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Evaluation of the Assessment Process of Primary Health Care Corporation in Qatar for Its Readiness to Deal with Mass Casualty Event during FIFA World Cup 2022

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Abstract

This study assesses the role of the Primary Health Care Corporation (PHCC) in Qatar and its readiness for FIFA World Cup in dealing with mass casualty events. The goal is to investigate the comprehensiveness of the present Primary care emergency disaster plan and to determine the current preparedness undertaken by PHCC to tackle a mass casualty event during the world cup 2022 in Qatar. A qualitative method was adopted as it was considered more appropriate due to the paucity of research in this area. Semi-structured interviews were conducted amongst primary stakeholders, employing a purposive sampling technique. The findings indicate that PHCC perceives the essentiality of investing in a comprehensive plan covering an all-hazard approach, with the flexibility to accommodate for an event like the world cup. Although the current plan is not ready for the world cup 2022, significant steps have been taken to ensure that the plan is ready for any event of a mass casualty. PHCC has already commenced on a journey which will lead to a comprehensive amendment of its plan to make it more competent, adequate and adaptive to the changing needs it will face in future.

Keywords: Emergency preparedness; FIFA World Cup 2022; Primary healthcare facilities; Mass casualty; Qatar

Introduction

Qatar will be the first Middle Eastern country to host Federation Internationale de Football Association (FIFA) World cup 2022. The events would take place over several football stadiums located throughout the country over a period of 28 days.

The current population of Qatar as of September 2015 is around 2.3 million [1]. A large event like the world cup draws a significant number of football viewers from around the world

along with sports fans, newspapers and television crews. This sudden upsurge in spectators and participants may increase the risk of a large number of casualties which can be caused due to a chemical, biological, nuclear, natural or another agent.

Evidence from preceding FIFA world cups demonstrates an upsurge in the uptake of healthcare needs due to a rise in the number of medical cases during and after each event [2]. Public health agencies, governmental organisations and healthcare institutions has a responsibility to determine the best possible ways to alleviate the probable impact from such sudden mass casualties. The Primary Health Care Corporation (PHCC) manages different healthcare centres throughout Qatar and is responsible for providing highest-level of healthcare.

A study by Hsu et al. reported that the current evidence of mass casualty incident training for hospital staff is limited [3]. Several exercise programs have been employed worldwide to ensure efficient public health emergency responses. Dausey et al. devised and conducted tabletop exercises to investigate public health preparedness for natural and manmade biological threats [4]. These have been practised for various objectives such as training staff [5-7], strengthening the relationship among stakeholders [8,9] evaluating the preparation levels [10,11] as well as to recognise gaps in the arrangements and make suggestions to improve [12,13]. However, most of these exercises have been designed for a targeted disease [14-16]. Since the spectrum of probable mass casualties during the World Cup is diverse, it requires employing a comprehensive strategy to ensure a prompt and efficient response. The evaluation of readiness of PHCC in handling mass casualty event has been scarcely reported. Therefore, in this current study, we assessed PHCC's disaster management plan and its preparedness, together with its strength and weakness in managing the mass casualty occurrences during FIFA World cup 2022.

Methodology

We employed a qualitative approach through the use of semi-structured interviews to collect the information. This approach was considered more relevant to undertake this research as it helped us to understand the emergency and disaster plan for PHCC and its extend and capacity to handle any mass casualty occurrences during FIFA World Cup 2022. Moreover, due to limited research on this topic, a qualitative method seems the most appropriate form of study.

The representative group of interviewees should be reasonably comparable and should share some similarities pertaining to the study [17]. Therefore, in choosing the group of participants, we employed the use of purposive sampling technique, which identified the most suitable and appropriate respondents in the research. Because the priority here was on quality rather than quantity, the intend was not to increase the number of participants but to be bounteous with plentiful and sufficient information on the topic [18]. The respondents included those who are currently working for PHCC and those who are presently involved in the planning team or some who were previously assigned to the team for developing the plan and were willing to speak freely with the researcher.

