

## EDITORIAL VIEW

# Role of effective communication in management of medical emergencies

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### ABSTRACT

Effective and rapid communication in management of day to day medical emergencies can decide between life and death of a particular patient, and life to death of a large number of casualties in case of a major disaster. A systematic approach to develop interpersonal and inter departmental communication needs to be stressed. The newer modes of communication must be incorporated in this system to facilitate speedy approach to the target healthcare facility.

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“Time is Muscle”. “Time is Brain”. You might be familiar with these catchy phrases, used in an Advanced Life Support course.<sup>1</sup> In case of acute coronary syndrome (when ‘time is muscle’), every little bit of time does count. A few minutes here and there can add up to a great difference in saving a heart, and in saving a life. Faster you call and the faster you get treatment, the better your chances of preserving heart function.

American College of Cardiology (ACC) launched a national ‘Door to Balloon (D2B) Initiative’ in November 2006. The objective of D2B Alliance was to establish an effective system in the hospital, to provide balloon treatment a patient within 90 minutes of his arrival in ED in case of acute coronary syndrome case. Over 800 hospitals joined the D2B Alliance in just one year.<sup>2,3</sup>

‘Time is brain’ represents situation of acute ischemic stroke.<sup>1</sup> For every minute stroke is left untreated, an estimated 1.9 million neurons are destroyed. Each hour, in which treatment fails to start, the brain loses as many neurons as it does in almost 3.6 years of normal aging. The time window for getting the best results from thrombolytic drugs is three hours from the first signs of stroke.

Both these examples can be applied to all kinds of emergencies, including obstetric emergencies.

Saving lives is a collaborative effort. Very efficient physicians and other medical personnel’s may not

be helpful in managing the emergencies or even nonemergency situations if proper communication, coordination and a structured management plan is lacking in a particular healthcare facility.

Only well-organized and functional communication system can enable the healthcare providers to act promptly and efficiently to handle and manage the emergency situations and so as to significantly reduce the morbidity and mortality.

In case of major disasters, e.g. a earthquake, large scale fire, major accidents, bomb blast etc., multiple departments including healthcare facilities need to be alerted and all possible resources need to be mobilized simultaneously in very short period of time, and this is possible only in the presence of an effective communication system.

In case of medical emergencies, the communication system can be subdivided as

- a. Community to healthcare facilities
- b. Inside healthcare facility

### Community to healthcare facilities

In case of an isolated or even mass scale medical emergencies, it is usually impossible for a community person to call a hospital and seek help. Hospital numbers are busy most of the time and also hospitals are not meant to provide services at outside locations. EMS or ambulatory health services

are designed to respond and provide immediate emergency first aid or resuscitation services in the field, followed by transportation to the appropriate healthcare facilities.

Most of the countries have universal access numbers (UAN) for important departments (police, ambulance, fire brigade etc.), like 15, 17, 1122, 997, 998 etc. But again in emergency situation, when multiple departments are needed, it may not be possible to call all these departments individually.

For immediate and effective emergency handling, a central information and response system is mandatory with single UAN all over the country (911, 999, 119, 112, 111, 000 etc.). A single number for emergency response system is most effective as it is easy to remember, can be dialed from landline as well as mobile phones, and even text messaging to these numbers is being made possible now.

Upon receiving the information about a disaster, major accident or patient in critical condition, emergency response system can activate concerned departments at the same time. EMS is dispatched to the location and hospitals (receiving facilities) are alerted.

EMS staff can diagnose and begin treatment in the field and en-route to the hospital. Special equipment allows EMS staff to transmit data to the hospital specialists. The hospital teams get ready to treat the patients upon arrival and can perform needed procedures quickly, thus increasing the chances of patient survival.

### **Inside the healthcare facility**

For immediate and organized medical services, many hospitals have created early response teams to attend and manage emergency situation. For example 'trauma code' is responded by "Trauma team", lead by a surgeon. Other members include anesthesiologist, orthopedic and neurosurgeons, respiratory therapist, nurse manager and other paramedical staff.

