

Hajj and Umrah Experiential Module in the New Reform Curriculum of Umm Alqura Medical School, Makkah, Saudi Arabia

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Abstract

Introduction and background: The Hajj (Pilgrimage) is one of the five Pillars of Islam, an obligation to every Muslim to perform the Hajj at least once in his or her lifetime if affordable. Annually 2-3 million pilgrims from almost 183 countries with diverse medical and social background to congregate at a single place (Makkah holy city) at one time to perform their rituals in a manner that is unique among religions which makes this event is the largest, consistent and annually organized Mass Gathering event in the world.

Aims and Objectives: Hajj and Umrah vertical module (H&UVM), develops students competencies to be an active contributor during in the Hajj and Umrah as, health advocate, researcher, and health services providers. To investigate the experience of Pilgrims' Welfare program and strengthening the social accountability of faculty of medicine and form students' perspectives. To emphasize the UQUMED value and commitment and provides further opportunities for exposure to global health problems relevant to the teaching.

Methods and structures: Hajj and Umrah is a unique experience for UQU medical students and a very distinguish responsibility to UQU medical college. It is considered part of the Faculty social accountability. Umm-Alqura university (UQU) Medical school have a long history of attempting to train students during the Hajj seasons. However, all these initiatives and approaches were done on ad hoc basis, under the voluntary activities and carry no academic weight. The UQU reformed curriculum in collaboration with the University College London (UCL) was launched in September 2016 The curriculum introduced and made learning during Hajj season a formal and structured educational activity which carries an academic weight within the new competent based reformed curriculum of the faculty of medicine. Hajj and Umrah vertical module (H&UVM) was piloted in a big scale and a full structured formal capacity throughout the undergraduate five years, allowing spiral reinforcement of learning modality and help student develop the professional attitude, ethical understanding and decision-making skills required by the SaudiMED (Figure 1). The new reform curriculum of UQU is an outcome-based curriculum, learning process is integrated, student's centered and delivered through horizontal modules (ABCD- in each year) and 8 vertical modules throughout the five years (Figure 2 and 3).

Results: UQUMED, is the first national school of medicine in the Kingdom of Saudi Arabia to have applied a successful structured and formal Hajj and Umrah module in its undergraduate curriculum which was never available before to any medical students in the Kingdom. The module has been designed to fulfill such an important social accountability. This H&UVM direct the student's needs. Conclusions and recommendation : Any curriculum is a live document, amenable to develop with time. H&UVM, was a successful experience for students. It facilitated

the development of students' core competencies in a rich clinical learning environment. It also developed students' responsibility toward pilgrims and fulfilled the social accountability of UQU Faculty of Medicine.

Keywords: Hajj and Umrah vertical module, reform curriculum, social accountability, structured module.

Abbreviations

UQU: Umm Alqura University; H&U: Hajj and Umrah; VM: Vertical module; UQUMED: Umm Alqura University Medical school; LO: Learning Outcome; TBL: Task Based Learning; MCQ: Multiple choice Questions (single best answer); OSCE: Objective Structured Clinical Examination

Introduction and Background

The Hajj (Pilgrimage) is one of the five Pillars of Islam, an obligation to every Muslim to perform the Hajj at least once in his or her lifetime if affordable.

The Hajj (annually inspires 2-3 million pilgrims from almost 183 countries with diverse medical and social background to congregate at a single place (Makkah holy city) at one time to perform their rituals in a manner that is unique among religions which makes the Hajj one of the largest, consistent and annually organized mass gathering event in the world.

From the seventh century onward, the Hajj became a platform through which the Makkah and Madinah communities work hard and compete to serve the Muslim pilgrims from all over the world. The Saudi authorities get reinforced to control over the Makkah Holy Capital and Medina and mobilize the necessary resources for organizing the Hajj every year and improve the facilities of the holly cities. Since then Hajj seasons attract tens of civil organizations, non-Governmental organizations, charities, and voluntaries working in harmony under the control of the Ministries of Interior, Hajj & Umrah and Health.

