Communication Challenges Between the Primary Health Care Command Center and Nodal Health Centers During Disasters in Qatar

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Abstract

The study aimed to determine how shared information databases and common spreadsheets can be used in disaster management communication in the Primary Health Care Command Centers (PHCCs) in Qatar to respond appropriately to any kind of disaster. The first objective was to assess existing communication frameworks between PHCCs and emergency command centers. Others included identifying factors that may be hampering adequate communication flow, analyzing contingency communication measures in place to help deal with many kinds of disasters, and determining the sources of information during emergency situations in Qatar. The last one was to identify the roles of various stakeholders in the communication chain in the PHCC emergency response team.

The research established that current communication frameworks between PHCCs and emergency command centers are weak. The sharing of resources and capacity information is not done well and regularly from the PHCCs to the emergency command center. Consequently, live shared spreadsheets would ensure the PHCCs distribute capacity information with the command center. The Spreadsheets would also act as a backup in case the phone communication links were broken. The tools should improve communication between the two levels, including disaster preparedness and response. They should solve the current problems of communication breaks between the PHCCs and command centers related to emergency and disaster planning.

Key words: Nodal Health Centers, disaster, Qatar

Introduction and Literature Review

Disasters have become a common occurrence in almost all parts of the world, and Qatar is not exceptional. Diverse types of disasters occur across the world, ranging from earthquakes, tsunamis, epidemics, floods, chemical hazards, and many others. This situation has resulted in diverse communication strategies to help in disaster management. The research explores the modern world's disaster management in Qatar. The choice of Qatar is influenced by the increased strategies of communication during disasters using a superior phone communication structure that has been established to ensure communication efficiencies (Medford-Davis & Kapur, 2014). Disasters have resulted in advancement of communication systems, especially the use of phones.

The Association of State and Territorial Health Officials (2018) explain that a communication overload represents a significant challenge in times of emergencies because of the multidirectional flow of information between various departments. The recent outbreaks of H1N1 and the current Covid-19 virus validate the argument. Risk communication principles dictate that communicators during emergencies must be reliable and truthful (Edmond, 2018). Nonetheless, Lundgren and McMakin (2018) observe it is often difficult for emergency agencies to balance these principles in a time when information is rapidly changing. The argument was validated during the 2009 H1N1 pandemic, where data and guidance changed quickly, hampering intervention efforts. Thus, efficient communication is vital for successful interventions during disasters.

The experience of pandemics such as H1N1 and the current Covid-19 indicate that communication is critical in stemming the spread of diseases. Therefore, state health agencies need to anticipate potential communication challenges that may hamper intervention efforts during a disaster occurrence. Specifically, state health agencies should identify the necessary tools that would enhance effective and efficient communication exchange, especially between health centers and the command center of the PHCC established to combat the pandemics. For example, Lu, Cao, and La Porta (2017) mention that cellular and short-range radios like WiFi and Bluetooth are promising communication tools during disaster recovery. Elsewhere, Liu, Fraustino, and Jin (2016) adds that social media, TV, government websites, and federal government websites are reliable sources of information during disasters. Thus, healthcare agencies and governments should ensure that there is reliable and continuous communication during pandemics. .

Because of previous disasters, many countries have demonstrated the desire to implement the necessary structures that would keep communications targeted and manageable. In the wake of pandemics such as the current coronavirus, communications between emergency centers and PHCCs should be prioritized and organized at all levels, ideally with dated entries and documents showing the designated contact, and resources to answer questions when needed.

In this regard, research indicates that spreadsheets can also be used as an alternative communication channel to phone calls. Spreadsheets have a variety of other uses in business, which include modeling datasets, data manipulation, and informing the decision-making process, including aspects of planning and implementation monitoring (Broman & Woo, 2018). Hence, it is presumed that they are a suitable technique for storage of information. Therefore, this study explores how health centers and the command center can ensure the availability of a standard spreadsheet that will be used in the declaration of available resources. The importance of the common spreadsheet is to ensure that the disaster command center is in constant and direct contact with the necessary healthcare resources to guide the disaster victims to the appropriate centers.

Primary Health Care Corporation (PHCC) and its stakeholders will be the main participants of the study. Information and data collected from them will be used to determine the effectiveness of a common spreadsheet to ensure that easy communication aside from the superior phone structure that is currently limited in Qatar, is effective. In the context of Qatar, the use of the common spreadsheet is critical, especially given the current Covid-19 situation and the upcoming world cup tournament, where thousands of fans will be expected to attend. A shared spreadsheet will provide command centers with critical information for guiding intervention efforts. The main participants in the study will be the nodal health centers, supported departments and existing command centers in Qatar. The researcher used primary data to assess the extent of the country's level of preparedness for any kind of disaster response.

Furthermore, disaster management agencies and healthcare institutions should collaborate on ensuring proper communication structure during emergencies. Researchers have further established that coordinating and streamlining messages between critical stakeholders such as health centers and the command center of the PHCC is critical to avoid being overwhelmed by too much information (Davis et al., 2004). The targeted alternative in this research is a collaboration between the disaster management department and primary healthcare facilities in Qatar through the establishment of a typical spreadsheet that can provide communication on the available resources needed during disaster for better responsiveness. The use of conventional spreadsheets as a communication tool in general contexts has been explored in previous research.

The general use of spreadsheets in a business setting includes thorough data representation and information storage. Therefore, the spreadsheets can help the government to maintain communication during disasters. The last decade has seen an increased frequency of disaster, which results in substantial economic loss, deaths of people, and increased public health emergencies. They

strike unexpectedly, causing significant damage to the environment and the population (Mathew & Hubloue, 2018). Some of the effects are irreversible to the extent that some communities lose the ability to cope with their resources. Global data shows that in the last past decade, 33 million people were displaced from their homes, and 4.2 million were injured (Alruwaili, Islam, & Usher, 2019). Over 2 million died because of both natural and human-made disasters, while 3 billion people were affected indirectly. Global data also shows that by the end of 2015, there were 65.3 million internally displaced people and 21.3 million because of a disaster (Ginige et al., 2014). Reports state that the number could be higher than that. Therefore, it can be concluded that the number of catastrophes has been burgeoning over the last decades from both natural and man-made disasters.

The emergence of various disasters results in several communication challenges. Disasters experienced by other countries have become an example of how mobile communication can become easily destroyed, making it difficult for the command center to organize on how to manage the victims (Glaser & Strauss, 1967; Gomes et al., 2016). For instance, after the Katrina emergency, the disaster command center was unable to reach the affected region due to destroyed roads and infrastructure that made communication and transportation difficult (Weinstock, 2014). To contact the casualties and local facilities, the command center used airplanes to drop messages on bottles for the victims who were trapped in the disaster area. The circumstances of poor communication infrastructure forced the command center to use this way of communication, which was less effective (Mathew & Hubloue, 2018). Many disaster occurrences have hindered communication, which has hampered rescue missions or provision of services to affected individuals.

