

Mass Gathering (Hajj) Medication Safety Services: New Initiative in Saudi Arabia

Yousef Ahmed Alomi* , Critical Care Clinical Pharmacists, TPN Clinical Pharmacist, Freelancer Business Planner, Content Editor and Data Analyst, Riyadh, Saudi Arabia.

Nezar Adnan Yahya Khayat, Bsc. Pharm Medication Safety Officer, Pharmaceutical Care Administration, Makkah Medical Affairs Region, Makkah, Saudi Arabia.

Yasir Abdurraheem Bamagaus, Bsc. Pharm Regional General Manager, Pharmaceutical Care Administration, Makkah Medical Affairs Region, Makkah, Saudi Arabia.

Osama Hamad Alahmadi, Bsc. Pharm Staff Pharmacist, Pharmaceutical Care Administration, Makkah Medical Affairs Region, Makkah, Saudi Arabia.

Majed Mohammad Alluhibi, Bsc. Pharm Pharmaceutical Care Administration, Makkah Medical Affairs Region, Makkah, Saudi Arabia.

Ahmad M. AlKharoby, MD Assistant General Manager for assistant medical affairs, Makkah Medical Affairs Region, Makkah, Saudi Arabia.

Wael H. Motair, MD General Manager, Makkah Medical Affairs Region, Makkah, Saudi Arabia.

Correspondence:

Dr. Yousef Ahmed Alomi, (BSc. Pharm, MSc. Clin Pharm, BCPS, BCNSP, DiBA, CDE) Critical Care Clinical Pharmacists, TPN Clinical Pharmacist, Freelancer Business Planner, Content Editor and Data Analyst, P.O. BOX 100, Riyadh-11392, Riyadh, Saudi Arabia.

Phone no: +966504417712

E-mail: yalomi@gmail.com

Received: 07-06-2019;

Accepted: 10-09-2019

Copyright: © the author(s), publisher and licensee International Journal of Pharmacology and Clinical Sciences. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License

Access this article online



www.ijpcs.net

DOI:
10.5530/ijpcs.2020.9.8

ABSTRACT

Objective: To demonstrate the mass gathering hajj medication safety as new initiatives in the Kingdom of Saudi Arabia. **Methods:** It is a new initiative project drove by national mass gathering pharmaceutical programs. The projects drove the mass gathering medicine guidelines and the international business model, pharmacy project guidelines project management institution guidelines of a new project. The initiative project is written through project management professionals and consisted of several parts, including the initial phase, the planning phase, the execution phase and the monitoring and controlling phase. **Results:** The medication safety services during the mass gathering with a defined vision, mission and goals. The services had multiple benefits, including clinical and economical on patients and healthcare services, as described in the review. The extension of the project assured by risk management elements description. Besides, the monitoring and controlling of the services as illustrated. The conversion of operation project, though closing project stage illustrated in the analysis. **Conclusion:** The mass gathering medication safety is a new initiative project that is part of the mass gathering medicine. There is various part of medication safety services can be started during the mass gathering; it is highly recommended in Saudi Arabia.

Keywords: Mass gathering, Hajj, Medication safety, Services, Initiative, Saudi Arabia.

INTRODUCTION

The national medication safety program started several years back at all healthcare organizations, hospitals and primary healthcare centers. ^[1] Currently, its standards of accreditation regulation overseas and locally. ^[2,3] Most of the healthcare institutions implemented the services. The impact on the medication's safety is very critical, clinically and economically overall, the world counties. ^[4-6] The requirements for the implementation of medication safety are highly demanding with the mass gathering hajj period with crowded pilgrims. ^[7] The chances of committing medication errors are high during the mass gathering and safety preventive measures are highly recommended. The Ministry of Health already started medication safety procedures through an annual mandatory education course given to physicians and nurses. ^[8,9] Some investigations suggested expanding the program for annual medication safety assessment for hospitals and primary healthcare centers with an emphasis on mass gathering hajj activities. ^[9,10] The authors are not familiar with any investigations, review project implementation of the medication's safety during the mass gathering locally or Gulf and Middle East countries. The aim of this implementation is to explore the mass gathering hajj medication safety in the Kingdom of Saudi Arabia.