Umm-Alqura (UQU) Medical school and other Saudi universities have a long history of attempting to train students during the Hajj seasons. However, all these initiatives and approaches were done on ad hoc basis, under the voluntary activities and carry no academic weight. Most of the previous approaches were unstructured, personal and extracurricular activities. UQU Faculty of Medicine recognized its duty to teach students to be socially responsible by involving them in activities that contribute to the happiness, health and prosperity of the community of Makkah and pilgrims welfare. The reformed UQUMED curriculum has been designed to fulfill such important social accountability [1,2].

Figure 1: Saudi MED Framework.

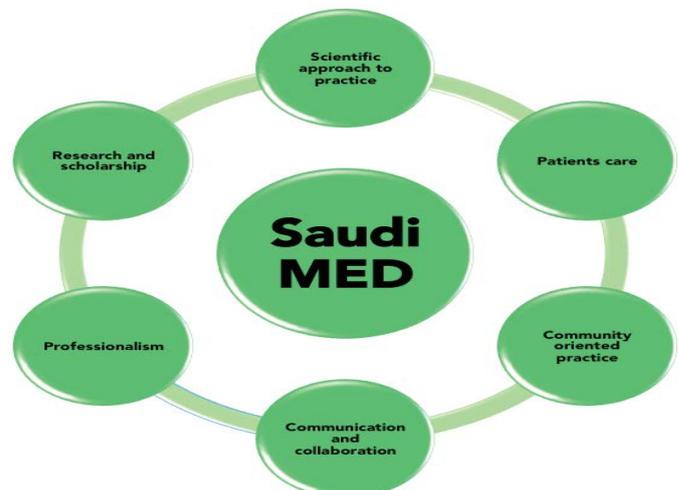


Figure 2: The UQUMED Reformed MBBS program showing the main domains and theme of each year in the new reform curriculum as well the continuity of the vertical modules.