Similarly 'code blue' (medical emergency) is responded by the team lead by a physician or intensivist; also including an anesthesiologist, respiratory therapist, pharmacist, nurse manager and other paramedical members.

It is mandatory for all the team members to respond to the specific code announcement in shortest possible time.

There is a standard format to alert and activate the concerned departments for possible involvement

(x-ray, CT scan, cath lab, operating room, ICU etc.)

In-hospital communication can be classified as

### **Interpersonal communication<sup>4</sup>**

- Communication with the patients and relatives/guardians (regarding admission, treatment, discharge or breaking the news etc.)
- With colleagues including seniors and juniors/residents, regarding patient management, hand overs
- Nursing and paramedical staff
- Other departments, like pharmacy, Lab, x-ray, CT scan, OR, ICU
- Teamwork during patient resuscitation
- Other healthcare facilities e.g. patient transfer etc.

Chances of miscommunication and error are more in emergency departments (EDs) in particular, being most busy, interruption-driven, and multi-tasking environments.

Communication can also break down because lack of clarity about assigned roles leads to ambiguity or conflict.

Teamwork failure most commonly involves miscommunication and poor team transitions. Majority of communication breakdowns have been verbal and involved just two individuals. Status asymmetry between the communicating parties (74%) and ambiguity about responsibilities (73%) as commonly associated factors.<sup>4,6</sup>

All hospital staff should be trained and educated regarding effective communication skills and rules, like;

- Clear messages
- Close loop communication,
- Mutual respect
- Confidentiality

When individual clinicians are stressed by high communication loads, they may commit errors on tasks unrelated to communication as well.

### **Equipment and structure**

It is perhaps natural to consider a technological solution to improve team and department-wide communication; however, it is more likely that interventions targeted at improving communication awareness, policy, and practice will yield more immediate results. Interventions that involve technology might show great promise, but they

need to be targeted to specific communication problems.

They usually require a period of organizational analysis, followed by time for implementation and evaluation.

The hospital itself might utilize very different communication mechanisms to alert, assemble, and coordinate clinical teams, according to the available resources.

A recent investigation of the type and frequency of use of ICT to activate and organize trauma teams in level I and II trauma centers in the United States found that the majority of field communications with pre-hospital care providers took place through shortwave radio (67.3%) and mobile or cellular (including satellite) phone (32.7%); regular telephones (32.3%) were the next most frequently used devices; e-mail (52.3%) and dry-erase whiteboard (52.1%) were selected as the least advantageous.

Communication equipment used in the hospitals may include a central announcement system, bleeps/pagers, landline, or hospital provided mobile phones. The last item is very effective tool in communication. Two-way communication makes it easy to clarify the nature of emergency and management plans can be discussed. Personal phones and e-mails are also effective communication method especially for group alerts or announcements. Internet/Wi-Fi facility is mandatory all over the hospital to use this service effectively. Speed dials are provided with speed dial numbers. It becomes very easy to dial these numbers from any phone in the hospital.

Emergency response teams for a specific emergency like trauma, obstetric, cardiac etc., should respond within the set time after the code announcement.

For a desired outcome expertise as well as equipment is needed, but more important is proper communication system and an organized, well established interdepartmental structure of communication and activation of services.

With limited-resources institutions a suitable communication system can be planned into two parts

**1-Equipment and installation** might be expensive and out of the hospital budget, but can be planned for over certain period of time.

- Funds to be allocated in every year's budget.
- Funds can be raised by extra demand from the government, or by donations from the community.

**2-Structure of communication** with available resources should be designed, tested and redesigned.

- Interpersonal communication protocols development doesn't need much finance.
- Frequent courses/workshops to be arranged for staff training. Regular mock exercises to handle emergencies improve performance of the staff in real situations.

"Take the extraordinary performance of a few hospitals and make it the ordinary performance of every hospital."

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