

# National Mass Gathering Pharmaceutical Care Program at Healthcare Institution in Saudi Arabia

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## ABSTRACT

**Objective:** To explore the pharmaceutical care services during mass gathering (MG) Hajj at the healthcare organizations in Saudi Arabia (SA). **Methods:** It is a descriptive analysis of a newly established program at the MOH in SA called MG pharmaceutical care program during Hajj and Umra Seasons, which was analyzed within the Pharmacy Strategic Plan 2012-2020 and update the plan with new Saudi vision 2030. **Results:** MG pharmaceutical care program is a new program established by the healthcare organizations in the last four years, which amongst to provide pharmaceutical care services in various fields. **Conclusion:** The mass gathering of pharmaceutical care services is a new initiative, part of the mass gathering medicine. The program should expand after the foundation stage with performance indication monitoring and follow up. Further assessment of the new project is required to validate the clinical and economic outcomes to research the high level of quality and professionalism in the future.

**Keywords:** National, Mass Gathering, Pharmaceutical Care, Healthcare, Institution, Saudi Arabia.

## INTRODUCTION

Several Million Muslim pilgrims come to the Kingdom of Saudi Arabia (KSA) each year to perform "Hajj"; the 5<sup>th</sup> pillar in the Islamic religion. Hajj period begins on the first 15 days of Dhu'l-Hijjah, the 12<sup>th</sup> month of the Islamic Hijri calendar, during this time, many people get together in one place to perform their duties; which leading to overcrowded, stampede and spread of many diseases. The Government of Saudi Arabia (GOSA) has taken upon itself the responsibility of the safety of Hajj and pilgrims and the provision of all services to simplify the pilgrims and visitors achieve their duties. One of these services is healthcare services, which is one of the most significant services that provide in a short period each year. MOH in SA provides many healthcare services for instance, but not limited to, these are, preventive medicine and public health services, medical, therapeutic services to ensure the provision of integrated medical services to pilgrims, preparing hospitals, health centers, emergency centers and a specialized trained medical staff, also the supportive medical services had a share in these services, including laboratories, blood banks and derivatives, also medical supply of medicines and pharmaceutical services.<sup>[1]</sup> Pharmaceutical care services one of the challenges that experience by the healthcare authorities in KSA to provide and ensure sufficient healthcare services for pilgrims. Several studies conducted to assess the pharmaceutical, healthcare services during Mass gathering (MG) Hajj and Umra period; one of them was conducted in 2016, which found "limitation in the Mass gathering pharmaceutical care services."<sup>[2]</sup> Other investigations discussed medication safety

during mass gathering Hajj period and mass gathering pharmacy workforces.<sup>[3-7]</sup> One study explored the mass gathering of pharmaceutical care.<sup>[8]</sup> However, full details about the project not existed locally or Gulf and Middle East countries or the rest of the world. The aim of this topic is to declare project review about mass gathering pharmaceutical care at a healthcare organization in the Kingdom of Saudi Arabia.

## Method of Development of the Project

It is a new initiative project drove by national mass gathering pharmaceutical programs. The task force team of mass gathering hajj pharmacy projects formulated and consisted of from an author's expert in the mass gathering hajj. The committee unitized and drove the mass gathering medicine guidelines and from the textbook and international literature about mass gathering medications, safety written by utilizing the international business model, pharmacy project guidelines project management institution guidelines of a new project.<sup>[9-12]</sup> The mass gathering medication safety project written through project management professionals and contained of several parts, including the initial phase, the planning phase, the execution phase and the monitoring and controlling phase.