Several studies document the existence of communication challenges caused by disasters. The 21st decade is faced by the consistent challenge of Emergency Risk Communications (ERC), which means challenges with real-time communication between healthcare experts and the disaster command center (Expat, 2019). These challenges have been influenced by the increased migration of people across borders, enhanced communication, biomedical revolutions, and widening societal growth and increasingly , climate changes (Menon et al., 2016). Experts continue to emphasize the importance of ERC in ensuring preparedness during public health emergencies by ensuring consistency in delivering information (Savoia, Lin, & Gamhewage, 2017). The inclusion of ERC in the eight-core capacities of the World Health Organization (WHO) is evidence of the increased attention paid to the issue of disaster preparedness (WHO, 2016). Consequently, ERC is a concern for ensuring that individuals prepare for disasters.

Moreover, institutions and agencies should ensure communication exists to help control disasters. In Qatar, the National Command Center (NCC) has been relegated with the role of managing and coordinating responses to local and national disasters (Rebeeh, 2018). The institution collaborates with other agencies to evaluate potential disasters and implement the necessary prevention or response measures. These agencies include the Hamad Medical Corporation, the Interior Ministry, Internal Security Forces, and Qatar's national ambulance services (Expat, 2019). However, the NCC has reported challenges in retrieving information and communication between the related agencies during disasters in the past (Ginige et al., 2014). To ensure a streamlined workflow, the NCC requires a modern communication method that will facilitate knowledge sharing and enhance its responsiveness to disasters in the country.

Real-time sharing of information is critical during disaster responsiveness. Unfortunately, mobile phone communication, which has been continuously dependent on over the years, has proven to be insufficient during disasters (Kapur et al., 2016). Many scholars argue that mobile phones have the potentials for improving quality, quantity, and timing of information passed during disaster management (Cinnamon, Jones, & Adger, 2016; Yu et al., 2018; Ali et al., 2015). However, Cinnamon et al. (2016) also confirm that it is significant to study the limitations of mobile phone use during disasters. Therefore, Ginige et al. 2014 argue that maintaining a common spreadsheet that is updated regularly between the involved parties would greatly help in ensuring that communication is not paralyzed even when mobile communication is disrupted. Collaboration with primary care institutions and the command centers will ensure that the necessary resources, such as medical practitioners, medications, and equipment, among other needs, are readily available. Therefore, communication during disasters can be enhanced not only through mobile phones but also through spreadsheets.

Another communication challenge during disasters is communication overload. The Association of State and Territorial Health Officials (2018) indicates that a communication overload represents a major challenge in times of emergencies because of the multidirectional flow of information between various departments. Besides, Smith, Stephens, Robertson, Li, and Murthy (2015) confirm that prevalent disasters can overload official agencies' ability to provide communication. This argument is valid, as witnessed during recent outbreaks of H1N1 and the current Covid-19 diseases. Risk communication principles dictate that communicators during emergencies must be reliable and truthful. Nonetheless, Lundgren and McMakin (2018) & Merwaday et al., (2018), observed it is often difficult for emergency agencies to balance these principles in a time when information is rapidly changing. For example, evidence validates the argument by suggesting that during the 2009 H1N1 pandemic, data and guidance changed quickly, hampering intervention efforts. Therefore, communication overload is a vital problem during disasters.

Researchers have further established that coordinating and streamlining messages between critical stakeholders such as PHCCs and command centers is critical to avoid

being overwhelmed by too much information, especially from volunteers and other non-official channels (Davis et al., 2004). Such coordination is especially important due to the large volume of information from different sources. For example, following the current outbreak of Covid-19, there has been conflicting information with regards to how the virus can be transmitted (Porcheddu et al., 2020). Such information gaps deny healthcare facilities and command centers the necessary information that would enhance the formulation of effective intervention measures. Similarly, during the H1N1 outbreak, some states felt that coordination and communication among the federal partners needed improvement (Association of State and Territorial Health Officials, 2018). This approach amounted to a tacit admission that the existing information-sharing systems between command centers and PHCCs were not effective.

Nevertheless, several measures can be used to address the communication issue during disasters. Measures such as proper utilization of common spreadsheets during global or national public health emergencies can improve real-time situational awareness and consistent messaging (Association of State and Territorial Health Officials, 2018). During a pandemic, transparency is essential for the coordination of the response. Moreover, it enables concerned stakeholders to know what others are working on and when they can expect information (Rambhia et al., 2009; Mauthe et al., 2016). Command centers can assist in coordinating messages as received from the ground and relaying the same to PHCCs and other relevant government agencies. Governments can implement these measures to ensure that the issues of communication during disasters are addressed.

So based on the challenges identified from the above studies and literature reviews this study has been initiated.

Research Questions

So the study was initiated to fill the gap that has been found from the above literature review and the following research questions were used to guide the researcher in data collection and analysis:

- What can the command center of the PHCC and health centers use as contingency measures to achieve a proper backup system in case phone systems collapse during a disaster to establish reliable communication capabilities?
- Between the command center and health centers, how effective is the use of common spreadsheets as a tool compared to sharing information through the phone, which currently exists in ensuring effective communication?
- For a nodal health center, how effective and doable is maintaining a regularly updated record of the healthcare resources and capacity compared to not using those records in ensuring effective operation and communication by the disaster command center?

Statement of the Problem

The modern world has been characterized by various disasters, from environmental catastrophes such as earthquakes and tsunamis to health disasters such as viral outbreaks. Regional and global pandemics such as Ebola, SARS, MERS, and recent Covid-19 have continued to threaten human lives, causing deaths and economic losses (Gilbert, 2020). The increase in the spread of global pandemics has been aggravated by the easy movement of people across borders, poor communication, and lack of appropriate preventive measures by the unaffected communities (Bajardi et al., 2009; Greenaway & Gushulak, 2017). Equally, governments have failed to contain pandemics such as H1N1 and Covid-19 because of inconclusive information from the regions where the disease was initially detected (World Health Organization, 2020). Because of the threat of these pandemics, the government should establish measures that inform people of where to seek intervention promptly.

Additionally, there is a need for policymakers to explore appropriate strategies that would allow for sharing information on time to collaborate and help the agencies and stakeholders on a better response measure. Historically, many countries have tended to struggle in the initial stages of pandemics before finally putting the situation under control. This situation is because healthcare facilities lack sufficient data for designing intervention policies, leading to deaths. Likewise, there is a near-complete breakdown of communication between essential entities such as the PHCCs and the command centers, leading to delays in the formulation of intervention measures.

Methodology

Data Collection:

The researcher used a qualitative approach for this study. This method is useful because it helped the researcher to deploy textual explanations and provide more knowledge of the preparedness by Qatar's government agencies such as PHCCs and command centers. Questionnaires were used as a method of collecting primary data. Open-ended questions included in the questionnaire were used to examine the plans that PHCC has put in place to effectively manage future disasters and pandemics. Some of the questions had 'not sure' as one of the response choices to allow for flexibility in the responses. Doing so prevented inaccuracy or blank responses.

Data was destroyed after finalizing the study.

Sample Selection:

No sampling was done as the study population included the on-call stakeholders of nodal health centers and the emergency command center of the PHCC in Qatar. These included managers, physicians in charge (who work in the nodal health center), head nurses, administrative personnel who are part of the response team during disasters and emergency response team from the command Centre, so in total, around (53 participants).

