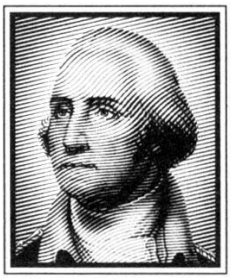


THE GEORGE WASHINGTON UNIVERSITY MEDICAL CENTER
WASHINGTON DC

Baseline Evaluation of the DC Emergency Healthcare Coalition

Melissa A. Higdon, Peter Shin, and Michael A. Stoto
June 11, 2008

The DC Healthcare Facilities Emergency Care Coalition, funded by a grant by the U.S. Department of Health and Human Services Assistant Secretary for Preparedness and Response (ASPR), was designed to significantly improve the state of emergency preparedness in health care facilities in the District of Columbia (DC), and to create a model for emergency preparedness that can be used by other large cities or regions of care across the nation. Its goal is to provide a comprehensive, uniform, and consistent framework and infrastructure for emergency preparedness across the full continuum of patient care. Devised to address the inconsistencies, shortcomings, fragmentations, and gaps present in current District hospital and healthcare facility emergency preparedness and response capabilities, the Coalition will achieve the following durable results and benefits for the District's medical preparedness and response to a catastrophic event.

One component of the ASPR grant that supports the DC Healthcare Facilities Emergency Care Coalition is an evaluation. The evaluation team, consisting of Michael Stoto and Melissa Higdon of Georgetown University School of Nursing and Health Studies and Peter Shin of George Washington University School of Public Health and Health Services, has developed a two-prong approach to this evaluation, involving structured interviews and an on-line survey. With the purpose of collecting baseline information on the Coalition, cooperative planning activities, and coordination among hospitals and the rest of the DC health care system, this analysis examines the current level of satisfaction with facility capabilities and capacity as well as early efforts to improve the integration and cooperation among healthcare providers and their partners in achieving its goals.[1]

Interviews

"Pre-intervention" interviews were conducted between March 24, 2008 and May 20, 2008 with 17 individuals representing hospitals, healthcare organizations, and DC agencies on a confidential basis to establish the baseline level of preparedness for the DC healthcare system.[2]

[1] As outlined in the proposal to the U.S. Department of Health and Human Services Assistant Secretary for Preparedness and Response (ASPR)

[2] Representatives of the following entities participated: Washington Hospital Center, Veterans Affairs Hospital, Walter Reed, George Washington University Hospital, National Rehab Hospital, Providence Hospital, Sibley Hospital, Children's National Medical Center, Howard University Hospital, Georgetown University Hospital,

Each interview was approximately 30-60 minutes in length, and followed a structured interview guide (see Appendix 1).

Hospital representatives typically characterized their institutions' current level of preparedness as somewhat less than ideal. For instance, every hospital has an emergency operations plan (EOP) written, but a number of respondents noted that these plans needed to be better "operationalized." One interviewee felt that a working EOP that is standardized for all of the hospitals and health care institutions in DC is the most desirable outcome. He acknowledged that this project allows us to take a critical look at the various players in health care and identify the deficiencies and an opportunity to improve. Moreover, he felt that, at the system level, the EOP is very important, as the information from the EOP can be used to incorporate into a critical infrastructure plan. However, it is important to standardize information in the EOP with the Hazards and Vulnerability Analysis (HVA) in mind.

Non-hospital healthcare organizations are generally seen as less prepared than the hospitals. Better coordination among healthcare providers and with the DC governmental agencies is seen as critical for improving this situation.

Hospital, healthcare organization and DC agency representatives alike agree that staffing for emergency preparedness is universally problematic. Few hospitals and healthcare institutions in DC have more than one person who is solely dedicated to emergency management. Some do not even have one individual with such a position. Similarly, there is never enough funding to stockpile an adequate amount of emergency supplies. Some hospital managers felt that they needed to cultivate a stronger interest in preparedness amongst the hospital administration to develop enough momentum to 'push the ball further forward.'

A number of hospitals and other healthcare organizations have memoranda of understanding (MOUs) or other formal or informal mutual aid agreements in place to share resources in case of an emergency. In addition to the DC Hospital Association (DCHA) agreement covering member hospitals, a number of healthcare organizations mentioned arrangements with facilities outside of DC, which could be important if all city healthcare organizations are dealing with the same emergency. Most of these arrangements were the result of being part of a hospital chain or similar arrangement.

With the exception of the citywide live exercise, there was scant agreement among the participants on what grant deliverable is the most important. Many hospital representatives did agree, however, that the main benefit of the DC Healthcare Facilities Emergency Coalition is "the bridges that are built and the silos that are knocked down" in the process of crafting the deliverables. Hospitals are acting in a more conscientious and collaborative fashion. The deliverables are all important, but the spirit of collaboration is most definitely the main takeaway from this endeavor.

As long as all of the institutions, including city agencies, participate, many representatives felt that the citywide exercise is potentially the most important ASPR deliverable. Many hospital representatives felt that the exercise is a measure of the success of the Coalition's total effort. In the past, hospitals have dropped out of citywide exercises as the individuals who need to find out about the exercise found out too late. Interviewees stressed the importance of planning ahead to accommodate the schedules of as many hospitals and health care institutions as possible.

Nearly all those interviewed thought the integration of institutional EOPs with the DC Emergency Management Program (EMP) was an important deliverable. For some, especially the non-hospital providers, this was seen as an opportunity to improve their own EOPs.

Similarly, nearly all interviewees thought the Hazards and Vulnerability Assessment (HVA) was important. Hospital representatives generally agreed that the outcome of the HVA, which was being completed at the time of the interviews, was very strong. Many also expressed that this activity was much sounder and useful than they originally expected it to be. Some hospitals used this activity as an opportunity to improve their own HVAs, borrowing ideas from others, and using the Kaiser format. However, one hospital representative who was a member of the subcommittee to develop a citywide HVA feels that as of right now they are merely following the footprint of other organizations such as the National Fire Protection Association (NFPA) and fire standards when developing the citywide healthcare HVA. It seems more of a reformatting activity to her and, hence, she does not expect it to make a big difference at the institutional level.

Interviewees also stressed the importance of improving the way hospitals and healthcare organizations communicate during an emergency. Many feel that during an incident, communication between DC healthcare organizations is usually *ad hoc*. People are friends with certain other people in the system and their organizations are the ones that generally communicate well in an emergency. There is a general consensus that communication systems could be exceptionally useful if they are successfully implemented and continually tested. Some are already looking forward to the outcome of the citywide exercises and how the new communication systems impacted the success of the exercise.

In this context, enhancements to the H-MARS system were generally seen as important. Respondents differed in their expectations of the utility of the web-based health information system (HIS). Many felt that an HIS is sorely needed, but noted that an effective HIS system needs to be correctly implemented and integrated throughout the DC health care system in order for it to be effective.

Most hospital representatives have not used Sharepoint as of yet and some representatives do not plan on using it during a disaster as other things take precedence. One interviewee expressed concern that the site may be hacked by the press to publish emergency plans of hospitals and healthcare institutions. Although the interview protocol indicated that the HIS and the Sharepoint system were separate and intended for different purposes, the responses suggest that the interviewees do not have a clear idea about the purpose or operations of these systems.

The institutions whose staffs are to receive the first three preparedness modules (VNA, DCPCA, Community Connections) generally regarded the material as useful and the LMS as a good way to deliver it. For primary care clinics, one representative noted, the LMS is the single most important deliverable of the grant. Primary care offices need to have a quick package available to train their employees. Short term memory is not always the best, so Just-in-Time training can also be used as a refresher. Some hospital representatives are a bit concerned about the limited scope offered in Just-in-Time training offers, but agree that it is a good start. Most hospital representatives think that LMS is a good step in improving safety for clinics that cannot afford the training in-person classroom training that is necessary to have a trained staff.

The security risk assessments and the design charrette for security enhancements were seen as potentially useful, especially to the facilities that participated in them. Their ultimate value will depend, respondents suggested, on resources being available to implement the ideas that are developed.

The majority of the complaints and problems with the ASPR grant related to the short time frame and intense work load. Moreover, the work on the DC Healthcare Facilities Emergency Coalition is an "add-on" activity for the individuals who are working on these various subcommittees and committees. The organizations are compensated for the individual's time, but the individual receives no additional compensation. Moreover, they receive no relief from their current duties, and are asked to take on the daunting deliverables for this coalition. This process definitely has the potential to burn people out.

In conclusion, the DC Coalition activities have helped some hospital representatives realize that a large institution is needed to spearhead a process like this. Smaller hospitals are generally unable to apply for a grant such as this one, as it is often assumed larger area hospitals like WHC would receive the funding. Without WHC leading this process, the coalition would not work. The DC hospitals as a system will work more effectively as a team from an operational standpoint as a result of this effort.

