

First responder communication information systems research paper example

[Business](#), [Management](#)



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First responders are at the frontline of gruelling human experiences, which have considerable effects on their psychological health. The provision of care to them is often complicated by the difficulty of accurately diagnosing, owing to the scarcity of information of information, and the failure to capture information opportunities that could be crucial for the very purposes. Communication and management information systems can play a critical role in encouraging first responders to open up, while at once giving health care practitioners considerable information to assess potential risk factors and the psychological welfare and needs. This paper provides a detailed description of then strategies to encourage utilization of these systems, before providing a range of systems that could be used for the same purposes.

Communication and Information Communication Utilization

Effective communication must utilize all or many channels of communication, in order to accord as many opportunities as possible for individuals to communicate. These should include video conferences, telephones, e-mail, radio and television among others. The effectiveness of any single communication channel is dependent on the nature of the message, context of communication and the type of audience for communication (Robert Wood Johnson Foundation, 2012). The importance of communication is multiply emphasized among first responders, given the strenuous and unpredictable nature of their work. The involvement of the first responders in the establishment of communication channels, and once it is introduced; efforts should be made to ensure that the target population has adequate knowledge of how to use the systems. These should include the provision of training on the communication technologies and the suitability of each in either situation. In addition, it is crucial to provide as many communication channels as possible, with measures being taken to include both informal and formal means of communication. Specifically, the use of social networking sites and other social media is crucial not least because mental health difficulties are usually personal and difficult to detect or share in formal circumstances.

Social media, including sites such as MySpace, Facebook and Twitter allows current and previous first responders to share experiences with each other and health care practitioners who can give them the required help (Nemati, 2008). This will encourage participation and increased utilization of the

communication channels by the target groups. In addition, engagement of the community on a variety of issues related with communication and mental illnesses, which will effectively assist in the creation of behavioural health communities, which supplement the efforts of the health care practitioners, first response administrators, the government and other stakeholders (Vaida & et al, 2011). In addition, the recruitment of first responder volunteers to engage in communication initiatives is helpful in encouraging the utilization of the facilities and the reception by the community.

Further, in order to ensure the systems and communication channels are effective, and thus continuously utilized, it is crucial that a decision-support and information management system is incorporated. These include databases and other forms of data storage, which will allow data and information to not only be stored but also processed to facilitate decision-making. These will add value to the systems and communication channels, which will in turn encourage the target population to use them, as against if they were simply communication systems (Cooper & Collman, 2011).

Information Management Systems

(i) Transaction Processing Systems- These help in the production of regularly scheduled, fixed reports summarized and extracted from varied communication and other transactions, with the purpose of informing structured or quasi-structured manner, which will in turn facilitate decision-making on the part of the first responders and the health care practitioners (Cooper & Collman, 2011). These systems collect, modify, store and retrieve

transactions and information about them, while at once ensuring that the data is left in a consistent manner, to facilitate the efficiency of further transactions. A transaction management system will allow for the tracking of the activities of the first responders in their varied communications with their colleagues and health care professionals, which have a value to the ultimate diagnosis and the determination of the nature of care that is necessary (Robert Wood Johnson Foundation, 2012). These will be crucial in facilitating early detection and provision of assistance, and as such, communication systems/channels e. g. telephones, emails, text messaging systems etc should incorporate transaction management systems.

(ii) Decision-Support Systems- This is critical in the collection of information from varied sources then helping in the solution of problems. These systems should have user privileges that allow the first responders to equally access information and applications that would assist them in decision-making about their psychological health (Department of Health and Human Services, 2007). Where applicable, communication channels should incorporate software and hardware applications that aid the health care professionals and the first responder clients in making decisions through the combination of raw data, diagnostic models, stored documents and personal knowledge, to help in making decisions. These systems include information on the individual first responders, and databases on the psychological health histories, pre-disposing experiences and records of previous communications. These systems will help health care professionals assess the risk factors facing the individual first responders, alongside other

information that is crucial in the diagnosis and treatment of psychological problems (Cooper & Collman, 2011).

Communication Systems

(i) Radio Communication- The radio systems pass information by using radio waves, facilitated by a receiver and transmitter. The transmitters generate radio waves at certain frequencies, which can be picked up by receivers, which also have electronic filters, which help separate out unwanted signals, before they are decoded. Radio waves are extremely effective in close geographical locations, but are affected by the weather. They are however natural to first responders since they form a crucial part of their work lives, and thus are likely to be received easily and utilized best (Cooper & Collman, 2011).

(ii) Internet-based Communication- These are easily the most used forms of communication. They include emails, online telephone calls, interactive online chats, Skype, video conferencing etc. These comprise of data formats that can be easily captured, stored and processed by varied information management systems, and thus it represent by far the most effective communication system that can be used (Robert Wood Johnson Foundation, 2012). Information communicated through these systems and application by the first responders both in line of duty and off-duty is crucial in building a contextual background that subsequently assists in the diagnosis of mental health problems facing them. In addition, information in formats that can be easily stored by easily integrated with diagnostic models, critical in profiling, diagnosis and treatment of psychological difficulties. The health care

practitioners will be encouraged to reach out to the first responders using these communication and information management systems, to encourage increased utilization.

Performance Management System

The effectiveness of different communication and information management systems will be gauged on two important measures. These will be (i) the user feedback and the number of traffic on the different systems.

User Feedback- The health care practitioners as well as the first responders would be requested to complete questionnaires and provide other forms of feedback on the effectiveness of the varied means of communication in meeting their communication needs (Voida & et al, 2011). Communication types and channels and information systems that prove unpopular would be axed, not least because if they are unpopular, then it implies that they are most likely to remain under-utilized and closed, besides consuming a considerable portion of the resources. Only communication and information management systems that are responsive to the needs of the health care practitioners and this measure will ensure that the qualitative usefulness of the systems to the health care practitioners and the first responders is gauged accurately to facilitate policy-making.

The amount of Traffic- The frequency with which the communication and information management systems would be utilized by the first responders and the health care practitioners. Targets will be set at the outset, and if

they are not reached, then the underperforming systems will be axed (Nemati, 2008).

Complaints

Engagement of the first responders in the choice and implementation of these systems, coupled by the need to ensure increased and continued utilization, necessitates the possibility to detect possible abuse, disuse and other factors (Cooper & Collman, 2011). It is crucial to allow for complaints among both the first responders as well as the health care practitioners. In order to receive complaints, audio communication systems will have specific numbers etc for complaints, in common with internet-based communication, which will equally have sections, emails, addresses etc for receiving complaints, which will subsequently be stored in the tables/databases, to facilitate ease of processing and retrieval.

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