Criteria for Including Participants in the Research:

- Current employees of the PHCC.
- Working as a manager, physician in charge and or head nurse in the nodal health centers.
- Are part of the PHCC command center response team either core or supporting members.
- Can read and speak English.
- All the participants must be equipped with knowledge of the organization's preparedness for disaster management.

Criteria for Excluding Participants in the Research

- Participants who were not a member of the response team of PHCCs and those who did not read or speak English were excluded from the study.

Procedure(s) of Data Collection:

The potential participants were informed by the researcher through notices emailed through PHCC official email and the purpose of the study was explained, informed consent was attached to the email and the researcher informed the participants that participation is voluntary. The researcher sent the email during the working days and gave the participant a week to receive the response; the questionnaire was sent via a web link and the duration to be filled in online by the participants was 10-15 minutes.

Ethical Considerations:

1. Principle of Justice (Belmont Report):

- The study addresses the principle of justice by ensuring that participants are equitably selected for inclusion by sticking to the purposive sampling technique with the first-come, first-served basis.

2. Principle of Beneficence (Belmont Report):

- The research had no direct benefits to the participants besides those to the broader population.
- The participant was anonymous except to the researcher. No personal information was shared; no harm was caused.

3. Privacy/Autonomy of Study Participants:

- All data was collected anonymously through online survey monkey questionnaire.
- No personally identifiable data was collected from the participants.
- The researcher used informed consent to ensure that participants did not feel coerced into giving feedback as well as to assure confidentiality
- Data was stored in a secure database with access only for the researcher and after the termination of the study no storage of data was done

4. Confidentiality/Anonymity of Study Participants:

Only the researcher had access to the confidential information of the survey results. The participants also requested not to give any personal information besides the place of work, Additionally, the raw data collected from participants was stored in confidence by the researchers before the analysis. The data was destroyed

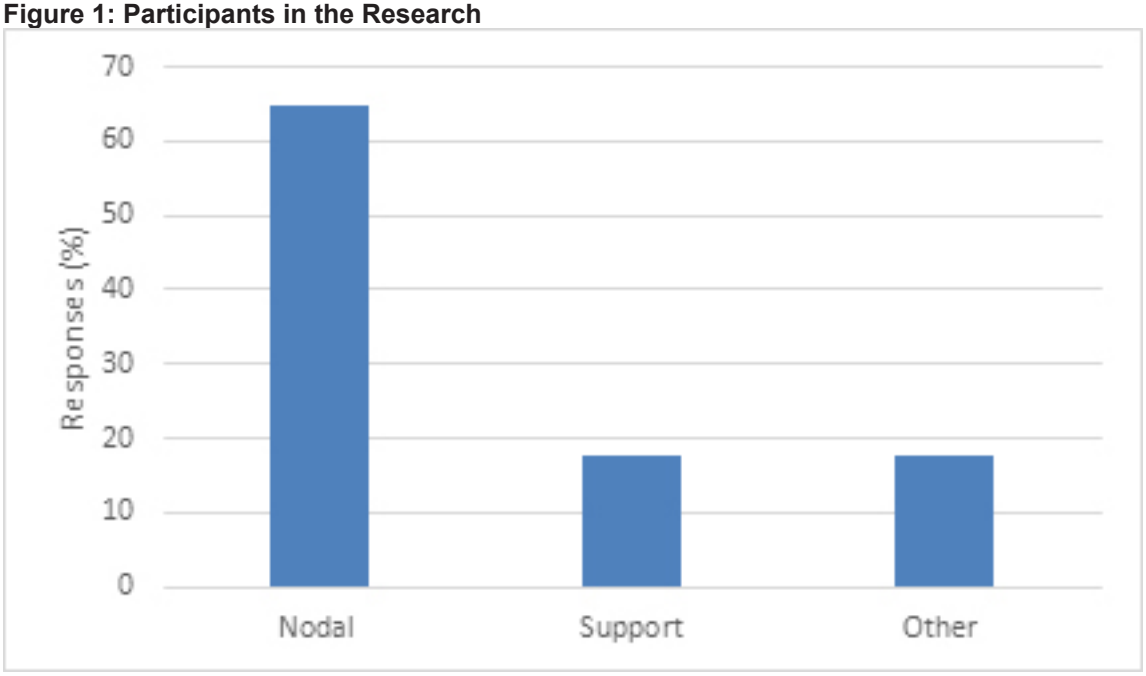
Results, Data Analysis, and Discussion

The study targeted a sample of 53 participants. However, only 17 questionnaires were returned. The response rate is indicated as 32.07%, which is low (Creswell & Creswell, 2017). The low response rate is a direct result of the participants' commitment to the COVID-19 situation. Being the frontline soldiers in fighting the pandemic, the emails were sent twice in a request for participation and were unanswered. The 17 participants who took part in the research were mainly drawn from Nodal Health Centers (64.71%), while the remaining originated from supporting functions in healthcare, as shown in Table 1.

Table 1: Participants of the Research

ANSWER CHOICES	RESPONSES	
Nodal	64.71%	11
support	17.65%	3
Other (please specify)	17.65%	3
TOTAL		17

