vaccine doses may need to be re-distributed from clinics having lower patient turnout to those where lines are long and vaccine supplies are declining rapidly. Given the global shortage of vaccine, ensuring that every available dose is given out is essential. Additionally, staff and volunteer resources may need similar distribution to meet varying demands at each clinic. You will also need up-to-date information in order to keep public officials and the public well informed. And, in a more general sense, the more timely and accurate information you have, the better decisions you will make.

But not only do you need all this information, but so do your partner agencies, including city governments, volunteer organizations such as the Red Cross, and even state and federal agencies. Using traditional methods of situation reporting, this has been very difficult. Typically, every thirty minutes, each clinic will submit its situation report by phone and/or email to the Unified Command EOC. For redundancy, an Amateur radio volunteer also calls in the numbers over a radio net. At the EOC, the person receiving the reports will write them down and transfer them to a white board as they come in. Representatives of the various supporting non-profit and government agencies at the EOC get the information from the white board or from the person who made or took all the reports. These on-site representatives may be able to pass on the latest numbers (if they have them) to their constituents and off-site supervisors, by phone or email, to keep them informed.

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This traditional information-sharing system works; but when multiple people provide and receive multiple reports, the risk of misstating or mishearing something is high and the risk of different people having conflicting information is even higher; all of which can lead to poorer decision-making in a real-time operational environment. Also, in this traditional hierarchical reporting structure, only the EOC receives ALL the sitreps from ALL the clinics – so only the EOC has the comprehensive information. If one of the clinics wants to know how things are going community-wide, the clinic has to get it from the EOC.
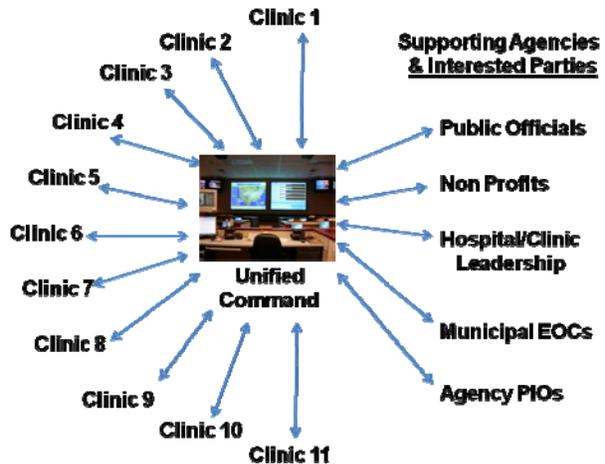
Even with these weaknesses, this traditional one-to-one reporting method has been the only option for operations such as H1N1 response and thus achieving a common operating picture among multiple agencies, organizations and individuals has been very hard to do—until now.

Depiction Mapping Software makes it relatively easy, and very inexpensive to create and maintain a map that shows key resource information as well as events that are occurring. It's easy to add information to the map as it comes to your attention AND you can set up your Depiction to **automatically** receive and map information as it is reported by others. You can even send information to others directly from Depiction. And all this exchange of information between and among the participants happens in near real time and is as easy as sending and receiving email.

In the vaccine clinic scenario, imagine that all the important voice communications (like the number of vaccines still available) was augmented with an email containing additional details. And, what if all this information being reported by email automatically appeared on a situation map on your laptop display AND on the displays of everyone who needed that same information? And what if you could forward selected key information to all the agencies involved in the response and/or higher authority simply by clicking your mouse, and have that information be visually displayed on **their** map to achieve a Common Operating Picture? With Depiction mapping software, this—and much, much more—is both possible and extremely affordable.

How it works

1) Equip each clinic, EOC and interested agency with a single copy of Depiction.
2) Create a 'depiction' file that maps the locations of each of the vaccine clinics, and their resources.
3) Establish a shared email account that will serve as the 'bulletin board' for reporting.
4) Tell each copy of Depiction to read the emails sent to this account.