On-line survey

The survey was administered to all Emergency Management Coalition (EMC) members between March and May 2008.[3] Out of approximately 30 organizational members, 15 responded to the survey, including 8 hospitals.[4,5] Due to the small number of responses, statistical analyses

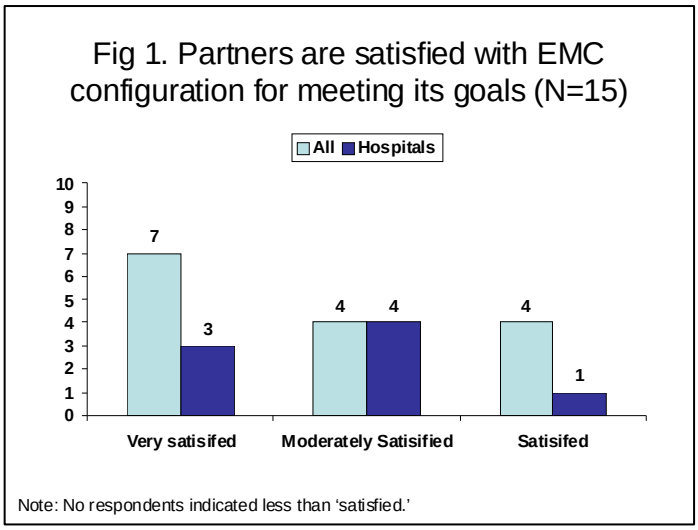
[3] Original deadline was one week but was extended due to lack of responses.

[4] Providence Hospital, Children's National Medical Center, Community Connections Mental Health, DC DOH, DC Fire & EMS, DC Homeland Security Emergency Mgmt, DC OCME, DC Primary Care Association, DCHA, Delorenzo Tricare Health Clinic, Dept. of Health & Human Services, George Washington University Hospital, Georgetown University Hospital, Greater Southeast Community Hospital, Homeland Security EMA, Howard University Hospital, MPDC, National Naval Medical Center, National Rehabilitation Hospital, Office of the Attending Physician, Sibley, Specialty Hospital – Hadley / Capitol Hill, VA Medical Center, VNA, Walter Reed Army Medical Center, Washington Hospital Center, and WRAMC.

[5] Respondents include: DC HA, DC DOH, DC OCME, DiLorenzo Tricare Health Clinic, Psychiatric Institute of Washington, DC Primary Care Association, Community Connections, Greater Southeast Community Hospital, Georgetown University Hospital, Specialty Hospital Nash-Hadley, Children's hospital, VA medical center, Washington Hospital Center, and Howard University.

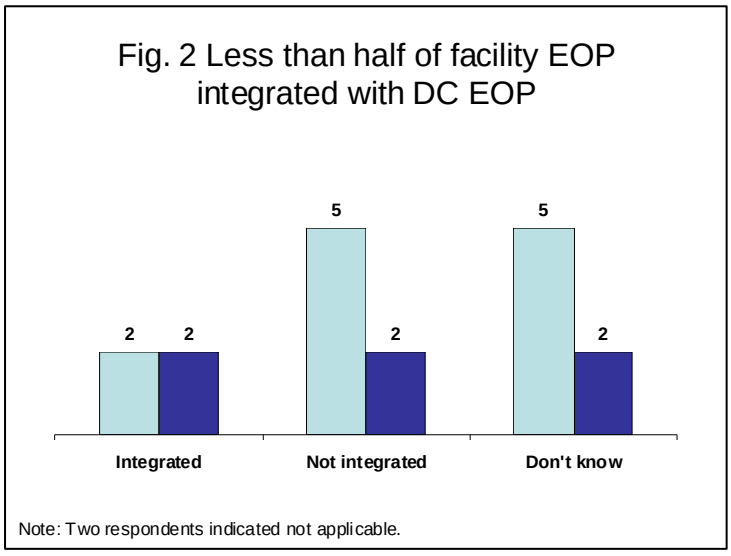
were not conducted. The descriptive results are included in Appendix 2 and are presented in the most simplest and transparent format possible with findings based on actual number (rather than percent) of responses.

The findings indicate the majority of respondents are satisfied with EMC efforts to meet the goals of the proposal. Figure 1 shows all respondents were at least satisfied with the current configuration (i.e., the groups participating in the coalition) of the EMC. The majority of respondents were either very satisfied or moderately satisfied. Hospital respondents also indicate higher level of satisfaction with EMC efforts.



When asked to identify top priorities and likelihood of achieving them, respondents identified the top three as developing and completing the EOP, EMP, and HVA. Nearly all respondents who identified these three issues as the top priorities also believed these priorities could be achieved through the EMC; and, for example, nearly all respondents indicated that they would use the EMP. While respondents identified other priorities and similarly high estimates of success, they rated coordination with vendors as the lowest priority and were less likely to believe it could be achieved; however, this may reflect respondent's mixed interpretation of 'vendors.'

When asked to identify top priorities for their own facilities, it was not surprising to find similar issues of staff training, exercises and drills, supplies and equipment were included. However, most indicated back-up communications as the least necessary; probably due to wide spread availability of cell phones and other communication devices. While hospitals also tended to rank communications lower, they also indicated need for plan/procedures to be a low priority.

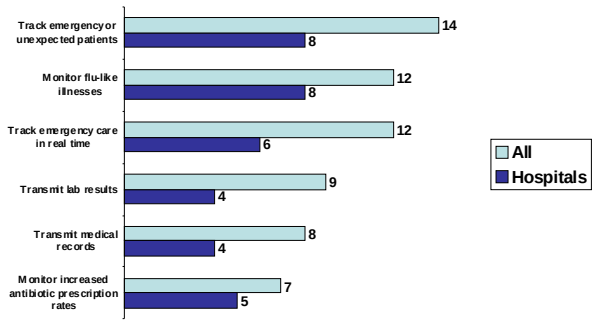


Most facility EOP appears to incorporate the major types of events and responses necessary. However, creating additional beds and reuniting families were least likely to be

included in the EOP. Additionally, when asked about their facility EOP integration with DC EOP, only 2 indicated integration (Figure 2).

With respect to developing health information systems, respondents generally agree participation in the RHIO, technical assistance, and appropriate software and hardware, and hospital security were priority issues. (Figure 3) While most believed an HIS could be achieved (11), respondents varied in what type of information should be included. At a minimum, respondents indicate need for the ability to track emergencies in real time, surge in unexpected patients, and monitor flu-like symptoms. Respondents, however, were split over the need for transmission of patient lab results, medical records, and antibiotic prescription rates.

Fig 3. Types of functions HIS should include; possible conflict over transmission of personal records



Most respondents (9) appear to indicate completing community-wide exercises and drills (and remains consistently one of the most important priorities for facilities). However, 7 out of 15 respondents indicate lack of satisfaction with staff preparedness. Nearly all respondents (12) recommended that Just-in-Time should be made available to all other members.

While HMARS is believed to be an effective tool for the hospital alert system, additional training may be warranted to ensure all staff know how to use them. Nine out of 15 respondents indicated it was an effective tool. While most felt it was a major priority, only six of 15 respondents indicated HIS is an effective information sharing tool (possibly due to the fact few understood how to operate it) and one believed it was not important or effective.

There were two additional issues which may require further education and information (and clarification in the next survey). Three hospitals indicated they were in full NIMS compliance with all 17 elements when in fact several of the elements needed for compliance had not yet been achieved by the EMC. In effect, there may be some misunderstanding of what is involved with NIMS compliance. Additionally, respondents appear to be confused on which agencies should be notified in cases of unusual cluster of illnesses – the question did not clarify if both needed to be contacted or if contacting hospital infection control personnel would be responsible for notifying the appropriate agencies. Seven or eight respondents indicated either the agency or hospital personnel, and only 6 indicated if those agencies or personnel could be contacted at anytime.

In sum, major findings of the on-line survey are:

- Partners are satisfied with EMC configuration for meeting its goals
- Top priorities are developing and completing EOP, EMP, and HVA
- Facility EOP need to be integrated with DC EOP

- Respondents agree on need for HIS but differ in necessary function.
- HIS was considered an important and effective tool but identified least necessary features of health information sharing -- transmission of lab results, medical records, and antibiotic prescription rates.
- Most organizations have completed community-wide drills and exercises but level of staff preparedness is not considered satisfactory
- Members indicate widespread adoption of Just-In-Time trainings
- Additional training needed for HMARS and HIS may be necessary
- Additional understanding of NIMS, interagency notification process and procedures may be required.

Appendix 1

DC Healthcare Facilities Emergency Care Coalition
Structured Interview Guide

Name:
Title:
Location:

Statement of confidentiality: This interview is confidential. While we will make a record of the information gathered over the course of the interview this hour, it will not be linked to your name or organization in any way in what we report or publish.

Interview protocol for beginning of grant period

- Current status of emergency preparedness at
  - Your own healthcare organization
    - facility
    - staff
  - DC hospitals as a group
  - DC hospitals, primary care and mental health clinics as a healthcare system

- Do you have any formal agreements (i.e., MOU) to provide or share resources in an event of emergencies with health care providers and/or organizations?