Figure 1: Participants in the Research

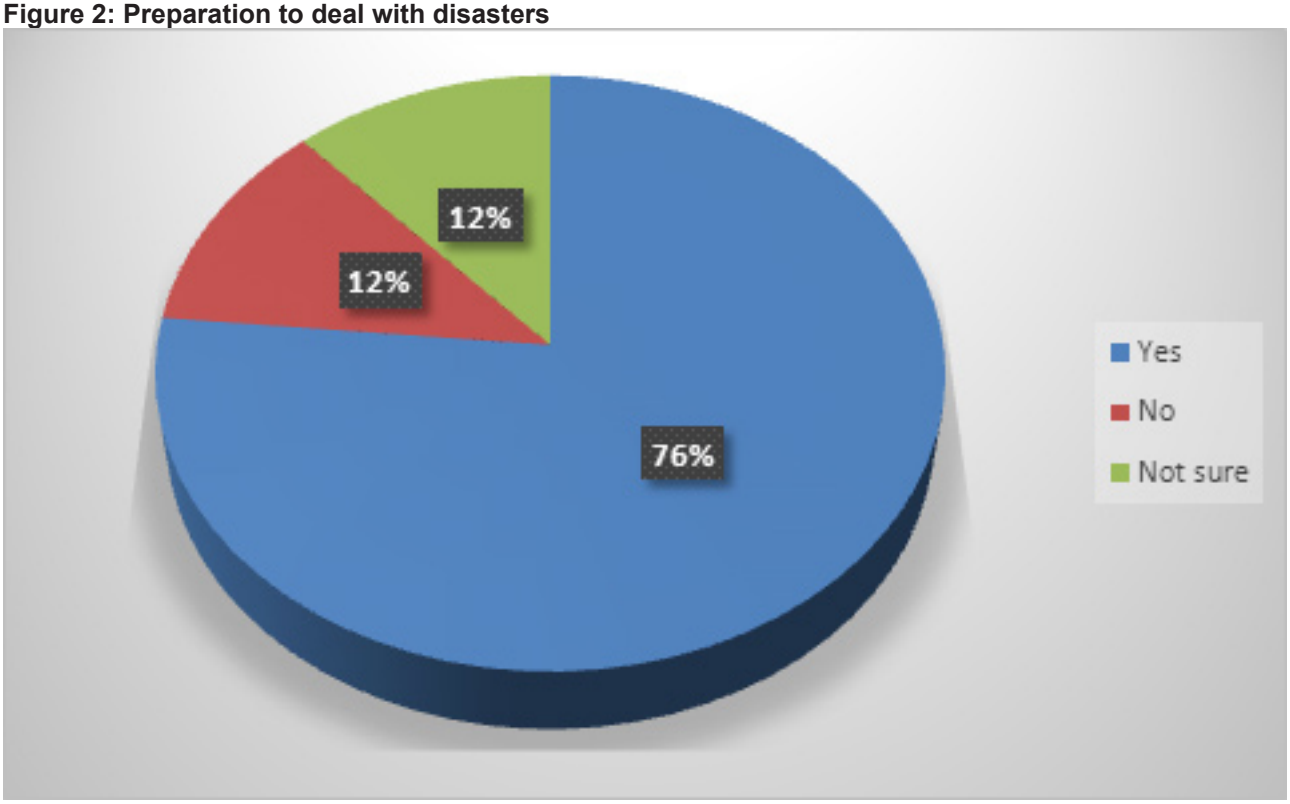


A total (13) 76.46% of the participants reported that the department was prepared to manage casualties in case of disaster. The remaining indicated that the departments were either not prepared or they were not sure if they would deal with emergencies should they occur, as shown in Table 2.

Table 2: Preparation to deal with disasters

ANSWER CHOICES	RESPONSES	
Yes	76.47%	13
No	11.76%	2
not sure	11.76%	2
TOTAL		17

Figure 2: Preparation to deal with disasters

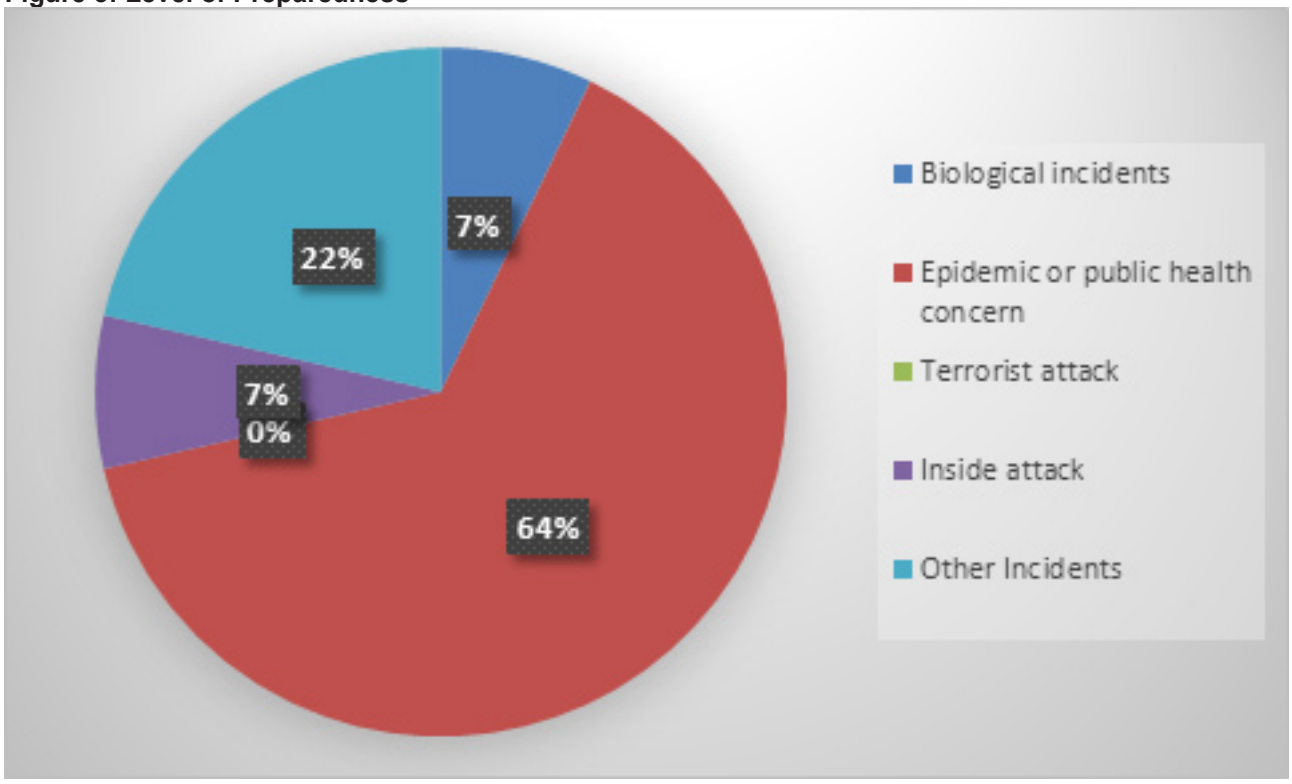


Focusing on the types of disasters that the healthcare centers were prepared to address, the research established that the majority of healthcare centers (64.29%) could handle the epidemic of public health concerns. The centers were less ready to tackle biological incidents or insider attacks. Furthermore, they were completely unprepared to deal with a terrorist attack. The levels of preparedness were as summarized in Table 3.

Table 3: Level of Preparedness

ANSWER CHOICES	RESPONSES	
Biological incidents	7.14%	1
epidemic or public health concern	64.29%	9
terrorist attack	0.00%	0
insider attack	7.14%	1
Other or if you have more than one answer	21.43%	3
TOTAL		14