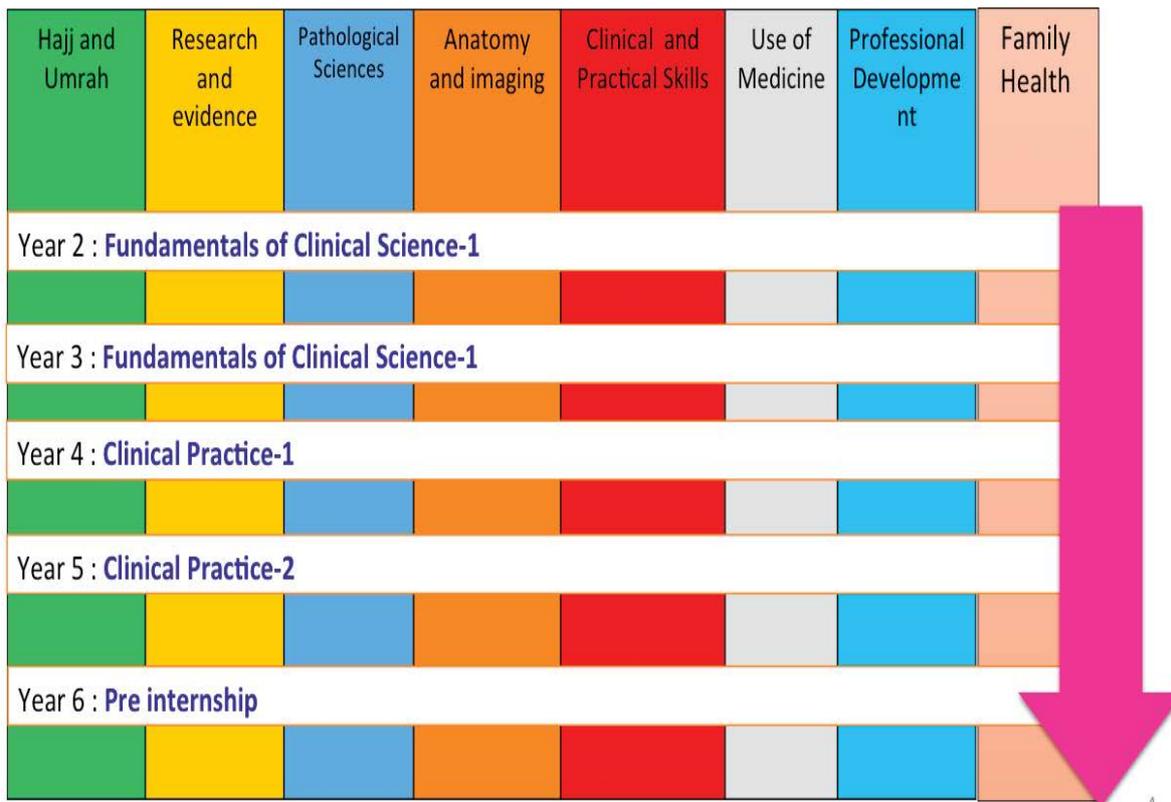


Figure 3: Demonstrate the curriculum map, where each year (2-6) showing 4 horizontal letters (A, B, C and D) which are indicate modules.

Year 2	Year 3	Year 4	Year 5	Year 6
A. Foundation of Health and Medical Practice B. Infection and Defence C. Circulation and Breathing D. Fluids, Nutrition and metabolism	A. Movement and Musculoskeletal B. Neuroscience and Behaviour C. Endocrine and Reproductive D. Genetics, Development and Cancer E. Special Topics -1	A. Clinical Foundation B. Cardiac, Respiratory Diseases C. Neurological diseases, Renal Haematology Diseases D. Gastrointestinal and Hepatobiliary diseases, General Surgery	A. Woman Health B. Child Health C. Community Medicine D. Mental Health and Dermatology	A. Musculoskeletal Health B. Emergency and Trauma C. Special Senses D. Pre-internship E. Special Topics -2 F. Special Topics -3

*The horizontal modules are delivered collaboratively by multiple academic departments within the Faculty of Medicine.

UQUMED adopting Competency based curriculum which helps students develop and demonstrate mastery over a topic, builds a culture of equity and inclusivity, and prepares students for life beyond the walls of their school. In collaboration with the UCL- was launched a new reformed curriculum in September 2016 [1].

In the last five years (2016-2020), more than 1200 male and female medical students (from the second, third, fourth, fifth and sixth year) had participated in the formal structured Hajj and Umrah vertical module(H&U-VM) activities and succeeded to keep a very bright log of such contributions which was considered part of the faculty social accountability. Students showed eagerness and enthusiasm in the field of health promotion, placement services and research activities.

Aims and Objectives of Module

The UQUMED adopted and launched this module in the reform curriculum for develops students’ competences to be:

An active contributor, health advocator, researcher, and health services providers and Haram Rescuer and Hospitals during Hajj and other mass gathering events.

Pioneers and successful national and international model of excellence on all front, health issues and safety of pilgrims during Hajj and Umrah and concept of mass gathering medicine [3].

Emphasized the role of UQU graduate doctor as health advocator, apply excellence of teamwork skills and effective communicator.

Enriched clinical experience and advanced professionalism skills.

Develops research skills and practice during the Hajj.

Provides acquisition of clinical skills in the Hajj which provides further opportunities for exposure to global health problems relevant to the teaching.

Introduces Social accountability & UQUMED value and commitment.

To focused and raise the awareness of students’ perception on Hajj experience and its education outcomes.

Module Description

UQUMED reformed MBBS is a six-year annual program, in addition to an internship year. The program consists of three phases Figure 3.

UQU Faculty of Medicine recognized it duty to teach students to be social responsible by involving them in activities that contribute to the happiness, health and prosperity of the community of Makkah. Hajj and Umrah is a unique experience for UQU medical students and a very distinguish responsibility to UQU medical school.