Method 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 medication, safety written by utilizing the international business model, pharmacy project guidelines project management institution guidelines of a new project. ^[11-14] The mass gathering medication safety project written through project management professionals and consisted of several parts, including the initial phase, the planning phase, the execution phase and the monitoring and controlling phase.

Initiative Phase Assessment Needs

The medication management consisted of several steps; procurement, preparation, prescribing, dispensing and monitoring. All those steps to reach the right medications with the right dose to the right patients at the right time. Each step needs to check to proceed without mistakes. Several factors may lead to mistakes or medication errors. For an instant, but not limited to; not clear or not appropriate policy and procedures for medication management and high workload, absence of knowledge, or education. During the mass gathering hajj period, there will be enormous patients who need medication and the number of prescriptions was very high and the possibility of mistakes was very high. As a result, the demand for a project or project takes care of the medica-

tions management process to stop the medications and make prevention in the future.

Market Analysis

A medication safety program established several years back with general elects and activities. It requires local and international accreditation organizations. Most of the healthcare, governmental and private institutions implemented medication safety services. The medication's safety started implementation during the mass gathering hajj period before several backs with several education courses for all healthcare providers. However, the demand for medication safety with updating of policy and procedures, using pharmacy automation and electronic prescribing, is required. The medication's safety during the mass gathering should revise with abundant elements and building safety culture before as prevention, during and after hajj events by reporting of medications safety is required to cover all medications stages during the mass gathering hajj activities.

SWOT Analysis

There are several to assess the new project. The SWOT analysis that's discussed several angles. The strength, weakness, opportunity and thread points need to be discussed. The strength points of the project were prevented any drug morbidity and mortality, prevent medication misadventures during the mass gathering hajj activities, to prevent additional and unnecessary cost on healthcare services. The weak points of the project, huge serving pilgrims during the mass gathering hajj, need more pharmacists. While opportunity points the implementation of accreditation organization's standards, implementation of the new pharmacy strategic plan with new vision 2030.^[15] The threads point related to the absence of leaders with a new vision of healthcare services and disaster problems occur during the mass gathering hajj period.

Planning Phase

Scope of the Project

The project is covering medication safety and related issues at healthcare organizations, including hospitals, primary healthcare centers and community pharmacies in the kingdom of Saudi Arabia during the mass gathering hajj period in the Kingdom of Saudi Arabia.

Vision, Mission and Goals

The vision of the project to reach the best and safest medications in healthcare services during the mass gathering hajj period in Saudi Arabia. The message of the project is to provide medication safety elements at all healthcare institutions during the mass gathering hajj

period in Saudi Arabia. The aim of the project is to implement medication safety standards to all healthcare organizations during the mass gathering time, to assess annually the medications, safety elements through international standers, the standardized medications, safety indicators at all types of healthcare services within the mass gathering hajj period, to measure the cost avoidance of prevention of medications errors during the mass gathering hajj period.