In total, a team of seven respondents comprising various team managers, staffs who were responsible for implementation of the plan, together with the support staff members who assisted in contributing ideas to the team as well as others whose primary role was in writing the actual plan, were interviewed. An interview consisting of 19 research questions were asked to all the interviewees between May and June 2016. These interviews were conducted in person using an interview guide which was prepared in advance to facilitate the structure and smooth running of the interview (Appendix A).

Constant comparative method were used to analyse the obtained data which was further compared and collated to the data from other respondents. Ethical approval was granted by the PHCC's ethical committee prior to the interview process [19]. Confidentiality and anonymity of all the interviewees were maintained thought out the process.

Results

Generation of idea

Most hospital or primary care disaster plans do not address the disasters and incidents with numerous casualties. According to the American Hospital Association the preparedness for any mass casualty incidences should include four aspects: these are community-wide preparedness, staffing, communication and policies or guidelines [20]. The first aspect, i.e., community-wide preparedness, involves the processes of educating and providing necessary training to the general public to make them aware of such incidences and how to deal with such situations. The second aspect, i.e., staffing, refers to having a sufficient number of staff members who could manage such mass casualty events. It also involves providing right training and expertise to the staff members to enhance their ability to handle such incidences. The

third aspect, i.e., communication, refers to the development, establishment, and co-ordination of internal and external communication between the medical facilities, other stakeholders, and third-party agencies. The fourth aspect, i.e., policies or guidelines, refers to the planning and establishment of appropriate guidelines that will aid in the proper functioning and co-ordination between various health facilities, staff training, and enhance the flow of functional processes, and communication channels.

Development of current emergency disaster plan

One of the interview questions evaluated the respondents' views regarding the difficulty in achieving the plan. A scale from 1 to 10 (1- very difficult; 10- very easy) was used to answer this question. Of the total, 71.43% respondents expected it to be challenging to achieve the plan, whereas 28.57% found the plan moderately tricky to achieve. It should be noted that none of the respondents believed that the plan was easy to achieve.

The main reason for such a finding could be the absence of a subject expert in the team as this could result in major hurdles in the development of an effective and efficient strategy. The development and implementation team faced many challenges when developing the plan; some of these difficulties were the lack of buying in from some senior operational team during the plan implementation and the lack of any input or interactivity with the national planning team. Moreover, the team members had to work on the plan without having any frame of reference since there weren't any pre-existing plans for disaster management in primary care. Therefore, they primarily depended on online materials and resources for gathering knowledge and information about the topic. The respondents also indicated that since PHCC is one of the major healthcare providers with more than 20 organised and coordinated facilities, preparing a plan from scratch involved significant challenges for the small team.

Execution plan during a disaster event

The respondents explained that the plan execution during a disaster event required three steps. In the first step, all staff members were sensitised to the plan before its implementation. In the second step, it was made possible for the different staff members to access the plan through the intranet. Third, the development team trained the staff on the entire plan. The training included general training for all staff and target-specific training for the leaders. After the training process, the success of the plan and the awareness level of the staff were evaluated using numerous desktop exercises and national drills.

The respondents revealed that about 75% of the staff members at the PHCC were sensitised to the current plan by the implementation team. Since there are more than 4000 staffs who work in shifts at the PHCC, the implementation team faced many issues, such as limited manpower and knowledge, conducting training sessions for the staff who work in multiple shifts. For those in leadership positions in the organisation, the implementation team conducted one-to-one training or small team training with specific drills. Tabletop exercises related to

Middle East Respiratory Syndrome Coronavirus, dust storms, heat waves, and stadium collapse were conducted at the health centres.

Another aspect measured was the feasibility of the implementation of the plan. The respondents were asked to rate the practicality of the plan implementation on a scale from 1 to 10; where 1 represented difficult and hardly practical to implement and 10 represented very easy and practical to implement. A total of 85.71% respondents stated that the plan was difficult and hardly practical for full implementation. One of them stated that training staff shortage made it difficult to implement the plan, whereas another respondent stated that it was difficult to convince everyone regarding its importance. The respondents also found the process to be time-consuming and required lectures both in Arabic and English languages depending on the staff's needs. The remaining 14.29% respondents did not find themselves suitable for answering this question as they were not part of the implementation team.