Figure 3: Level of Preparedness

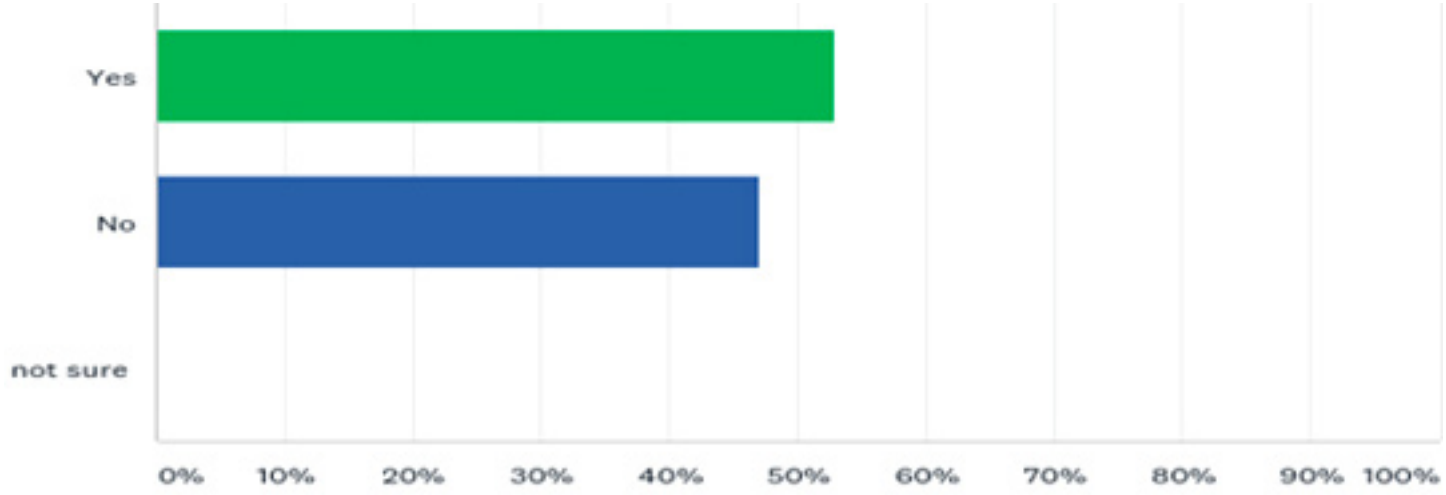


Concerning staff resources, the study established that 70.59% knew the current number of staff operating in their respective departments. Further, the evidence demonstrated that about half (52.94%) of healthcare facilities have a database with each staff's skill set as shown in Figure 4. The remaining half of the participants had no knowledge of the HC possessing such a database, as shown in Table 4.

Table 4: Staff Resources

ANSWER CHOICES	RESPONSES	
Yes	70.59%	12
No	17.65%	3
not sure	11.76%	2
TOTAL		17

Figure 4: Healthcare Facilities having database of Staff skillset

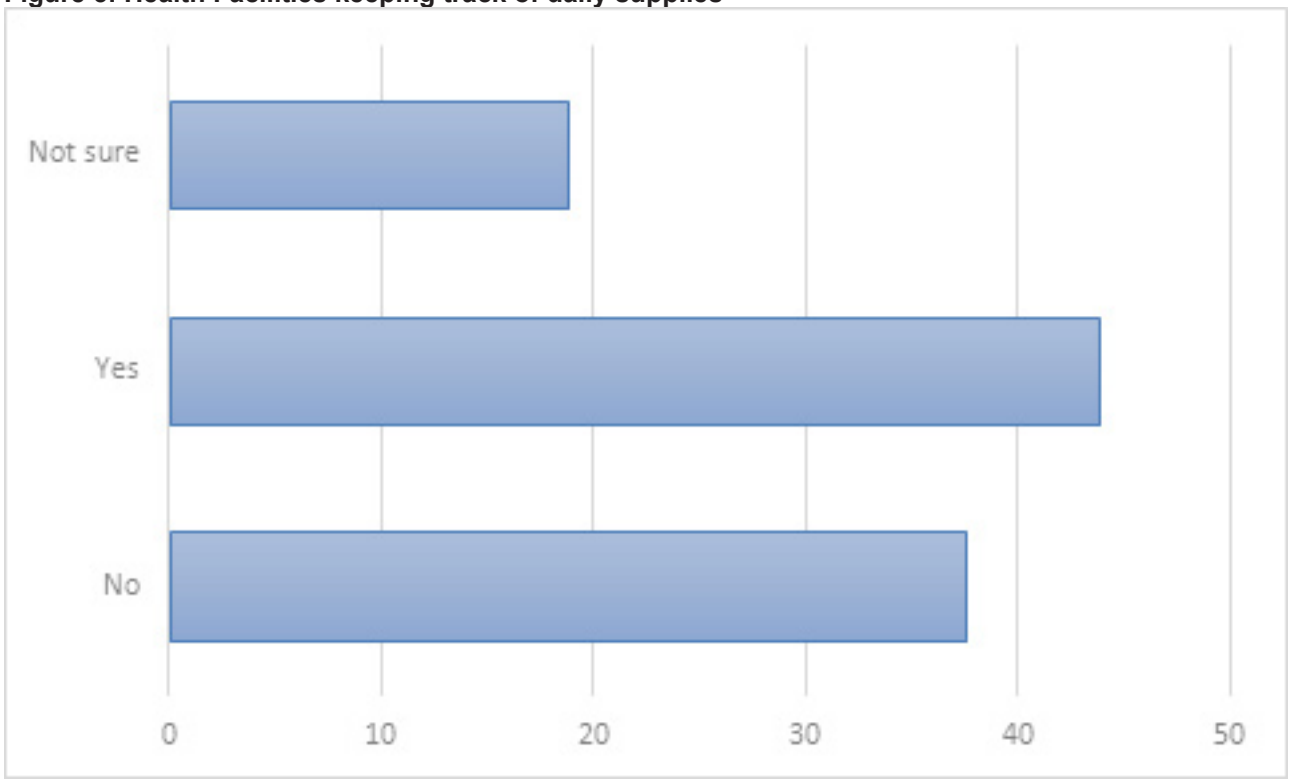


A total of 64.71% of the healthcare facilities have a current list of medical and non-medical supplies needed for a better response to a disaster. About 23.53% of the facilities reported having no such record of supplies while the remaining were not sure. The figures are an indication that, to some extent, some of the facilities were not adequately prepared to deal with a disaster (Masys, 2016). The majority of them also failed to keep track of the expiry dates of the medical supplies, which suggests that they could be carrying stocks that would be unusable in the case of an emergency as shown in Table 5.

Table 5: Keeping track of the expiry dates of the supplies

ANSWER CHOICES	RESPONSES	
No	37.50%	6
Yes	43.75%	7
not sure	18.75%	3
TOTAL		16

Figure 5: Health Facilities keeping track of daily supplies



Healthcare facilities do not share information about resources (staff and supply) with the command center as given in Figure 6. However, a total of 81.25% reported that sharing the information with the command center would help in better management of disaster in case it happened, as illustrated in Figure 7. Such findings create evidence for the creation of platforms for the distribution of information between health centers and the command center (Steelman, McCaffrey, Velez, & Briefel, 2015). The participants recorded that the healthcare facilities have a system of reviewing the supplies.

Figure 6: Health center / support department baseline on sharing information with command center