- Greatest organizational needs to achieve adequate level of emergency preparedness
  - plans
  - training
  - exercises
  - technology
    - health IT
    - other technology needs
  - capital needs
    - supplies
    - other capital needs
  - other

- Expected impact of ASPR grant on own healthcare organization
  - improved Emergency Operations Plan (EOP)
  - improved HVA
  - increased or enhanced emergency preparedness training for staff
  - improved preparedness plans for own facility/organization
    - for all hazards
    - for a specific type of event (what types?)
    - evacuation plan
  - development of DC healthcare system EOP
    - inter-facility transfer

        - communication across the healthcare system
    - integration of your own EOP with the DC Emergency Management Program (EMP)
    - participation in Emergency Management Committee (EMC)
        - to improve own facility's/organization's preparedness
        - to build personal relationships with other response personnel that will be useful during an event
    - development and expansion of Mutual Aid Agreements to include additional hospitals or other response organizations and vendors
    - development of/access to real-time systems to communicate with other healthcare providers and DC Department of Health (DOH) and Department of Human Services (DHS)
    - ED-IT connectivity for family unification (*for hospitals*)
    - H-MARS and Hospital Information System (HIS) enhancements for hospitals and DCPCA and Community Connections
    - development of a Learning Management System (LMS)
    - implementation of 3 emergency preparedness training programs through the LMS (*for DCPCA, VNA and Community Connections*)
    - security risk assessment (*for GW Hospital, Sibley, VA, Providence, Walter Reed, Howard University, National Rehab Hospital, WHC, GU Hospital, Children's*)
    - design charrette for security enhancements (*for Children's, VA, National Rehab Hospital, WHC)*
    - opportunity to participate in EOP training
    - opportunity to participate in live city exercise on the EOP
    - opportunity to participate in national conference on lessons learned from grant

- Potential problems
    - completion deadlines
    - takes away time from other organizational preparedness efforts
    - difficulties that may become problems later
    - negative effects of ASPR grant
    - other

- DC Healthcare Coalition
    - Are the right people at the table?
        - from each institution/organization?
        - are correct institutions/organizations present?
        - who would you add or remove?
    - Dynamics
        - meeting length or frequency
        - concerns about sharing of information with other healthcare organizations
        - trust
    - Sharepoint (file sharing software)
        - aware of/have access to?
        - user friendly system
        - useful idea for sharing work products and other information

        - used effectively for sharing work products and other information

- ASPR grant in general
    - Referring to list of deliverables in the project summary,
        - Which are most important and/or necessary?
        - Which are least important and/or necessary?
        - Are they all achievable?
    - Impact of grant
        - Expands number of organizations participating in preparedness efforts in DC and their degree of participation
        - allows us to do that we wouldn't have done otherwise as a system
        - provides funding for projects that we would have done otherwise
        - provides funding for projects that we would not have done otherwise
        - helps ensure own hospital/organizational preparedness
    - What are your personal/professional reasons for involvement with the process?

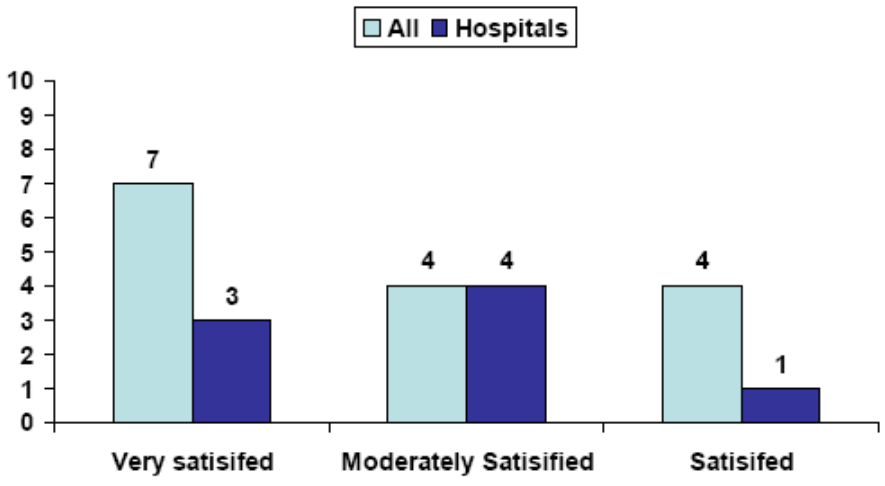
- Wrap-up
    - What do you believe will be the most important benefit of the grant
        - for your own organization?
        - for the healthcare system in DC?
        - for you personally or professionally?

Appendix 2.

Analysis of EMC Survey: Baseline Perceptions of Capabilities and Achievements

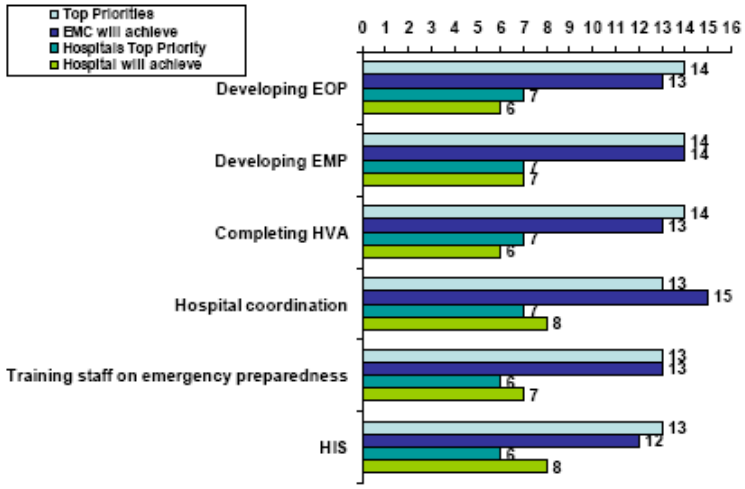
Peter Shin, PhD, MPH
Michael A. Stoto, PhD

Partners are satisfied with EMC configuration for meeting its goals (N=15)



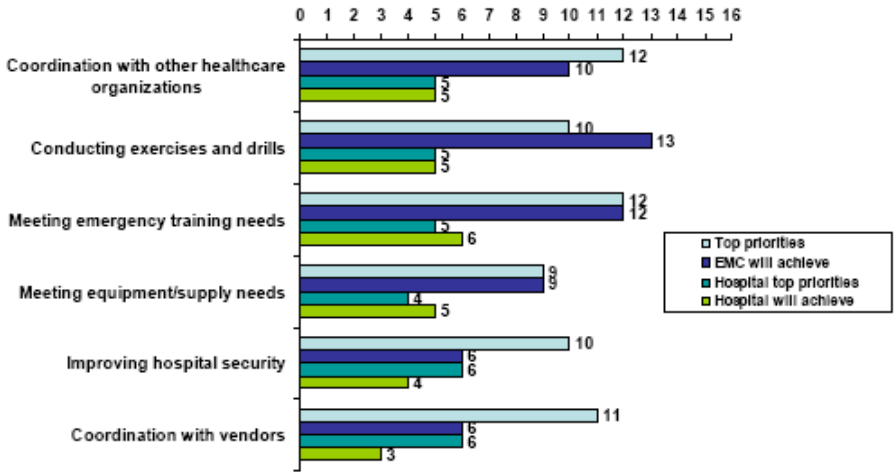
Note: No respondents indicated less than 'satisfied.'