## Initial Phase

### Assessment Needs

Mass gathering (MG) according to World Health Organization (WHO) when more than 1000-2500 persons gathering with a specific place for

a specific goal for a defined period of time, naturally, many diseases will seem as a result, besides, it is essential to draw up complete plans that enable us to organize these gathering easily and enable us to maintain their safety and health, that is what happened precisely during hajj and Umra gathering.<sup>[8,13]</sup> Based on that the Ministry of Health (MOH) established a new strategic plan, which draws up by the General Administration of Pharmaceutical Care at MOH (GAPC-MOH) in KSA. The mass gathering pharmaceutical program was an essential part of this strategic plan.<sup>[14,15]</sup>

## Market Analysis

Based on the General Authority for Statistics (GAS) years 2010-2019, the number of pilgrims each year, ranging between 1,980,249-3,161,573 pilgrims, which is divided into two types, inside pilgrims who come from inside KSA and outside pilgrims who come from outside of KSA. This massive number of pilgrims and visitors need an extreme effort to maintain safety and to facilitate the performance of their duties. MOH arranged around 30,908 healthcare providers, including pharmacists according to GAS 2019, to serve these pilgrims and visitors.<sup>[16]</sup> In 1436/2016 the general administration of pharmaceutical care (GAPC) established a new program called mass gathering pharmaceutical care during Hajj and Umra period, which was one of the projects in the Strategic Plan of GAPC at MOH in SA 2012 – 2022.<sup>[14,15]</sup> The program contains several strategic points, which are collectively aimed to achieve pharmaceutical care, clinics and electronic care and including human resources; along with cutting back on wastage and preventing all the medication-related problems in over all of the MOH's facilities during mass gathering Hajj and Umra and to provide the best pharmaceutical care services in high quality, high level of professionalism, modern technology by a reasonably-priced cost for the patients of the MOH's amenities through hospitals and primary care centers at holy region in Makkah and Almadina during mass gathering Hajj and Umra.<sup>[17]</sup>

## SWOT Analysis

SWOT analysis had been performed commonly for any new project. SWOT means "Strength, Weakness, Opportunities and Threats." the strength of the program was represented in drawing up a clear way to the pharmacist and all healthcare providers to deliver their services with high quality and professionally during Hajj and Umra seasons depending on a well-prepared strategic plan. The weakness of the program was the lack of a continuous evaluation mass gathering pharmacy pro-

gram, which evaluates the program outputs and compares them with the previous situation before its development and approval. While the opportunities where the successful application of the mass gathering medicine program, awareness of the program to all pharmacy staff at all healthcare settings and the cost availability; because of the appropriate cost of needed medical services provided during Hajj and Umra season. Among the threats, not enough of pharmacy workforces, or the administration planner does not involve the pharmacist in the administration mass gathering committees.

## Planning Phase

### The Scope of the Project

The mass gathering pharmaceutical care program offers its services with best-practice standards and regulations that had been deliberated some of the activities previously for both pilgrims, visitors of the holy cities Makkah and Almadina regions and also for the healthcare providers who work annually during Hajj and Umra period, where it is offered under the supervision of MOH in KSA.<sup>[18-21]</sup>

### Vision, Mission and Goals

The vision of this project is to define the best way to achieve the best mass gathering of pharmaceutical care services during Hajj and Umra and related issues. The mission is to provide complete pharmaceutical care with safety and best practice during mass gathering Hajj and Umra. The goals of this program were to discover the mass gathering Hajj pharmaceutical care services, to implement best pharmacy practice during mass gathering Hajj yearly and to prevent drug-related morbidity and mortalities to the pilgrims.

### Description of the Project

The mass gathering pharmaceutical care services during Hajj and Umra program comprises the following strategic points, but not limited the following.<sup>[20-24]</sup>

### 1. Mass Gathering Pharmaceutical Care Committees

This a new established committee, which set-up to act as a pharmaceutical care director, this committee responsible about many services; for instance, providing pharmaceutical care services to the patients and all healthcare providers, increases alertness about medication use during Hajj and Umra period, progress the quality of pharmaceutical care services by enhancing communication between patients and pharmacist. Also accountable for an instant but limited to supervision of all hospitals and healthcare centers pharmacist, the application of clinical pharmacy services and therapeutic

protocols, responding to inquiries related to medications, giving training courses for the pharmacist and technician who works for Hajj and Umra annually. Moreover, Medication errors and side effects follow-up is also one of the responsibilities of this committee, follow-up of application and distribution of antidotes, vaccination and anti-chemical, follow-up of preparation and administration of IV medications through the IV manuals and providing pharmaceuticals and electronic equipment in the holy places.