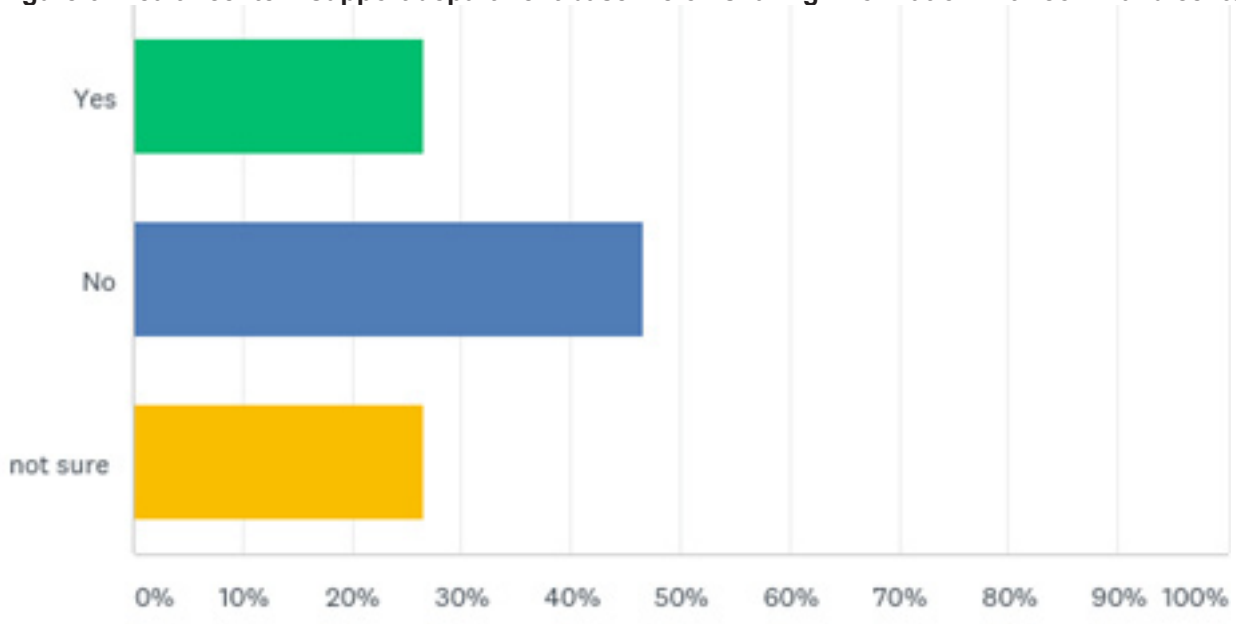
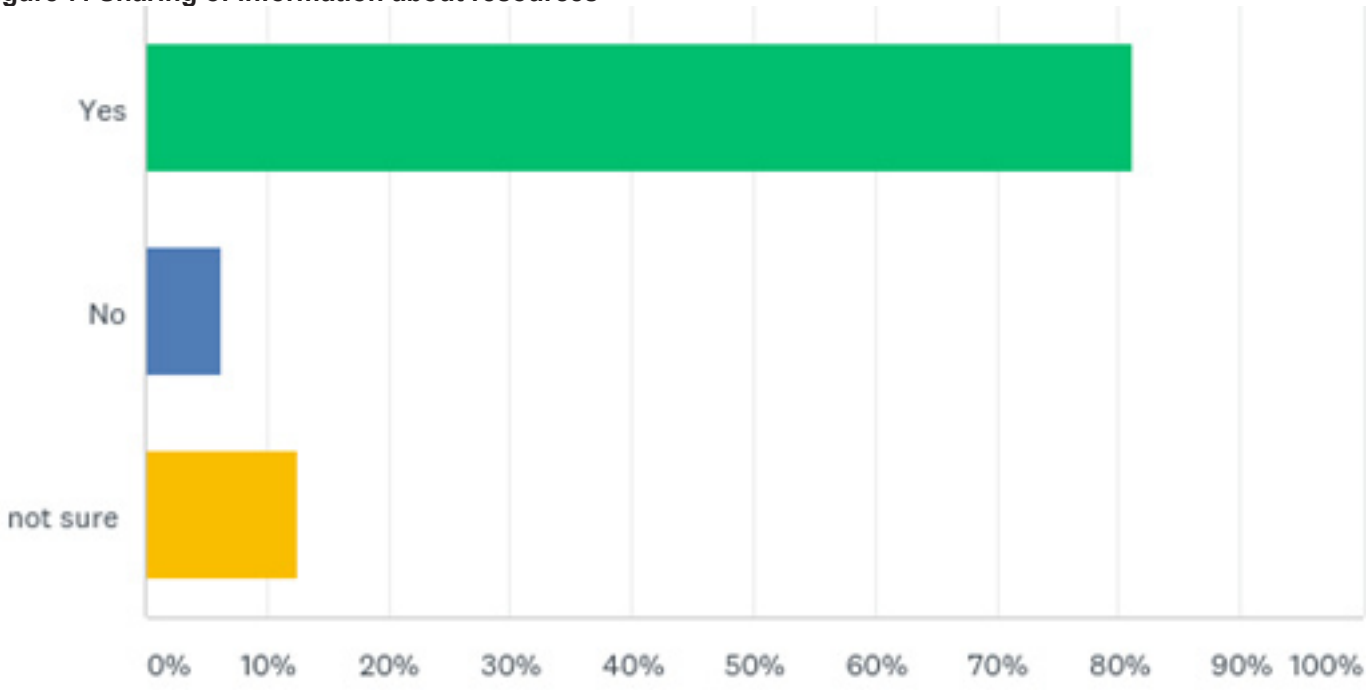
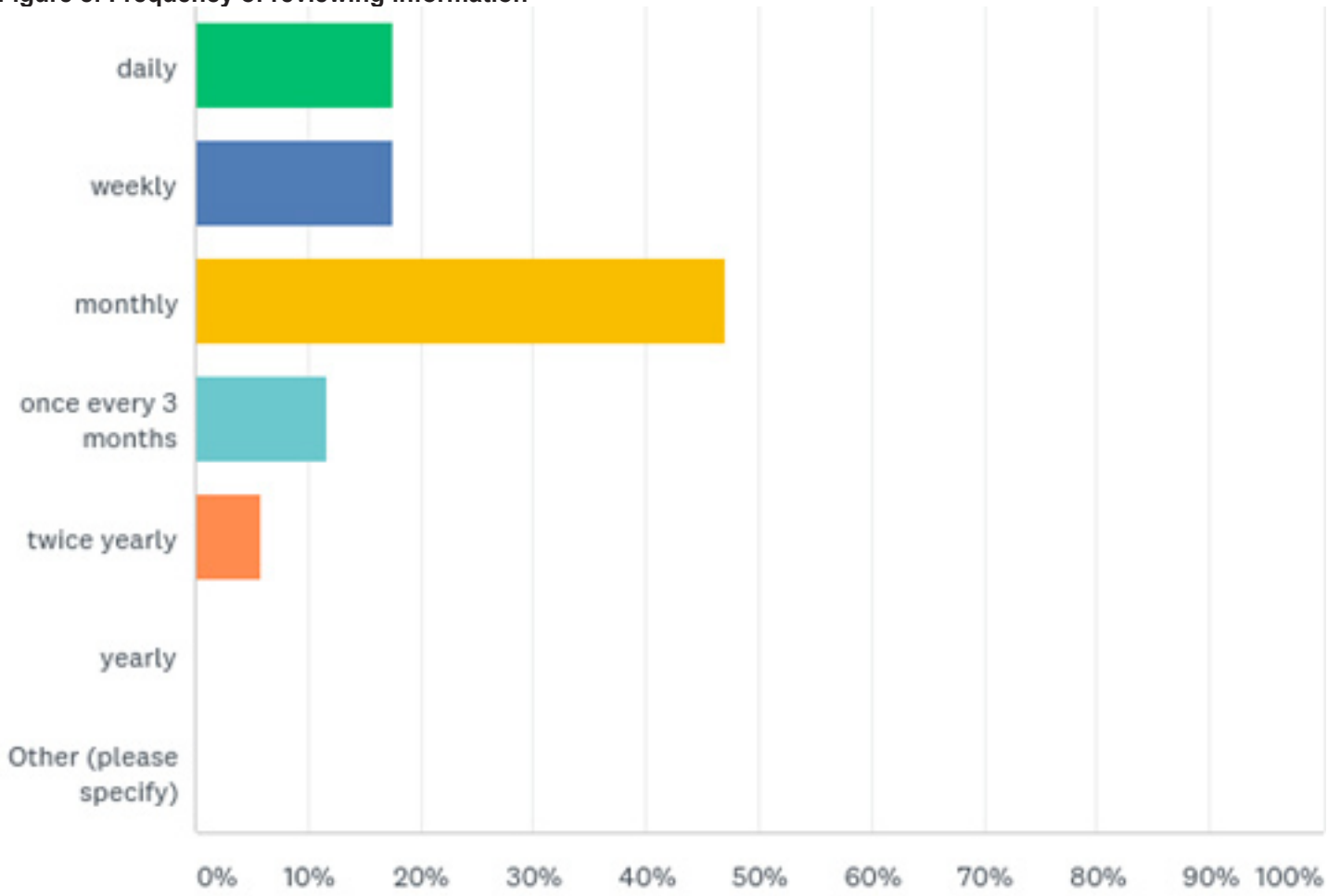