After some pilot sessions, the plan was found to be incomplete. This led to a halt in the implementation process, and thus, it was decided to rewrite the plan taking into consideration all the proposed changes.

In addition, when the respondents were asked to estimate the time within which the PHCC can respond to a major disaster, they all agreed that there would be a quick response from PHCC but could not define the exact time period.

Evaluation of the existing plan and SWOT analysis of the current plan

There were interview questions regarding the preparedness of PHCC and its current scope and whether the organisation will establish a plan specifically for the World Cup event. One of the respondents pointed out that there is a section in the plan that is specifically for the management of mass casualties during a sports event. It was further stated that a specific plan for FIFA 2022 can be incorporated into the present plan, which would be safe for any international event. Another respondent mentioned that although the current version of the plan is comprehensive, modifications can be incorporated by the national disaster team to bridge the gaps in the plan for the World Cup event. Therefore, the PHCC should aim to invest in a plan involving an all-hazard approach with the flexibility of being modified for a particular event like the World Cup.

Currently, there are no 24-hour services provided by the health centres, and the PHCC services remain closed from 11:00 pm to 7:00 am. However, for uninterrupted services during a disaster, the emergency disaster team is planning on improving the current policies and guidelines. With plans to extend the services, the PHCC has included five walk-in clinics with 24 h services for the patients. The primary goal of the PHCC is to increase its preparedness to handle mass casualty situations during the World Cup event and save the maximum number of lives. The respondents believe that the PHCC can efficiently function with excellent communication, proper training, appropriate equipment, and staffing and capability supported by available policies and procedures.

The respondents further stated that there was a rise in the number of collaborations among the different arms of the government including the Ministry of Interior and the Ministry of Defense and other governmental organisations. The respondents also mentioned that there was a lack of guidance from the national team regarding the role of PHCC during a major disaster when the initial plan was being formulated. However, currently, the situation has changed with the Ministry of Public Health preparing a draft plan that defines the roles of PHCC during a major disaster. Moreover, due to the various suggestions received during the drills conducted for implementation process of the plan, the PHCC has decided to reformulate the current plan. One respondent stated that the PHCC aims to improvise their plan so that it can be efficiently and effectively utilised in the case of disasters. Furthermore, plans are being made to make improvement to the efficiency and self-sufficiency of the organisation so that it can handle mass casualties that may arise during a disaster. Policies are also being charted out to build the inter-relationship between the national plan and the national team and other stakeholders.

The Qatar government is proactively ensuring that the relevant organisations are prepared for mass casualty incidences, particularly during the proposed FIFA World Cup 2022. The PHCC intends to work in collaboration with other organisations related to disaster preparedness such as the Hamad General Hospital and the national disaster preparedness team so as to enhance the feasibility of their plan.

The new plan is yet to be completed, but the respondents could provide us insights regarding the new changes they are working on. One of these changes involved reformulating the communication pathway between the health centres and major command centers. To handle any major incidents, the PHCC has an operational Major Emergency Command Centre (MECC) located at its headquarters, and a Health Centre Command Centre (HCCC) situated at those health centres functional during a major disaster. One respondent mentioned that the members of MECC and HCCC teams would undergo changes so that the communication process between them and other stakeholders is enhanced and streamlined. The respondents also mentioned that the revised plan would include easy-to-use and straightforward process flows, updated pathways for patient care, and improved mental health support to casualties for family members and staffs.

PHCC is also interested in better equipping itself so as to serve others efficiently and systematically during emergencies or mass casualties. One respondent stated that the members of PHCC have sufficient training for handling practical situations and are supported by policies, procedures and protocols for prompt reaction to any disaster.