### 2. Mass Gathering Drug Information

Through (937) call center, MOH delivers during mass gathering medicine services, by which the pharmacist can answer the questions and queries of the patients. The drug information services are a critical service, which can improve patient outcome and avoid redundant healthcare cost burden.<sup>[24,25]</sup>

### 3. Mass Gathering Medication Safety

The Medication Safety program should apply all the time and its importance increase during Hajj and Umra seasons, it is essential to prevent and decrease the medications related problems, mortality and morbidity and to control health care system budget by preventing the unnecessary cost.<sup>[3-5]</sup>

### 4. Mass Gathering Pharmacy transition care

The mass gathering pharmacy transition care with importance on the medication reconciliation is a process necessary implemented to decrease medication errors and patient harm at hospital admission and it has been shown to be an active process.<sup>[26-30]</sup>

### 5. Mass Gathering Primary Care Centers

The primary healthcare centers are essential places for pilgrims. Mass gathering primary healthcare services should be provided with the best high quality and safety manner.<sup>[7]</sup>

### 6. Mass Gathering Pharmacy Practice

The best practice standard of local and international organizations should be showed within Intravenous admixture and acute care services.<sup>[20,21]</sup>

### 7. Mass Gathering Pharmacy Infection Control

The infection control in the pharmacy practice is very critical to prevent infection-related matter and promote the best control drug usage and microbial resistance.<sup>[31-34]</sup>

## 8. Mass Gathering Community Pharmacy

The community pharmacies are essential during mass gathering hajj period to implement Saudi managed care pharmacy and ambulatory care services.<sup>[35]</sup>

## 9. Mass Gathering Clinical Pharmacy

The clinical pharmacy services including critical care, emergency pharmacy, drug intervention and mass gathering research to decreased morbidity and mortality.<sup>[36]</sup>

## 10. Mass Gathering Emergency Pharmacy and Disaster Management

The emergency pharmacy during mass gathering hajj period should be implemented to enable the emergency services and prevent disaster-related issues.

## 11. Mass Gathering Pharmacy Human Resources

The pharmacy workforce during mass gathering hajj period in the hospitals and primary healthcare centers is required for updates annually to provide the best healthcare services to all pilgrims.<sup>[6,7]</sup>

## 12. Mass Gathering Pharmacoconomics

The measurement of the impact of mass gathering hajj pharmaceutical care services to the clinical or economic outcome is vital for the best utilization of the resources.

## 13. Mass Gathering Pharmacy Research

The pharmacy research during mass gathering hajj period is highly dependable to follow up and monitor the pharmaceutical care received by the pilgrims.<sup>[37]</sup>

## 14. Mass Gathering Pharmacy Statistics and Surveillance

The pharmacy statistics and surveillance are essential elements during the mass gathering hajj to monitor the key performance indicators and improving pharmaceutical care provided to the all pilgrims.<sup>[38-42]</sup>

## Planning Cost Management

Financial assistance is desirable to support this program for the training and courses which provide to staff (pharmacist and technician) who work for Hajj and Umra annually, medication error, side effect evaluation system, electronic system and for other related mass gathering pharmaceutical care services during this period. Also, the economic funding of all com-

mittees associated issues and performances in KSA, the monitor the financial budget over the mass gathering Hajj period is recommended to avoid overuse and underutilization related matter.