Figure 7: Sharing of information about resources



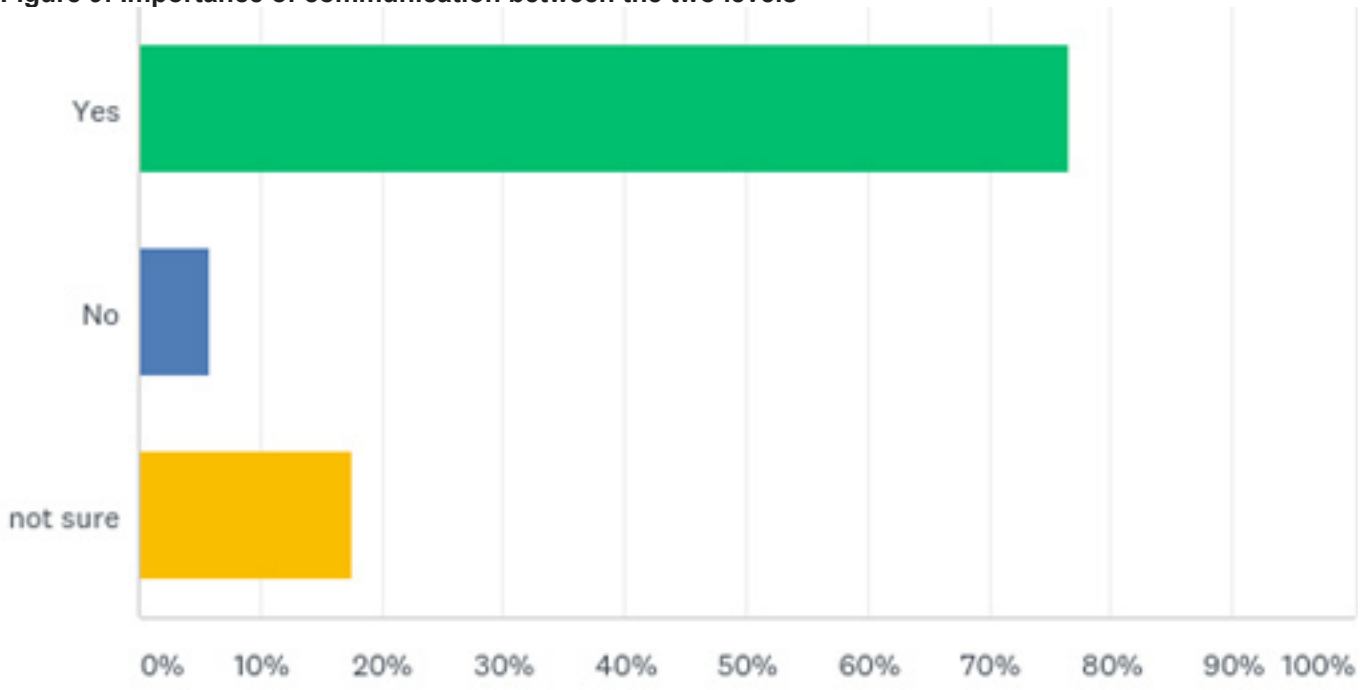
The resources are reviewed monthly in 31.25% of the healthcare centers. In 18.75% of the institutions, the resources are assessed either daily or weekly. The remaining total of 31% conducts either semiannually or annually. The varied timelines of analyzing resources for disaster preparedness are an indication that the emergency and disaster plan does not have clear guidelines on when and how the resources should be assessed and information shared with the command center. Most of the facilities consider that the details ought to be reviewed and shared monthly with the command center.

Figure 8: Frequency of reviewing information



Information should be availed to the command center through a shared spreadsheet, as revealed by 70.59% of the healthcare facilities. A further 11.76% considered that meetings would be appropriate for disseminating the information. Overall, the healthcare facilities discouraged sharing of information through phone and instead favored live spreadsheets with sessions being used to discuss the information. The information is not just evidence of the need to improve the current information-sharing mechanisms but also strengthening communication between the health centers and the command centers. Communication breaks between the two levels were considered a significant gap in the operations and implementation of emergency and disaster plans. 76.47% of the participants reported that communicating resources and capacity for every health center with the command center would be useful in guaranteeing effective operation and communication by the disaster and command center.

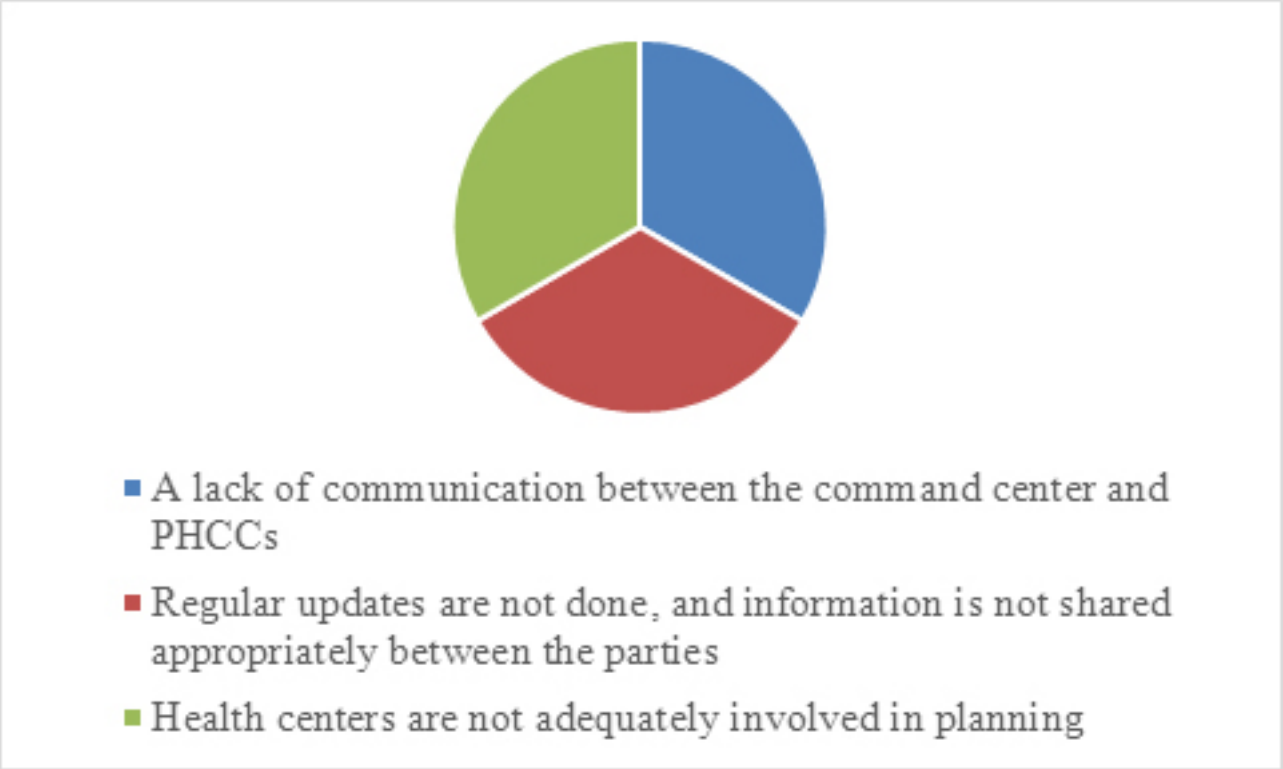
Figure 9: Importance of communication between the two levels