PHCC has taken steps to ensure that its staffs are aware and ready to manage any incident of mass casualty. One respondent explained that the new plan emphasises on the raining and orientation of all staff across different health centres and management sections, with prioritised training for incident commanders and emergency disaster plan champions. It was proposed that national training including Major Incident Medical Management and Support, National Advanced Disaster

Administration and Management Support and Hazard Vulnerability Assessment will be provided to specific staff members who will lead during a disaster response. In addition, all physicians and nurses will be trained in Immediate Life Support and Pediatric Life Support as part of the current licensing process. Individual doctors and nurses will be further trained for Advanced Life Support and Trauma Life Support. The communication channels and process maps will be examined using functional tests. The efficiency and response of the current team will be analysed using proposed drills at health centres and major command centres. One respondent stated that the revised plan would present a more transparent guideline of the procedure and the hazards that should be expected. The revised plan will also highlight the level and type of training to be received by each category of staff during the implementation process. However, there is a need for further clarification regarding the feasibility and effectiveness of these training programs in improving emergency preparedness. An extensive assessment of any emergency disaster preparedness training program should provide answers about its capability and productivity on training its participants. Moreover, any emergency disaster preparedness training programs should be subjected to a process of continuous monitoring with evaluations and applicable alteration and adaptation in the programs as applicable.

Discussion

In this study, we investigated the extent to which the PHCC is prepared for dealing with mass casualty incidences in Qatar during the FIFA World Cup 2022. We found that although the initial plans of PHCC did not highlight its actual scope during a disaster, the revised and updated plans will provide a clear insight to the objectives of the disaster management plan that supported the green-tagged or walking wounded casualties from a major incident.

The feasibility assessment of the current emergency disaster plan showed it is not sufficiently prepared for the FIFA World Cup 2022. However, essential steps have been incorporated in to preparing the plan action-ready for incidences of mass casualty. It requires the incorporation of various changes and improvements to enhance its effectiveness, efficiency, and success. This has been recognised by PHCC during the testing phase of the current plan, and hence, the organisation has taken steps to make the plan more efficient, practical, and adaptive to the changing demands.

Further evaluation revealed that the implementation of the emergency disaster plan has been currently halted to incorporate the proposed revisions. Our findings showed that PHCC had recognised the importance of a robust all-hazard approach plan that can be modified as per the requirements. The proposed plan involves detailed planning with the aim to ensure that the organisation is efficient and better equipped to handle cases. Different channels have been established for better communication among stakeholders with a priority on practical and adequate training of the entire staff of PHCC, along with appropriate and feasible policies, procedures and protocols. Moreover, the proposed plan is in its initial stages and

has not been tested for its efficiency and effectiveness. Hence, it is too early to be implemented for FIFA World Cup, which is a significantly huge event. Given that there are more than five years to the World Cup event, the PHCC has considered many significant steps in the proposal of an effective and feasible plan, which can be tailored accordingly for the event.

Based on the responses obtained in the interviews, this study recommends the following strategies for inclusion in the disaster management plan. a) Addition of a subject expert: All the respondents pointed out that there is a need for a subject expert in the team for a comprehensive investigation of the development process of the plan. Therefore, those with the necessary expertise and knowledge should be considered in the plan development and implementation. b) Improved communication and collaboration among stakeholders: Establishing improved channels of communication and collaborating with the national disaster team, Hamad Medical Corporation, and other stakeholders can result in the accomplishment of key tasks and enhancement of problem-solving skills. This can further lead to new partnerships and ideas. c) Examining the plan robustness: It is important to develop a practical plan that is in accordance with the national plan. The robustness of the plan can be improved by conducting local and national drills, examining the functions and communication channels of the plan, and improved coordination with the national team and other stakeholders.

Based on the responses obtained in the interviews, this study recommends the following strategies for inclusion in the disaster management plan [21]. There are a few limitations of this study. First, the preparation for FIFA World Cup is still an undergoing process, and so, any additional efforts and changes concerning the preparedness are not reflected in the study findings. Second, there could be a potential bias of the interviewer and interviewee, in spite of the precautionary measures taken.

Nevertheless, the results of this research should act as a basis for further future research to assess the effectiveness of the proposed new disaster management plan. The future research can extend the interviewee numbers and can include front-line staff to understand their views on the emergency disaster plan and measure the success of its implementation.