Top priorities for tomorrow's emergencies and likelihood of meeting them

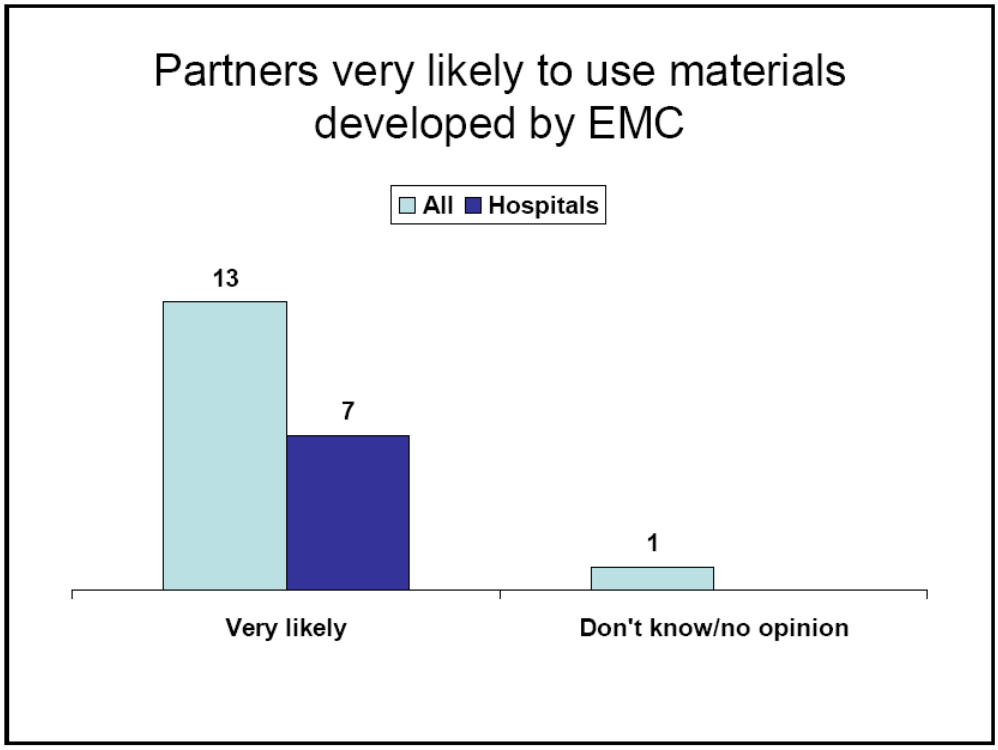


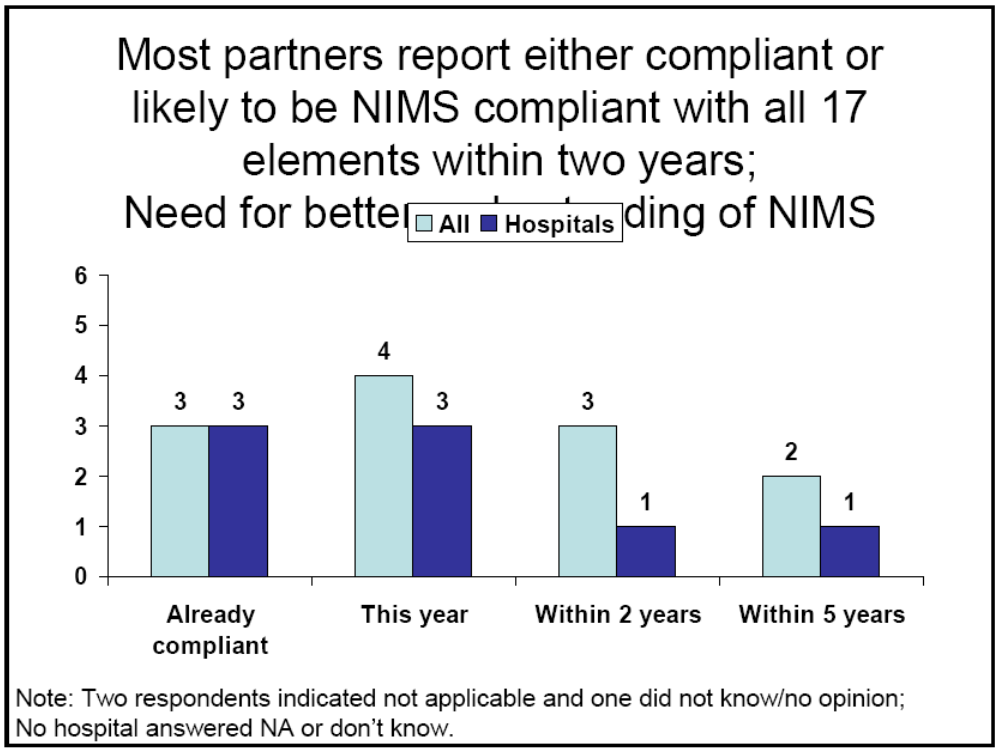
Note: List sorted by highest priority (Rank=1); number of observations for priority include indications for Ranks 1 and 2.

Next group of priorities for tomorrow's emergencies; vendor coordination lowest priority and less likely to be achieved



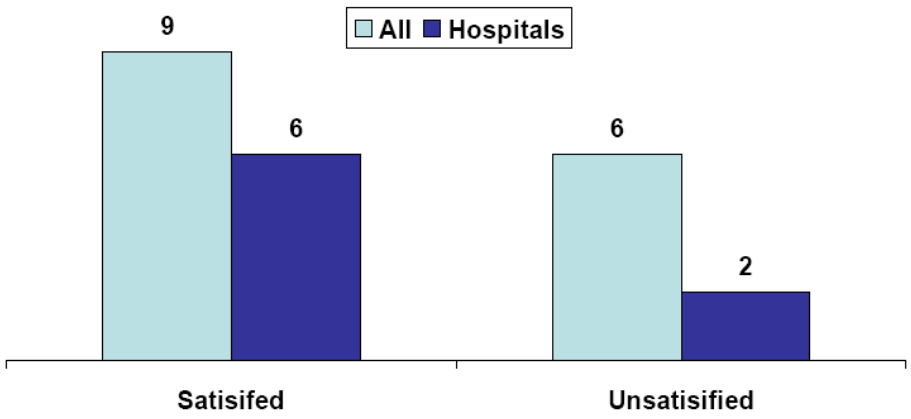
Note: List sorted by highest priority (Rank=1); number of observations for priority include indications for Ranks 1 and 2.


Partners very likely to use materials developed by EMC
All
Hospitals
13
7
1
Very likely
Don't know/no opinion


Most partners report either compliant or likely to be NIMS compliant with all 17 elements within two years;
Need for better
ding of NIMS
All
Hospitals
6
5
4
3
2
1
0
3
3
4
3
3
1
2
1
Already compliant
This year
Within 2 years
Within 5 years
Note: Two respondents indicated not applicable and one did not know/no opinion;
No hospital answered NA or don't know.

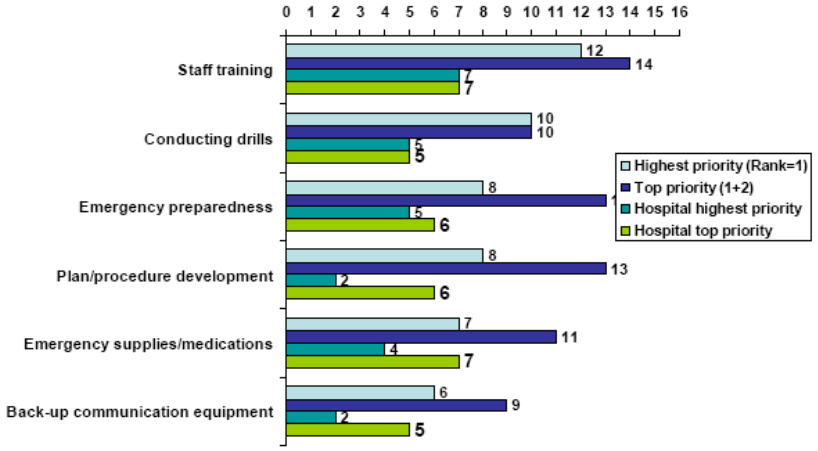
Facility Emergency Management Program (EMP)

Organizations split over satisfaction with their facility EMP



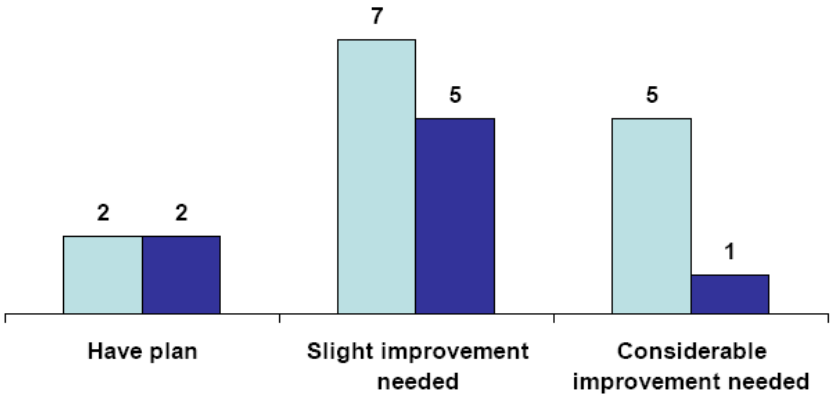
Note: Both groups include varying levels of satisfaction.