Each vaccine clinic in Depiction can be set up to include all the key information about the clinic's situation—vaccine stockpiles, wait time, priority individuals and more. To submit the every-30-minute situation report, the clinic Depiction operator needs only to enter the updated numbers into the element and click the Send button. The Depiction operator then enters the shared email account that all the clinics are sending their reports to (for example, h1n1sitreps@county.gov), and can also enter more email addresses if desired.

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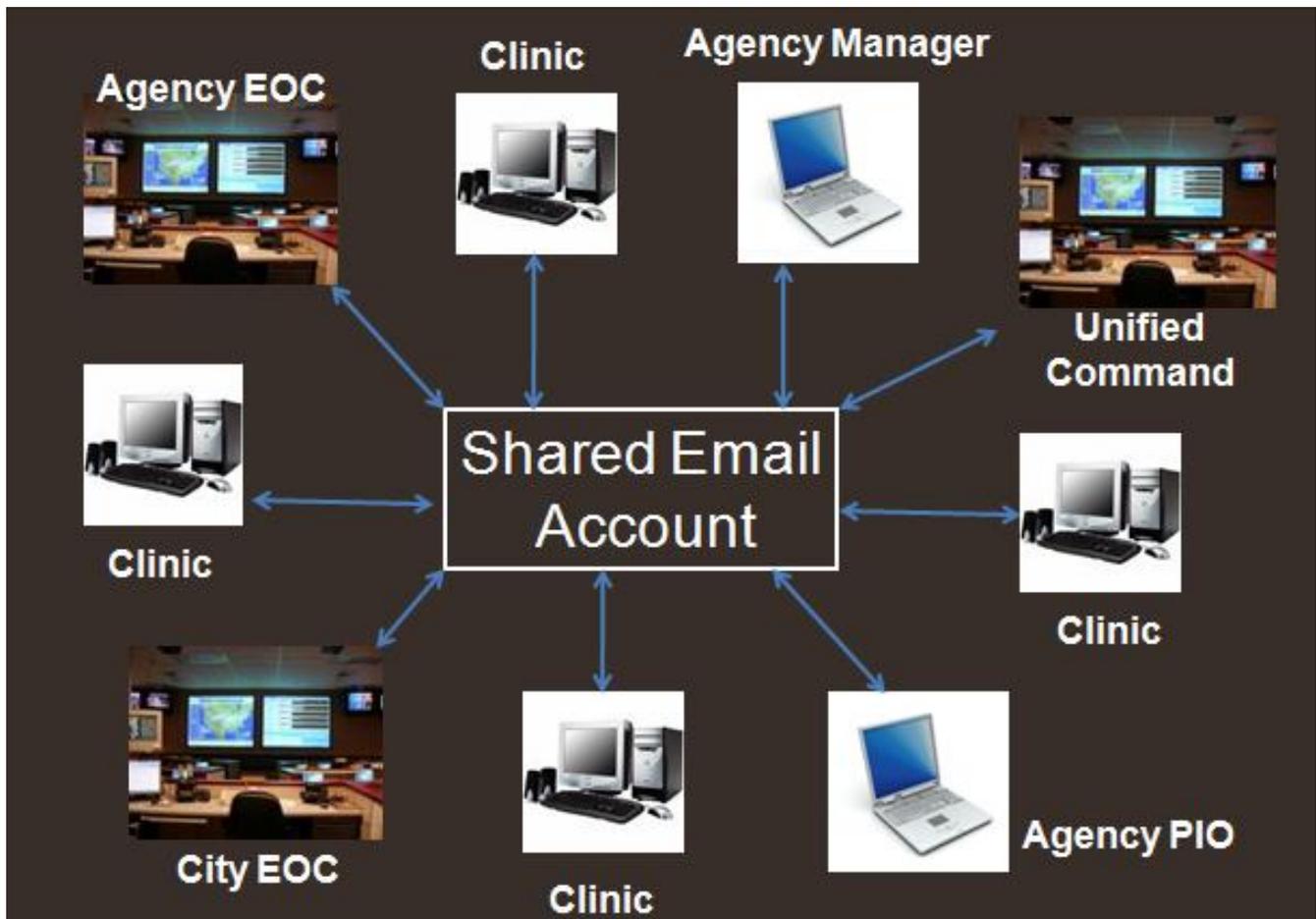
The report is then transmitted to the shared email account. The Depiction operator at the Unified Command EOC has the same depiction file loaded showing the 11 operating clinics. To receive situation reports from the various clinics, the Depiction operator only needs to give Depiction the account information for the shared email account, and the program will begin scanning the shared email account. When a clinic's report is received, Depiction automatically updates the information associated with that clinic. With every clinic submitting its sitreps using Depiction's built-in Send feature, the Depiction operator in the EOC merely has to hover over a clinic's icon to get the latest information that was reported, and in a tactical geographic display that could even be projected on a screen to benefit all those in the EOC.