Hajj and Umrah is a longitudinal spiral module that extends from Year 2 until graduation. In this module learning during Hajj season is a formal and structured educational activity which carries an academic weight (Figure 2, 3). Since then the Hajj and Umrah vertical module (H&UVM.), was piloted in a big scale and a full structured formal capacity. It is covered vertically throughout the undergraduate five years, allowing spiral reinforcement of learning modalities and help student develops competences, the professional attitude, ethical understanding and decision-making skills required by the SaudiMED (Figure 1).

The new reform curriculum of UQU is an outcome-based curriculum (Product Decides the Process) or start by stating the expected learning outcomes before designing the learning activities. Learning process is integrated, student's centered and delivered through horizontal modules (ABCD- in each year) and 8 vertical modules throughout the five years (Figure 2), cognitive, clinical, professional & holistic skills learning throughout the curriculum and provides further opportunities for exposure to global health problems relevant to the teaching. The H&UVM, aimed to build knowledge and structured skills on clinical preparedness for pilgrims during this particular ritual event and to be excellence of advocate.

UQUMED, is the first national school of medicine in the Kingdom of Saudi Arabia to have applied a successful structured and formal Hajj and Umrah module in its undergraduate curriculum which was never available before to any medical students in the Kingdom.

The module has been designed to fulfill such an important social accountability. Field work during Hajj and Umrah seasons offers good & unique opportunities for the student's training on a broad range of learning experiences and skills [4,5]. H&UVM, were unique experiences for UQU medical students and very distinguish responsibility to the UQU Faculty of Medicine, also the module served as a platform to confirm the relationship and effective role of the UQU as partners to the Ministries of Hajj and health in improving and promoting health of the pilgrims [1,2]. In addition to exploring the principle of mass gathering, this module will help the student to develop the professional attitude, ethical understanding and decision-making skills required by the SaudiMed. (Figure 1). H&UVM., develop students' competencies to be an active contributor during the Hajj and Umrah as, health advocates, researchers, health services providers and pilgrim's welfare. Above and beyond, Hajj provides a golden opportunity for students to learn and appreciate the process through which the pilgrims perform their Hajj. Moreover, students have also encountered different medical, surgical and trauma patients during Hajj, which provided them with diverse opportunities to apply the Mass Gathering (MG) knowledge and skills during the Hajj [6,7].

Conclusions

However, the Hajj module offers good and unique opportunities for student's training on a broad range of learning experiences and skills. The academic staff and students are keen to participate in many Hajj and Umrah activities and they succeed to keep a very bright log of such contributions.

The H&UVM identified the direct relevance of the Hajj (pilgrimage) with the various educational opportunities for the medical students and residents and their learning to the emergency situations and mass gathering [4,8,9].

Saudi Medical Education Directives Framework "Saudi MEDs", which is approved by the Deanery of Medical Colleges and the Ministry of Education date January 2015.

The Teaching Methodologies

Interactive lectures and presentations for large groups on the subjects of demography, the health system, social factors, believes, traditional practices, culture diversity and their role in health.

Mass gathering Medicine, epidemiology, statistical principles and research methodology etc.

Small groups sessions for learning communication, group dynamics, role play and medium group workshops discussion and presentations.

Initial skills and training on required communications and clinical skills.

Practical experience in field work including data collection, interviews and research activities in Hajj & Umrah placement.

Workplace learning, practical and field work (placement during Hajj seasons-Almashaer / Umrah -Haram). Student seminars to share experiences and present their work (Groups and individuals) assignments and self and peer learning.

Contents of Hajj and Umrah Vertical Module (topics/sessions /workshop) and specific Learning Outcome: Table 1

2nd year activities

1. Introduction to Hajj & Umrah Vertical Module in UQUMED curriculum.
2. Cultural Diversity of international Pilgrims and interpersonal Makkah Community.
3. Discussion of social and international determinants of health.
4. Basic preventive measures of infectious diseases.
5. Mock drill & Triage for hypothetical disaster Activity during Hajj season (mimicking reality)
6. Heat Events and related Problems.