Top Facility Priorities for Major Accident; Backup equipment lowest priority

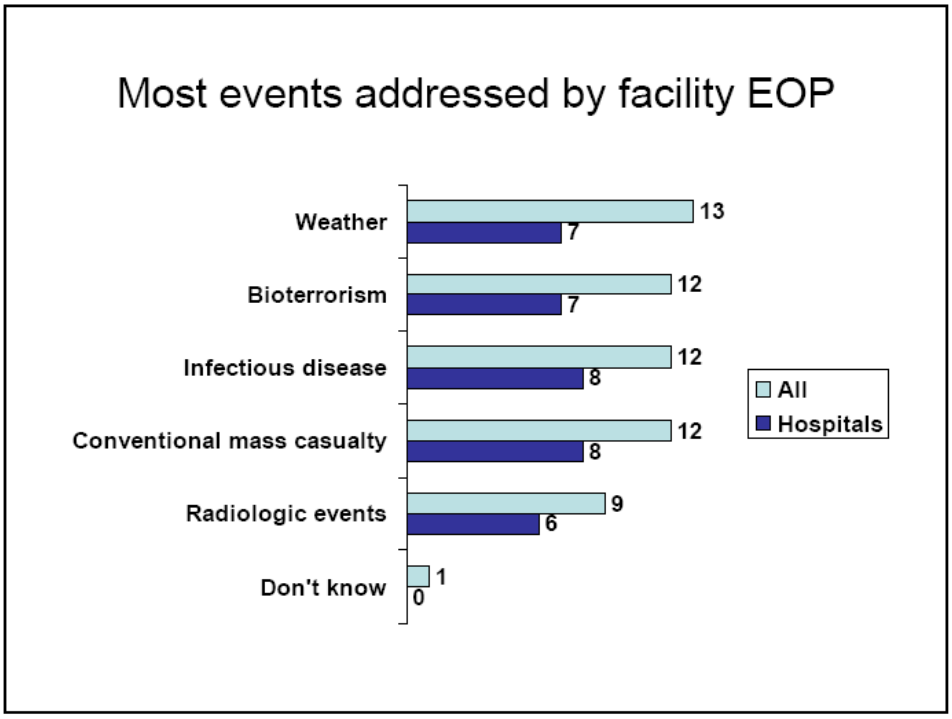


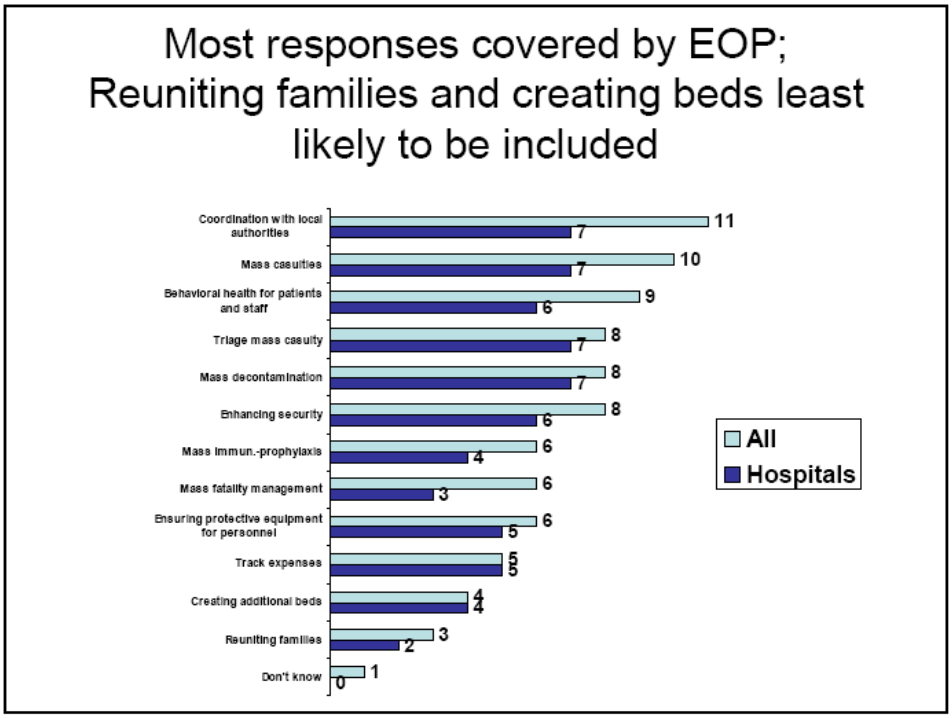
Note: List sorted by highest priority (Rank=1)

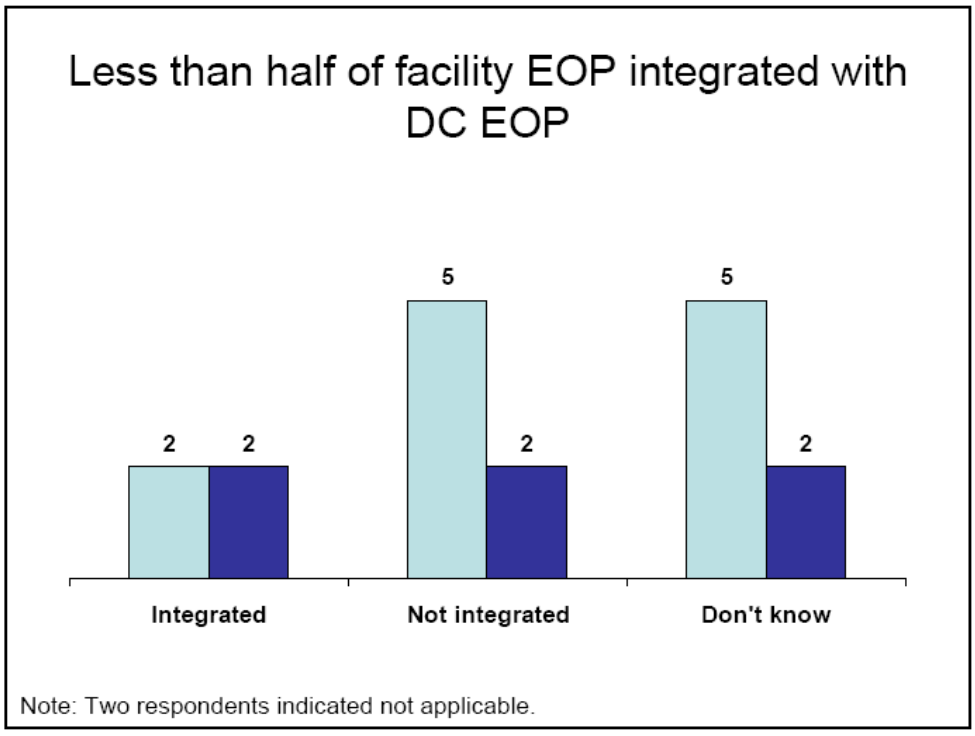
Most identify need to improve facility EOP

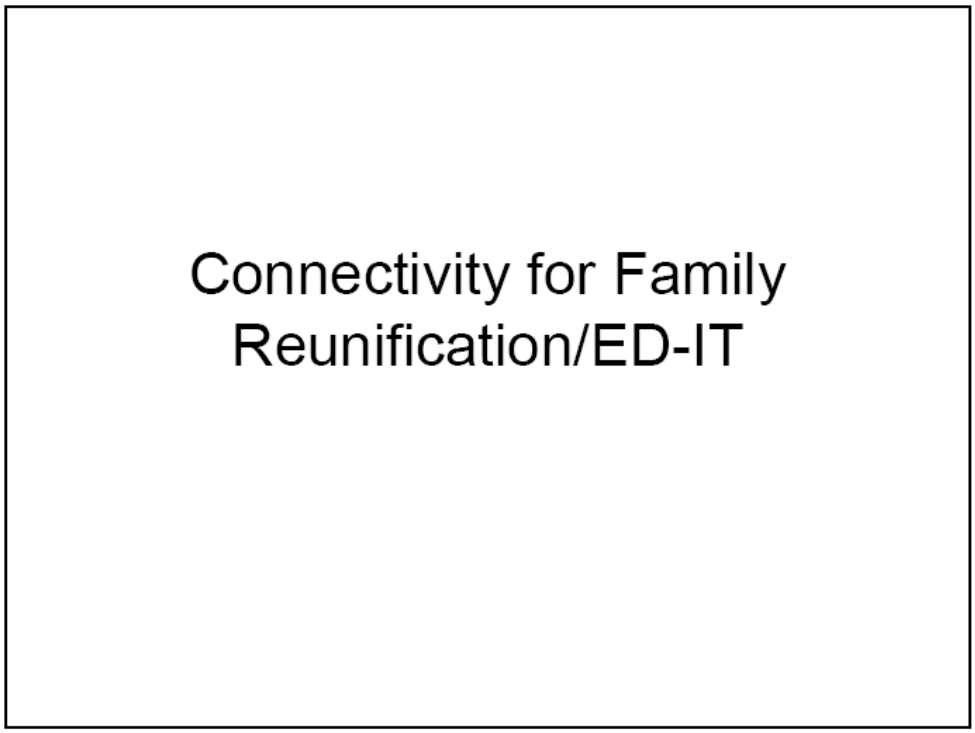


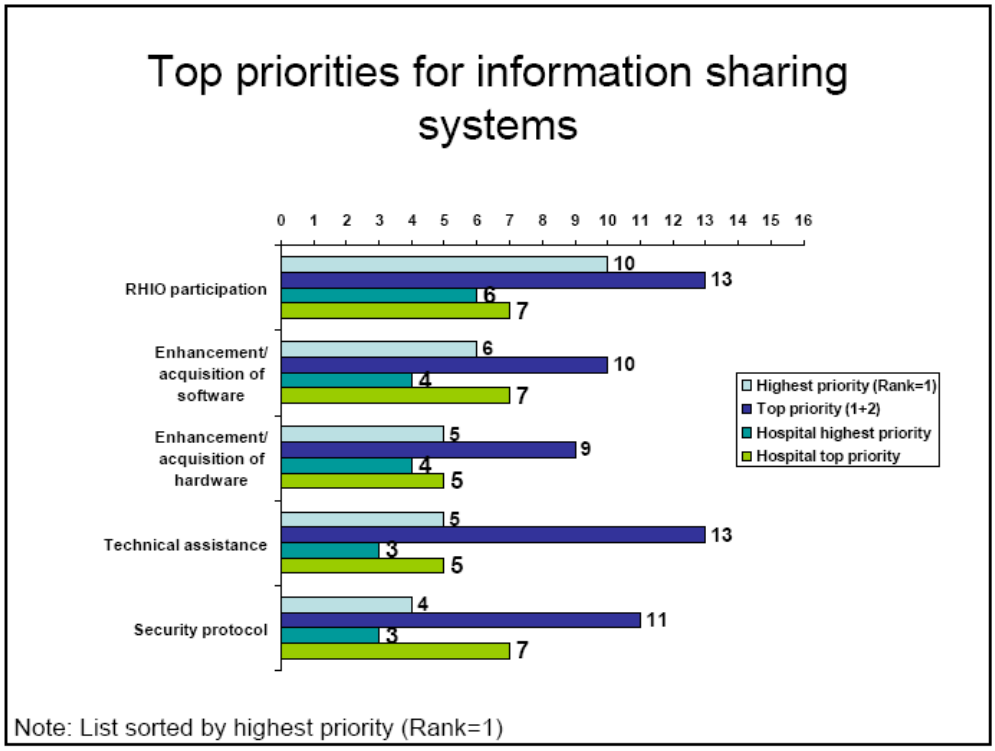
Note: One respondent indicated not applicable.