And instead of being restricted by the traditional one-to-one communications methodology, submitting sitreps to a shared email account using Depiction supports a one-to-many approach, so that all the Depiction operators at the clinics and other supporting agency headquarters—even trusted individuals sitting at home—have all the same sitrep information that the EOC is getting, and at the same

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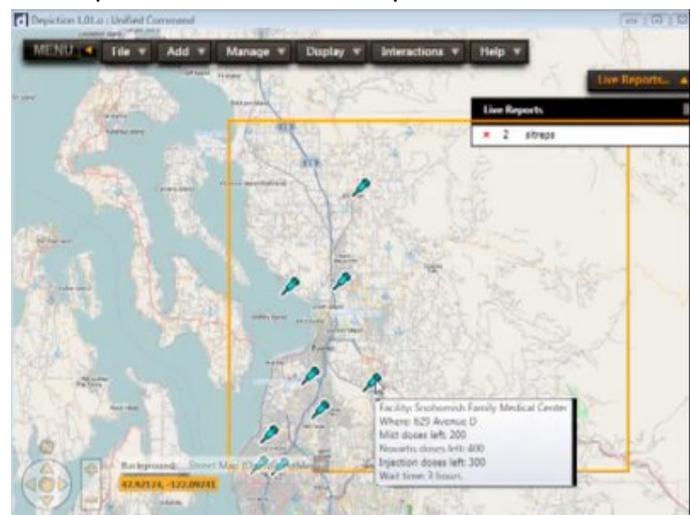
time. The result is key information getting to all authorized personnel faster, without risk of filtering errors—and in a mapped situational awareness display that serves as a Common Operating Picture, shared in real-time by all the activities involved in the operation. To participate, each clinic, agency or individual need only have the password to the shared email account, an internet connection; and a copy of Depiction Mapping Software – which costs under $200.

There are some additional aspects of this Depiction-enabled, information exchange network:

1) When someone joins the network by launching their copy of Depiction and setting it up to read the appropriate email account(s), Depiction will read all the emails and in just a few moments, the Depiction display will be up to date and reflect the most current information—no need to read back through a stack of messages to get "up to speed" on the situation.

2) The various email account(s) constitute an "event log," of sorts, containing every email report that was sent during the incident. These emails show: what was reported, who reported it, who it was reported to, and when it was reported. There is no need to keep a separate chronological event log except to document those events not reported by email.

3) Using the "Save as" feature of Depiction, users could periodically Save their Depiction to capture the situation at that given moment and store it on their desktop as "Situation_at_290600.dpn" for example. Saved "dpn" files can then be recalled to reconstruct events in support of post-event analysis, to capture lessons learned and to better train for future events.

Using Depiction and email networks as described above, good Situational Awareness and a Common Operating Picture are achievable! This example focused on H1N1 vaccination clinics, but the same approach could be used to map and keep track of a multitude of resources and information: the locations and status of staff, volunteers, vehicles, facilities, supplies and more.   Establishing and sharing situational awareness in a secure, simple and inexpensive way; and for any emergency, crisis or event is achievable using Depiction mapping software. And the real-time communications features described above represent only a portion of the software's innovative capabilities. To learn more, visit the Depiction website or contact Depiction at info@depiction.com

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