Findings of the study indicate that existing communication frameworks between PHCCs involve sharing information through distributed folders. On most occasions, the details are disseminated monthly. However, the sharing of information with the command center is limited. The implication is that the command center lacks comprehensive information for the running of a successful emergency and disaster plan. As a result, it may suffer setbacks in coordinating the response to emergency and disaster if they materialize.

Different factors hamper effective information flow. The majority of the participants in the study reported a lack of communication between the command center and PHCCs. Since the emergency and disaster plan is not communicated correctly, the staff members require specific training on its operations. Another problem is that regular updates are not done, and information is not shared appropriately between the parties. Some participants reported communication as characterized by confusion and chaos with no cascading of information. Additionally, health centers are not adequately involved in planning. Evidently, the combination of these challenges creates a lack of communication at the two levels, which leads to limited preparedness. Emergency situations would likely devastate the emergency and disaster response due to the evident communication breaks.

Figure 10: Factors hampering effective information flow



Conclusion

Overall, the aim of the study was to determine how shared information databases and common spreadsheets can be used in disaster management communication in the PHCCs in Qatar to respond appropriately to any kind of disaster. The specific objectives included to assess existing communication frameworks between PHCCs and emergency command centers and identifying factors that may be hampering effective communication flow. The research established that current communication frameworks between PHCCs and emergency command centers are weak. As a result, there is no sharing of resources and capacity information from the PHCCs to the emergency command centers. Similarly, the study revealed that a lack of proper communication and training about the emergency and disaster plan results in a limited understanding of the plan. By extension, the challenges contribute to limited disaster preparedness. The evidence is confirmation for improved information sharing, whereby live shared spreadsheets would ensure the PHCCs distribute capacity information with the command centers. The Spreadsheets would also act as a backup in case the phone communication links were broken.

The participants provided various recommendations on the improvement of communication between PHCCs and the emergency command center. Some of them include the need for EDP to establish an easy communication system to enable seamless adding and interpreting of the information from both HC and EDP. Information sharing methods should be standardized (Wang, Wu, Yen, Guo & Cheng, 2016). In addition, they need to be robust with built-in redundancies. Testing ought to be done frequently. The EDP needs to increase the level of communication and attend the health center frequently. The members of the command center and response team should be invited to the headquarters for them to see how the communication is done in their level. The information ought to be passed to each and every member and communicated in a simple way to ensure everyone understands the details. The improvement recommendations would play an important role in influencing the efficacy and effectiveness of communications. The report also adds the importance of shared Spreadsheets as a smooth and efficient strategy of providing standardized live information. The approach is a well-tested and proven mechanism of communication that would aid in strengthening disaster preparedness.

Research gaps

The research identified communication gaps between the PHCCs and the emergency command center. Notably, the study established that the emergency and disaster plan is not considered to be useful in disaster preparedness. Surprisingly, the plans have been the most common method of communicating disaster preparedness. Therefore, the research has identified the need to pursue additional studies on methods to improve communication in disaster planning and preparedness. Some of the techniques include communication backup plans in case phones break (Masys, 2016). The rationale is that disaster planning needs to anticipate all possible challenges that are likely to be encountered in the implementation of emergency protocols.

On the need for improvement, the study identified a gap in understanding the use of data sharing mechanisms, including the timing of data sharing. The most common trend was distribution of information on a monthly basis. However, the sharing of data and information also varied significantly across the different participants in emergency and data planning. While emergencies may be a one in a

lifetime occurrence, the study identified the need to focus on the most appropriate mechanism of sharing information. The goal is to have an evidence-based emergency and disaster plans where standards are anchored on evidence (Masys, 2016). Further research is required to determine the right protocols in data sharing

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Appendix A: Questionnaire

Name of the health center \ department _____

Region _____

1. Type of the health center:
   ( ) nodal ( ) other _____
2. In your opinion do you think your health center \ department is prepared to manage causalities in case of a disaster
   ( ) yes ( ) no ( ) not sure
3. If yes What kind of disaster if any they are prepared for?
   ( ) Biological incidents ( ) epidemic or public health concern ( ) terrorist attack ( ) insider attack ( ) others -----
4. Do you know the current number of staff that operating in your department \ health center yes ( ) ( ) no?
5. If yes can you mention their number and current location and shift (physicians, nurses, lab technicians' others (...)

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6. Do you have a database indicating each staff skillset? ( ) yes ( ) no ( ) not sure
7. Do you have a current list of medical Supplies available in your health center \ department?
   ( ) yes ( ) no ( ) I don't know
8. Do you keep a track of the Expiry date of each of the supply?
   ( ) yes ( ) no ( ) I don't know
9. Do you think having a resource (staff and supply) list shared with the command center will help in a better management of disaster in case happened?
   ( ) yes ( ) no ( ) I don't know
10. What resources the center would like to have it added in the shared list with the command center for better management of a disaster (human or medical supply)?

   ( ) yes ( ) no ( ) not sure
11. If yes do you share this list with the command center?
   ( ) yes ( ) no ( ) not sure
12. How often does the center review their resources?

_____

13. In your opinion what do you think is the Ideal method for sharing this information with the command center?

_____

14. How often can do you think the disaster command center require update to the resource information that is shared with Is there a current process in place to review the current resources in your health center \ department now?
   ( ) once a month ( ) once every 3 months ( ) twice a year ( ) only when there is an update ( ) others _____
15. What do you think is the best way to share information with the command center?
   ( ) spreadsheet ( ) meeting ( ) phone ( ) others _____
16. What do you think is the proper backup system for the disaster command center and health centers if the phone system collapsed during a disaster to communicate the capability of the response HC?

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17. In your opinion what do you think the gaps and limitations exist regarding the use of common communication pathway between the command center and health centers?

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18. Would maintaining a regular updated record of healthcare resources and capacity for every health center be useful in ensuring effective operation and communication by the disaster command centre?
   ( ) yes ( ) no ( ) I don't know
19. Any other suggestions or comments regarding sharing information and disaster response?