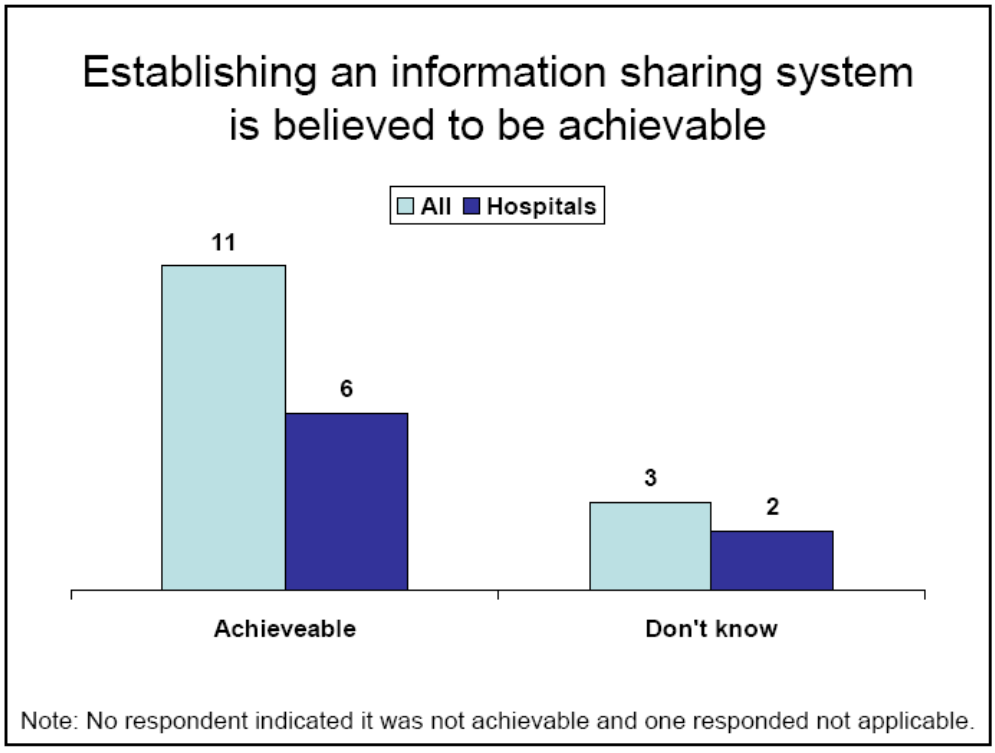

Most events addressed by facility EOP
Weather
13
7
Bioterrorism
12
7
Infectious disease
12
8
Conventional mass casualty
12
8
Radiologic events
9
6
Don't know
1
0
All
Hospitals

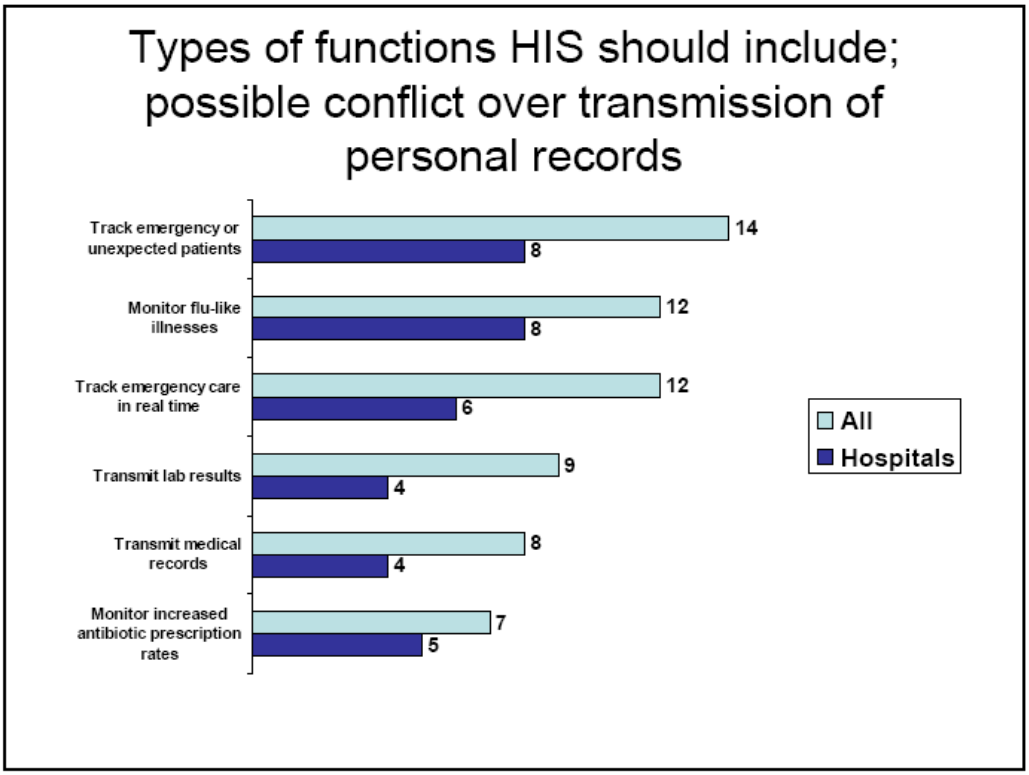

Most responses covered by EOP;
Reuniting families and creating beds least likely to be included
Coordination with local authorities
11
7
Mass casulties
10
7
Behavioral health for patients and staff
9
6
Triage mass casulty
8
7
Mass decontamination
8
7
Enhancing security
8
6
Mass immun.-prophylaxis
6
4
Mass fatality management
6
3
Ensuring protective equipment for personnel
6
5
Track expenses
5
5
Creating additional beds
4
4
Reuniting families
3
2
Don't know
1
0
All
Hospitals

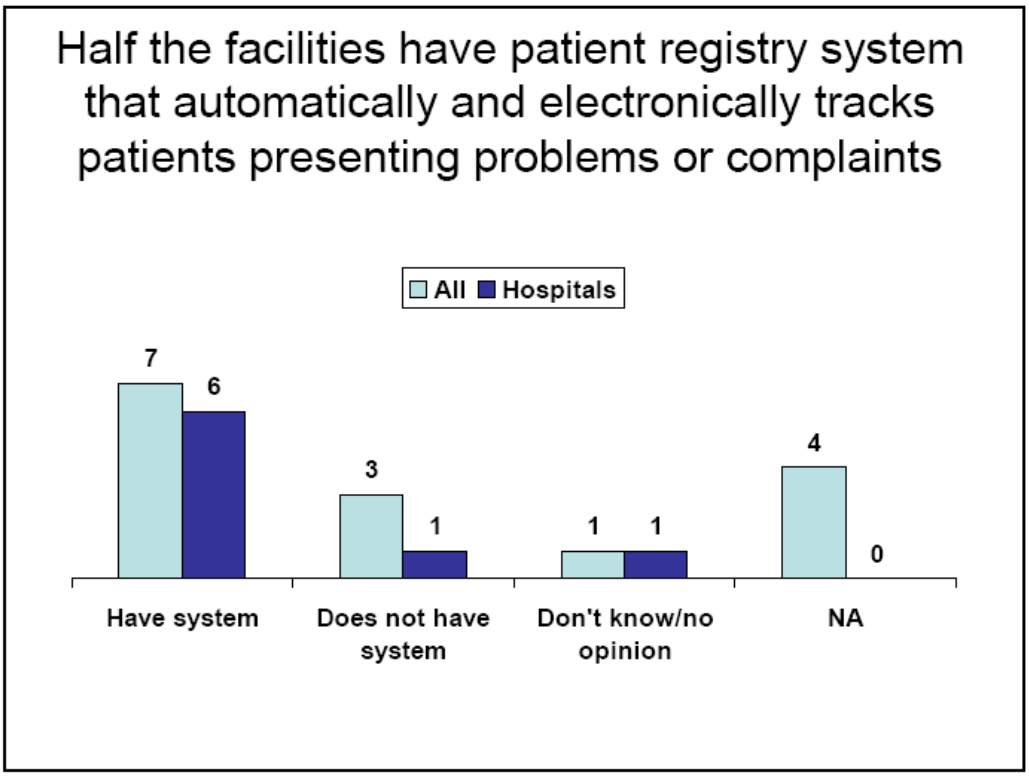

Less than half of facility EOP integrated with DC EOP
5
5
2
2
2
2
Integrated
Not integrated
Don't know
Note: Two respondents indicated not applicable.