Project Description

- ✓ Each year the mass gathering hajj committee should proclaim about medication safety specialties demand during the mass gathering hajj period.
- ✓ The announcement arrangement with the pharmacy workforce in Makkah and Almadina regions.
- ✓ The mass gathering committee should dispense medication safety pharmacist supervisor in Makkah and Almadina regions.
- ✓ The medication safety pharmacist supervisor should allocate each clinical pharmacy specialist for each hospital or primary healthcare centers.
- ✓ The pharmacy director of each hospital should obtain the medication safety pharmacist and make orientation for him and involvement with his medical and pharmacy team.
- ✓ The medical and pharmacy team member should give the new medications safety pharmacist orientation about their system during the mass gathering hajj period.
- ✓ The medication safety pharmacist should work according to their specialties with the best pharmaceutical care providers.
- ✓ The medications safety pharmacist should give lectures about essential medications safety to all healthcare providers, including a physician, nurses and pharmacist.
- ✓ The medication's safety should document the valuation of medication safety and the inpatient and outpatient medications error prevention, prevention of medication errors and reconciliation discrepancies with a clinical and economic impact electronically.
- ✓ The final report should to the medication's safety supervisor by the end of the hajj period.
- ✓ The medication safety supervisor should send the final all reports of medication safety pharmacists during the mass gathering hajj period to the higher committee of the mass gathering hajj committee and discussed their recommendations for next year's Plan schedule management.

Planning Cost Management

The medication safety projects need a financial budget, including the cost of several education and training courses, cost of medication safety materials, cost of committee meetings, the salary of medications, safety pharmacists and pharmacy technicians. The budget should regulate at begging and work within it without increase or decrease the overall budget periods of project establishment.

Executing Phase

Management Team

The program should organize through the medication's safety team. The team consisted of medication safety representatives from each region or governmental or private sector. The team will implement the medication safety program at all levels of healthcare services. The team should implement the assessment of medication safety before the program, implement medication safety regulations and measure the outcome of medication safety with clinical and economic outcomes during the mass gathering hajj activities.

Education and Training

The primary medication safety courses should be conducted before the mass gathering hajj period to all healthcare providers, including physicians, pharmacists and nurses. Regular face to face and online education courses should be conducted annually. Each year educational reports of medication safety during the mass gathering hajj period should be delivered to all healthcare providers and discuss the best solution elements and preventive measures for the current year. Long training of medication safety residency during the mass gathering hajj period is highly recommended to start in the future in the Kingdom of Saudi Arabia.

Monitoring and Controlling Phase

Project Total Quality Management

The process of quantity management during project medication's safety during the mass gathering hajj period is one the vital tool to monitor the implementation of the project and the impact assessment of the project. There are many total quality tools used by the current project. Some tools using during and after the implementation of the project of using balance scored cards. The system monitors for angle customer, finance, internal process, education and innovation. That is including with internal processes and one tool might be used for an instant the assessment of healthcare services of medications safely. In the education and innovation types, the measures of clinical outcome of medication safety during the mass gathering hajj can reflect the education and competency

of pharmacy staff. The financial type the measurement of the cost efficiency of medication safety maybe is full. The customer, types might measure the patient's satisfaction with medication safety culture and medication safety program satisfaction by pharmacy staff and healthcare providers during the mass gathering hajj activities in the Kingdom of Saudi Arabia.

Risk Management

There are six types of risks in the current project: budget risks, scope risks, schedule risks, personal risks, technical risks and quality risks. The project might expose to risks such as personnel, budget, technical and quality risks. The project might expose to the budget of not available or not enough for education and training of healthcare providers and pharmacy informatics equipment at healthcare organizations. There is another personal risk that may be exposed to it with a shortage of pharmacists to follow up on all medication safety-related issues during the mass gathering hajj period. The technical risks another type may be the project exposed to it, the electronic recourses of the friendly user computer system in pharmacy practice with an emphasis on during the mass gathering hajj period. The project might be exposed to quality risk due to no training, healthcare providers, or implemented medication safety standers during the mass gathering hajj period.

Closing of the Project

The medication's safety during the mass gathering hajj services at all healthcare organizations should be implemented to prevent drug misadventures and follow-up on the medication problems and set up safety culture inside the healthcare system in the Kingdom of Saudi Arabia. The medication safety project should

continue at governmental and private's hospitals and primary healthcare centers through mass gathering, pharmacy committees and related committees. The mass gathering hajj medications safety and related Education and training short and long residency should be founded annually and expanded of medication safety in the future to cover all healthcare systems. The Annual celebration of medication safety officers during the mass gathering hajj periodic highly recommended in the Kingdom of Saudi Arabia.