## Execution Phase Management Team

Commonly the new project was led by the administrative team. The team consisted of several essential various members. For instant; Mass gathering pharmaceutical program coordinator from each region, pharmacy total quality management, medication safety pharmacist, clinical pharmacy, pharmacist, pharmacy technician and mass gathering medicine representative. The team had the responsibility for implementing and monitoring mass gathering hajj activities. The team should educate and train pharmacy staff and healthcare providers about the project. The team has updated all masses gathering pharmaceutical care services annually and resolve any project problems until the project become one of the operation models in healthcare institutions in Saudi Arabia.

## Education and Training

All pharmacists should attend Hajj courses, which are held by MOH, either a regular one or through electronic-Courses. GAPC as responsible authority arranged the following training programs to train, qualify and develop the pharmacist and technician:<sup>[17]</sup>

1. Mass Gathering Pharmacist Drug Information Training Program.
2. Mass Gathering Pharmacist Infection Control Training Program.
3. Mass Gathering Pharmacist Clinical Pharmacy Training Program.
4. Mass Gathering Pharmacist Emergency Pharmacy and Disaster Management Training Program.
5. Mass Gathering Pharmacist Medication Safety Training Program.
6. Mass Gathering Pharmacist TQM Training Program.
7. Mass Gathering Pharmacist Primary Care Centers Training Program.
8. Mass Gathering Community Pharmacist Primary Training Program.
9. Mass Gathering Pharmacist Research Training Program.

## Monitoring and Controlling Phase Project Quality Management

The Balance Score Card (BSC) considered one of the total quantity management elements that had been used for a new project about mass gathering pharmacy infection control in the Kingdom of Saudi Arabia.

BSC divided into four types the customer, finance, internal process, education and innovation. The internal process type, which example was the assessment of mass gathering pharmacy infection control. Another type related to the education and innovation types measures of clinical outcome of mass gathering hajj pharmacy infection control and that has declared the education and competency of pharmacists and pharmacy technicians. On the other hand, the financial type the measurement of cost-saving of mass gathering pharmacy infection, while the customer types maybe measure the patients or pharmacy staff and healthcare provider's gratification with the mass gathering infection control in Saudi Arabia.

## Risk Management

Budget, scope, personnel, schedule, technical and quality are the six types of risks. Budget risk is the most common type, might due to the cost or personal or quality risks. Budget risk is related to the absence of enough funds for the different provided services of the program, like education, training and electronic services. Limitation of human resources with a high workload, in addition to the poor staff education and training about the program; all these reasons might experience personal risks. Also, the program might be exposed to the quality due to un-qualified pharmacy staff, inadequate training in the quality risks pharmacy tools and lack of electronic systems, which might lead to technical risk. System failures and unexpected regulatory framework modifications can be classified under the full scope risk umbrella.

## The Closing of the Project

Mass gathering Hajj and Umra are a real challenge that needs significant effort. Pharmaceutical care program one of the big strategic plan established by MOH to serve and facilitate the duties of the visitors and pilgrims during the Hajj and Umra period. Mass gathering pharmaceutical care programs gave the pharmacist and all healthcare providers a clear way to provide the services with high quality and professionally. However, until now, there is no study showed to evaluate the mass gathering pharmaceutical care program in effect during the last four years. We need to evaluate this program to know where we are and what we want to add to make this program provide more and more services with a high level of quality and professionalism in the future. Besides, the Education and training of the mass gathering pharmaceutical care should conduct regularly. The Annual celebration of mass gathering pharmaceutical care of all staff, including clinical pharmacists, pharmacists and pharmacy technicians at all healthcare institutions, is highly suggested in KSA.

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None.

## CONFLICT OF INTEREST

None.

## ABBREVIATIONS

**GOSA:** Government of Saudi Arabia; **KSA:** Kingdom of Saudi Arabia; **MOH:** Ministry of Health; **MG:** Mass gathering; **WHO:** World Health Organization; **GAPC-MOH:** General Administration of Pharmaceutical Care at MOH; **SWOT:** Strength, Weakness, Opportunities, and Threats; **GAS:** General Authority for Statistics; **BSC:** Balance Scored Card.

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