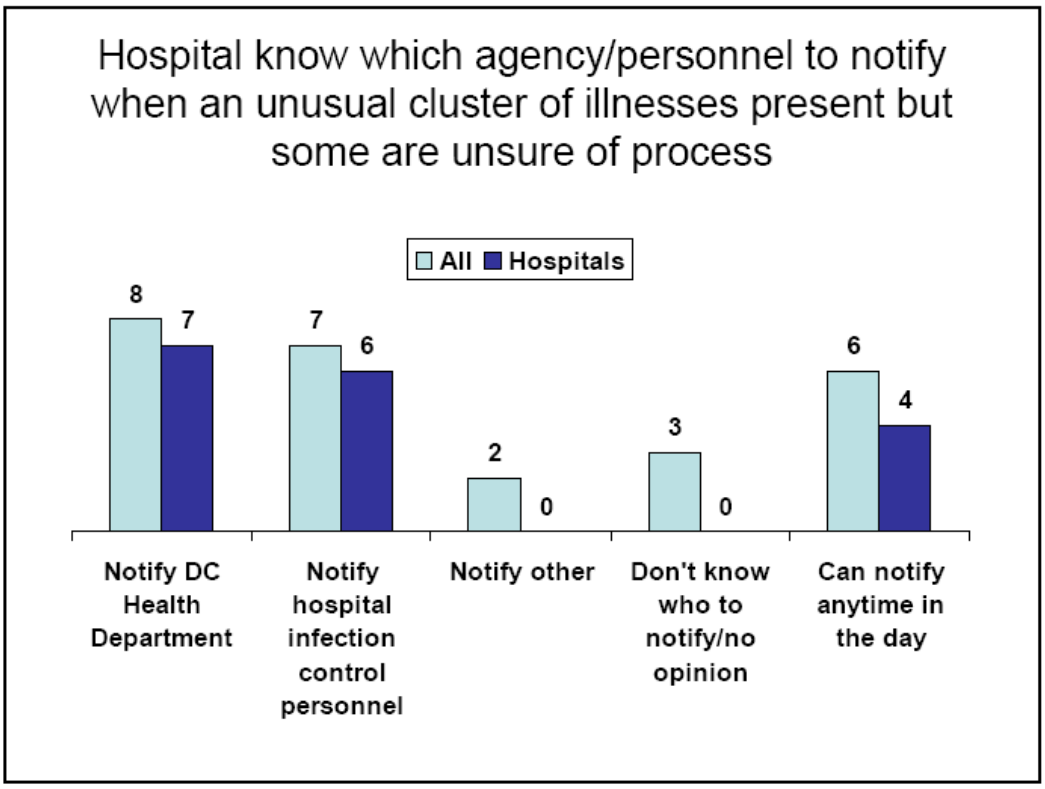

Connectivity for Family Reunification/ED-IT


Top priorities for information sharing systems
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
RHIO participation
10
13
6
7
Enhancement/ acquisition of software
6
10
4
7
Enhancement/ acquisition of hardware
5
9
4
5
Technical assistance
5
13
3
5
Security protocol
4
11
3
7
Highest priority (Rank=1)
Top priority (1+2)
Hospital highest priority
Hospital top priority
Note: List sorted by highest priority (Rank=1)

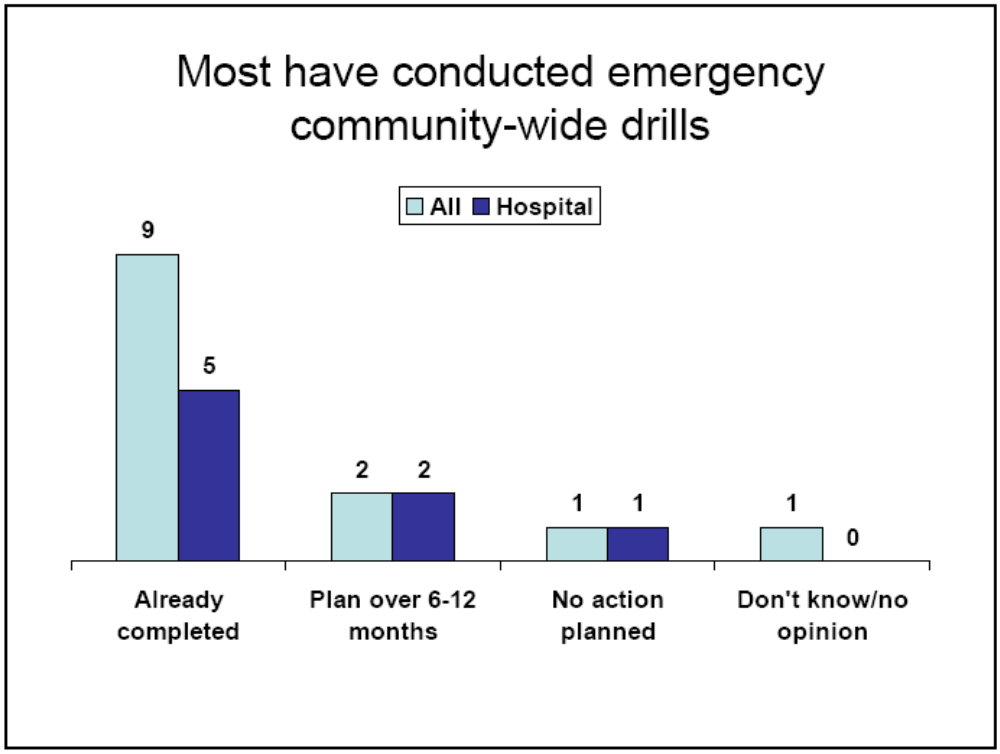

Establishing an information sharing system is believed to be achievable
All
Hospitals
11
6
3
2
Achieveable
Don't know
Note: No respondent indicated it was not achievable and one responded not applicable.

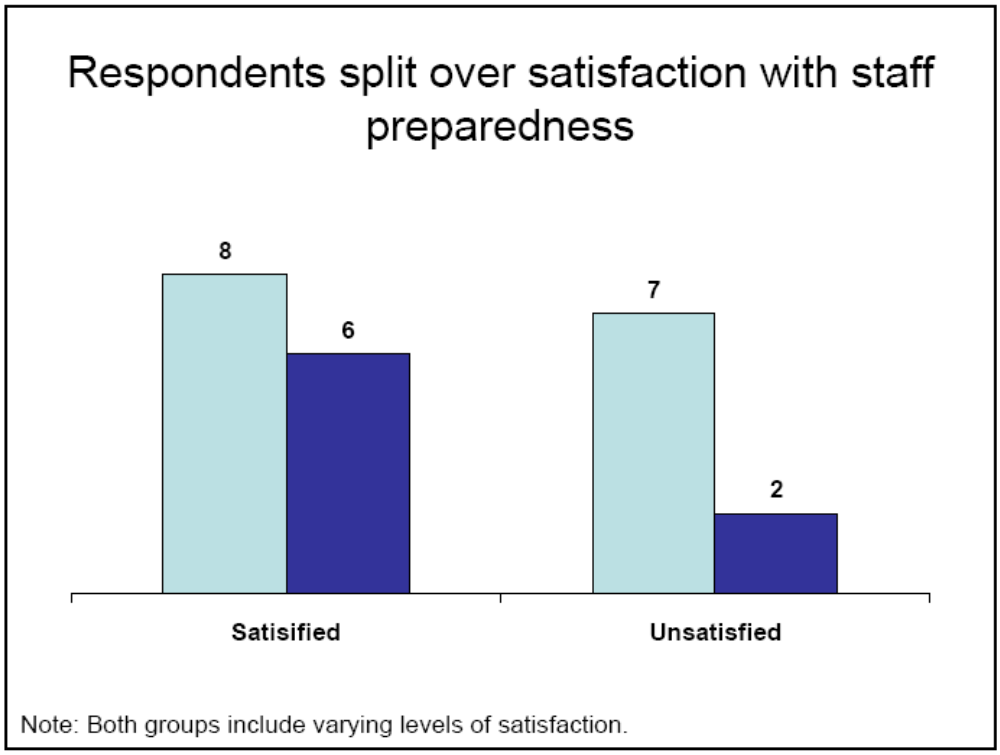

Types of functions HIS should include; possible conflict over transmission of personal records
Track emergency or unexpected patients
14
8
Monitor flu-like illnesses
12
8
Track emergency care in real time
12
6
Transmit lab results
9
4
Transmit medical records
8
4
Monitor increased antibiotic prescription rates
7
5
All
Hospitals