3rd year activities

1. Common Risk & hazards of service providers / pilgrims during Hajj season.
2. Concept and basic Principles of Mass Gathering and Hajj as a case study.
3. Hospital Caravans to ARAFAT for inpatient pilgrims with acute surgical /medical conditions and special needs. Preparation and Plan of Action (Phase I).

4th year activities

1. Discussion and reflection on Hospital Caravans to ARAFAT for inpatient pilgrims with acute surgical /medical conditions and special needs. Presentation of Students Experiences (phase II) 2- Special chronic Health (medical and surgical) problems and Health care needs for old age Pilgrims during Hajj/Umrah seasons.
2. Discussion of life style disease among pilgrimages.

5th. Year Activities

1. Describing the principles of organizing and conducting the tasks of child immunizations.
2. Identifying the profile of the Special and common health problems of children attending the Hajj and woman health specially the pregnant ones.
3. Communicating with the parents and informing them of all the needed vaccinations and potential epidemics during upcoming Hajj.
4. Plan, manage and evaluate an appropriate prescription of care according to the children health needs during Hajj.

5. Develop and evaluate health care strategies appropriate to the management of childrens' health condition emergencies during Hajj season.
6. Discuss the basic management of problems arising during Hajj among women, pregnancy, Miscarriage, vaginal bleeding and immature labor, etc.

Year 6

1. Consists of four major Mock triage mimicking reality in collaboration with the Saudi Red Crescent, Civil Defense ,Traffic Police and Force security Hospitals: includes; road traffic Accident, building collapse, food poisoning in Camps,

Table 1: List of contents (session / workshops) and learning outcomes (LO) and assessment tools of H&UVM.

	List session/workshops learning outcome	List methods of assessment for each LO
Year 2		
	List / sessions/Topics/workshops and outcome	Tools of assessment of each learning objective.
Year 2		
1	Outline and discuss the interaction between demographic, cultural diversities with health and disease within pilgrims Outline and discuss the interaction between demographic, cultural diversity with health and disease within pilgrims Understand & outline some important challenges and dilemmas related to ethnicities facing Pilgrims. Raise the awareness & creating a culture of respect of other ethnicities. Emphasize some areas that caregivers need to pay attention (language and Customs, tradition and taboos). Increasing knowledge of faith and traditions of others. Be able to use strategies to be proactive and remove barrier	MCQs single best answer, group presentation and portfolio
2	Discuss the relationship between socioeconomic determinant factors in distribution pattern of global health. To describe the Principal of Social Determinants of Health (SDH), and outline the different determinants To Discuss the effect of different SDH (socioeconomic, environmental, cultural, tradition.) on the health status and health care of individuals.	Written -single best answer (MCQs), group presentation and portfolio
3	Discuss the common infectious diseases during Hajj season and understand the most effective prevention measures. Identify the risks associated with the spread of infectious diseases during Hajj and Umrah. Understand that the Hajj and Umrah gathering may be a source of import, spread and export of infections Apply recommended infection control measures during Hajj and Umrah	OSCE e.g. Hand wash -MCQs- & portfolio
4	Basic principle of Drill/triage. (Mock) in collaboration with Saudi red crescent and civil defense. To provide an overview of mass gathering, triage concept and their applications in emergency and disaster situations. (triage 1,2,3) To orient the student with the concept of mass gathering health. Basic principles of team work and mass gathering	Written single best answer (MCQs) / portfolio
5	Heat Exhaustion and Heat Stroke Events during Hajj and Umrah Seasons Be fully aware of the problems of heat injuries and recognize clinical features of heat exhaustion and diagnosis. Discuss principles of heat exhumation and basic essential management. Operate the heat exhumation apparatus. Identify the patient with heat exhaustion and heatstroke. Explain the basic step to prevent heat illness.	Written single best answer (MCQs) / OSCE and portfolio.
Year 3		
1	Discuss the role of different sectors providing services to pilgrims with particular reference to the polices in Saudi rules and regulations relevant to Hajj and Umrah public health problems.	Written single best answer (MCQs), portfolio.
2	Demonstrate delivery of health education and health promotion sessions on selected health problems most prevalent in the pilgrims Camps.	Presentation (individuals and group) portfolio
3	Discuss the preparation, including planning for the special Hospitals inpatients trip to Arafat (Caravan) with special concern of disabled, special inpatients and special pilgrims needed.	Presentation, Portfolio and tutors report
4	Discuss the principle, assessment and analysis of hazards and risk during Hajj & Umrah Be able to make, or contribute to, good decisions regarding identification of hazards and risk affecting pilgrims and service provider during Hajj	Written single best answer (MCQs), group presentation and portfolio
<i>By the end of year 3, all students must performed at least one field and Residential Hajj/Umrah Camp placement to progress to the subsequent year -this is mandatory and prerequisite for moving to 4th., year and it is a requirement for graduation</i>		