Conclusion

The findings of this research work suggest that PHCC considers it important to invest in a robust all-hazard approach plan that can be modified for a specific event like the World Cup. Although the current plan is not ready for the World Cup, the PHCC has considered making significant revisions to its plan to make it more efficient, practical and adaptive to the changing demands it will face in future.

References

1. Ministry of Development Planning and Statistics (2015) Population statistics.

2. Morimura N, Katsumi A, Koido Y, Sugimoto K, Fuse A, et al. (2004) Analysis of patient load data from the 2002 FIFA world cup korea/japan. *Prehosp Disaster Med* 19: 278-284.
3. Hsu EB, Jenckes MW, Catlett CL, Robinson KA, Feuerstein C, et al. (2004) Effectiveness of hospital staff mass-casualty incident training methods: A systematic literature review. *Prehosp Disaster Med* 19: 191-199.
4. Dausey DJ, Buehler JW, Lurie N (2007) Designing and conducting tabletop exercises to assess public health preparedness for manmade and naturally occurring biological threats. *BMC public health* 7: 92.
5. Orfaly RA, Biddinger PD, Burstein JL, Leaning J (2005) Integration of academia and practice in preparedness training: The Harvard School of Public Health experience. *Public Health Rep* 120: 48-51.
6. Quiram BJ, Carpender K, Pennel C (2005) The texas training initiative for emergency response (T-TIER): An effective learning strategy to prepare the broader audience of health professionals. *J Public Health Manag Pract* 11: S83-89.
7. Livet M, Richter J, Ellison L, Dease B, McClure L, et al. (2005) Emergency preparedness academy adds public health to readiness equation. *J Public Health Manag Pract* 11: S4-10.
8. Dausey DJ, Aledort JE, Lurie N (2006) Tabletop exercise for pandemic influenza preparedness in local public health agencies. U.S. Department of Health and Human Services.
9. Richter J, Livet M, Stewart J, Feigley CE, Scott G, et al. (2005) Coastal terrorism: Using tabletop discussions to enhance coastal community infrastructure through relationship building. *J Public Health Manag Pract* 11: S45-49.
10. Jarrett CD (2003) Lessons learned: The "pale horse" bioterrorism response exercise. *Disaster Manag Response* 1: 114-118.
11. Sarpy SA, Warren CR, Kaplan S, Bradley J, Howe R (2005) Simulating public health response to a severe acute respiratory syndrome (SARS) event: A comprehensive and systematic approach to designing, implementing, and evaluating a tabletop exercise. *J Public Health Manag Pract* 11: S75-82.
12. Taylor JL, Roup BJ, Blythe D, Reed GK, Tate TA, et al. (2005) Pandemic influenza preparedness in Maryland: Improving readiness through a tabletop exercise. *Biosecur Bioterror* 3: 61-69.
13. Smith BT, Inglesby TV, Brimmer E, Borio L, Franco C, et al. (2005) Navigating the storm: report and recommendations from the Atlantic Storm exercise. *Biosecur Bioterror* 3: 256-267.
14. Andress K (2003) A postevent smallpox mass vaccination clinic exercise. *Disaster Manag Response* 1: 54-58.
15. Doxtator LA, Gardner CE, Medves JM (2004) Responding to pandemic influenza: a local perspective. *Can J Public Health* 1: 27-31.
16. Morrow CB, Novick LF (2005) A case exercise in public health preparedness: A community outbreak of influenza-like illness. *J Public Health Manag Pract* 11: 306-310.
17. McCracken G (1988) The long interview: A four-step method of qualitative inquiry. *Qualitative Research Methods*. SAGE Res Meth 13.
18. Padgett DK (1998) Qualitative methods in social work research: Challenges and rewards.
19. Glaser BG, Strauss AL (1967) The discovery of grounded theory: Strategies for qualitative research, Chicago, Aldine.
20. American Hospital Association (2000) Hospital preparedness for mass casualties.
21. Mathew D, Hubloue I (2018) The readiness of primary healthcare facilities in qatar to deal with potential mass casualty incidents during the FIFA world cup 2022. *Arch Med* 10: 1-5.