ACKNOWLEDGEMENT

None.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

ABBREVIATIONS

MOH: Ministry of Health; **KSA:** Kingdom of Saudi Arabia; **SWOT:** Strengths, Weaknesses, Opportunities and Threats; **BSC:** Balance Scored Cards.

REFERENCES

1. Alomi YA. National medication safety program at Ministry of Health in Saudi Arabia. *J Pharmacovigil.* 2015;3(5):e145.
2. Saudi Center Board for Accreditation for Healthcare Institutions (CBAHI). Medication Management (MM). In: National Hospital Standards. 2nd Edition. Saudi Central Board for Accreditation of Healthcare Institutions. 2016;194-211.
3. The Joint Commission. 2016 Comprehensive Accreditation Manuals. Joint Commission Resources. 2016.
4. Alomi YA, Alshabaar N, Lubad N, *et al.* Inpatient medication errors and pharmacist intervention at ministry of health public hospital, Riyadh, Saudi Arabia. *Pharmacol Toxicol Biomed Reports.* 2019;5(1):44-8.
5. Alomi YA, Aldosori N, Alhadab M, *et al.* The outcomes of clinical pharmacist consultation visits at

ministry of health hospitals in Saudi Arabia: Medication safety and pharmacy research. *J Pharm Pract Community Med.* 2017;3(3):168-75.

6. Alomi YA, Alanazi AA, Alsallouk SA, *et al.* Cost-efficiency of medication safety program at pediatrics, obstetrics and gynecology hospital, East Province, Saudi Arabia. *Value Heal.* 2016;19(7):A464.
7. Alomi YA, Khayat NAY, Baljoon MJ, *et al.* National Survey of Hospital Medication Safety Practice during Mass Gathering (Hajj-2016) in Makkah, Saudi Arabia: Medication Preparation and Dispensing. *J Pharm Pract Community Med.* 2017;3(4s):S36-42.
8. Alomi YA, Khayat NAY, Baljoon MJ, *et al.* National survey of hospital medication safety practice during mass gathering (hajj-2016) in Makkah, Saudi Arabia: Environmental Culture and Staff Competency. *J Pharm Pract Community Med.* 2017;3(4s):s15-21.
9. Alomi YA, Khayat NAY, Baljoon MJ, *et al.* National Survey of Hospital Medication Safety Practice during Mass Gathering (Hajj-2016) in Makkah, Saudi Arabia: Patient Education, Quality Process and Risk Management. *J Pharm Pract Community Med.* 2017;3(4s):s1-7.
10. Alomi YA, Khayat AY, Jamil BM, *et al.* National survey of hospital medication safety practice during mass gathering (hajj-2016) in Makkah, Saudi Arabia: Patient Information. *J Pharm Pract Community Med.* 2017;3(4s):29-35.
11. McDonough R. Writing a Business Plan for a New Pharmacy Service. *The Dynamics of Pharmaceutical Care: Enriching Patients' Health.* 2010;23.
12. Harris IM, Baker E, Berry TM, *et al.* Developing a business-practice model for pharmacy services in ambulatory settings. *Pharmacotherapy.* 2008;28(2):7e-34e.
13. Sachdev G. Sustainable business models: Systematic approach toward successful ambulatory care pharmacy practice. *Am J Heal Pharm.* 2014;71(16):1366-74.
14. PMBOK Guide. A Guide to the Project Management Body of Knowledge. Sixth Edit. Project Management Institute, Inc. 2017.
15. Alomi YA, Alghamdi SJ, Alattyh RA, *et al.* The evaluation of pharmacy strategic plan in past 2013-2016 and forecasting of new vision 2030 at ministry of health in Saudi Arabia. *J Pharm Pract Community Med.* 2018;4(2):93-101.