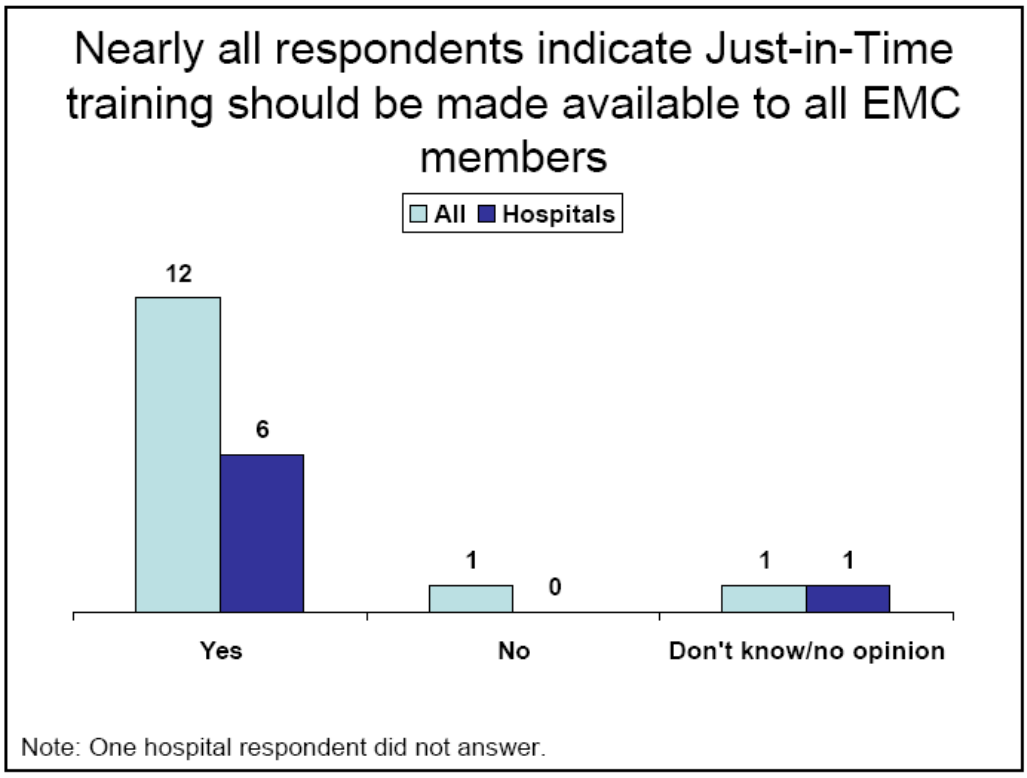

Half the facilities have patient registry system that automatically and electronically tracks patients presenting problems or complaints
All
Hospitals
7
6
3
1
1
1
4
0
Have system
Does not have system
Don't know/no opinion
NA



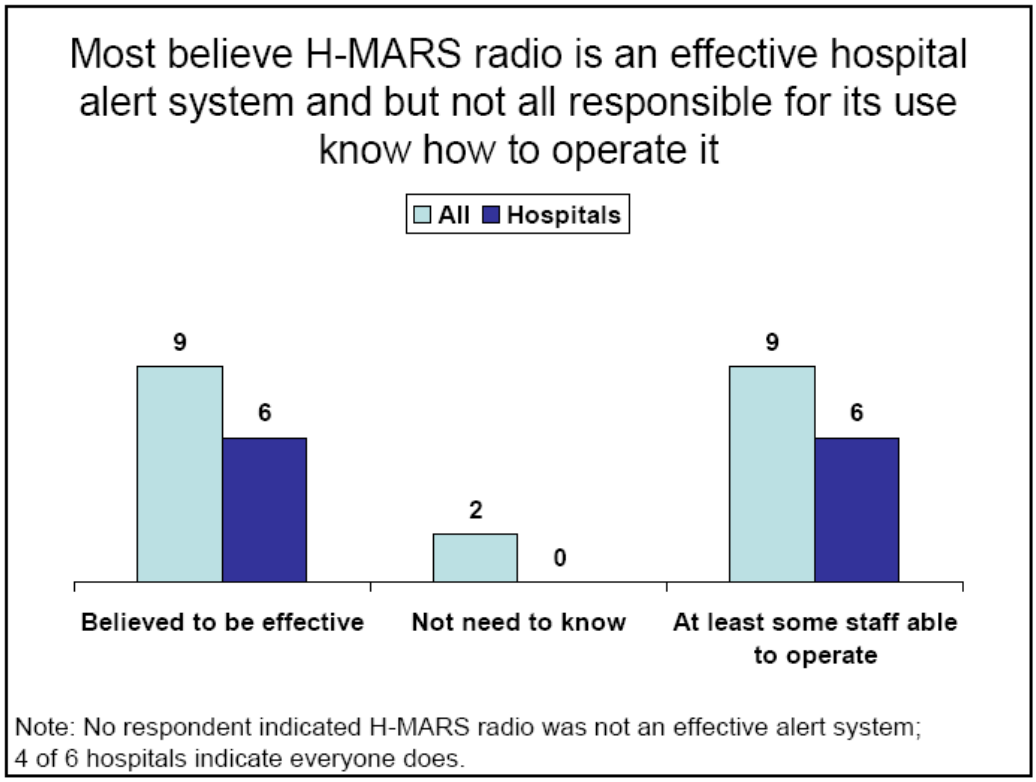
LMS/Staff training


Most have conducted emergency community-wide drills
All
Hospital
9
5
2
2
1
1
1
0
Already completed
Plan over 6-12 months
No action planned
Don't know/no opinion

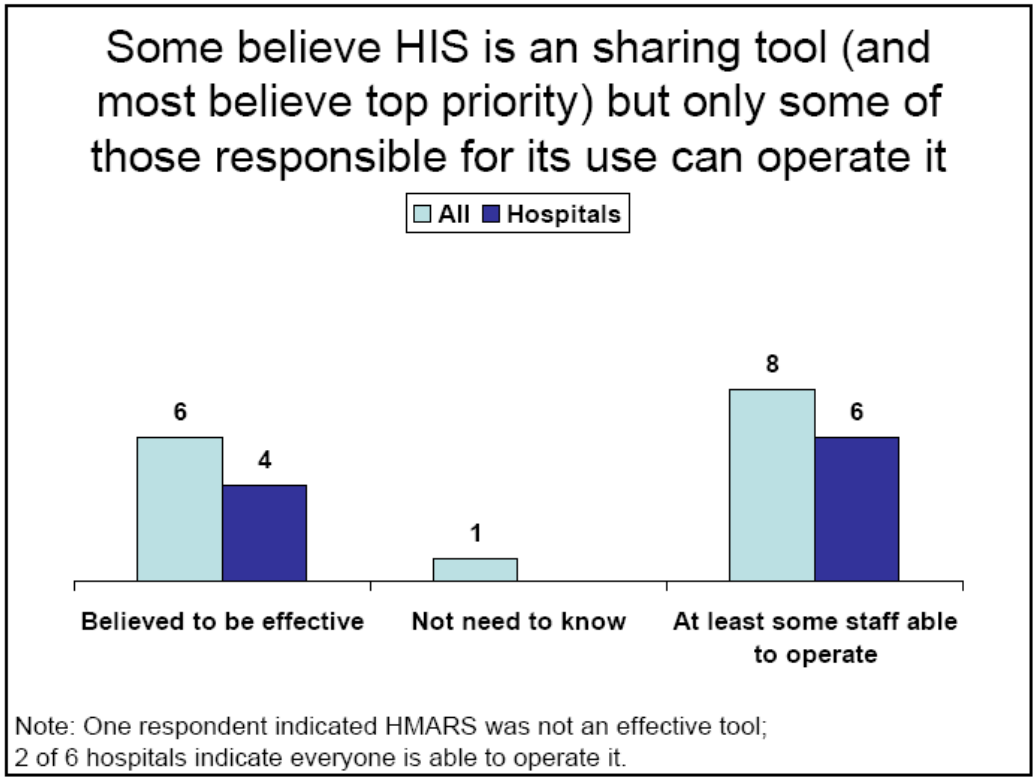

Respondents split over satisfaction with staff preparedness
8
6
7
2
Satisfied
Unsatisfied
Note: Both groups include varying levels of satisfaction.


Nearly all respondents indicate Just-in-Time training should be made available to all EMC members
All
Hospitals
12
6
1
0
1
1
Yes
No
Don't know/no opinion
Note: One hospital respondent did not answer.

HMARS/HIS



Note: No respondent indicated H-MARS radio was not an effective alert system; 4 of 6 hospitals indicate everyone does.



Note: One respondent indicated HMARS was not an effective tool; 2 of 6 hospitals indicate everyone is able to operate it.