Year 4		
1	Understand the Principle care & follow up of chronic disease selected patients within health / hospitals during Hajj and Umrah seasons. "Special needs for Special Pilgrims" -Chronic & Life style diseases- To raise the awareness of students with chronic health problems e.g. life style diseases. To differentiate between seriousness medical problems& acute on top of chronic diseases. To develop the basic of team work and communication	Tutor report & portfolio
2	Discuss the preparation, including planning for the special Hospitals inpatients trip to Arafat (Caravan) with special concern of acutely injured or diseased pilgrims.	Tutor report and portfolio
Year 5		
	Describe the principles of organizing and conducting the tasks of child immunizations To identify the profile of the Special and common health problems of children attending the Hajj. Communicate with the parents and aware of all vaccinations and potential epidemics during upcoming Hajj. Plan, manage and evaluate an appropriate prescription of care according to the children health needs during Hajj. Develop and evaluate health care strategies appropriate to the management of emergency children,s health condition during Hajj season.	Tutors report and portfolio
2	Discuss the basic management of problems arising during Hajj among women, pregnancy, Miscarriage, vaginal bleeding and immature labor, etc.	Tutor report and portfolio
Year 6		
1	Four major Mock triage mimicking reality in collaboration with Saudi Red Crescent, Civil Defense, Traffic Police and Force security Hospitals: includes; road traffic Accident, building collapse, food poisoning in Camps, Hands on training of a Mass Gathering management approach. Differentiate the various roles of the team members providing assistance during a disaster. Be familiar with the rescue chain from the incident site to the hospital. Understand the importance of patient documentation and recording. Understand and apply the triage algorithms.	Portfolio, documentation and verification of student learning activities within the Hajj & Umrah placement. Workplace assessment by tutors in the rural

Table 2: Toolbox showing the Grading yearly Scheme for each activity of module.

Assessment	Assessment Tool	Assessment due date	The proportion of Final year Assessment
1	Student profile (Attendance, Attitude & Attributes).	Throughout the module	10%
2	Portfolio documentation	At the end of year	30%
3	individual and group assignments reports		10%
4	MCQs integrated within Horizontal Modules.	In relevant horizontal modules (end of year)	20%
5	OSCE. integrated within the horizontal modules.	End of the year exam	10%
6	Workplace assessment by tutors during Hajj attachments (Task-Based Learning)	During the residential Hajj seasons activities.	20%
			100%

*Also see Table 1.

- Hands on training of a Mass Gathering management approach.
- To differentiate the various roles of the team members providing assistance during a disaster.
- To be familiar with the rescue chain from the incident site to the hospital.
- To understand the importance of patient documentation and recording.
- To understand and apply the triage algorithms.

Student Assessment

Variety of tools TABLE 2. for various types of tasks. Not all tools will be used on all occasions and each tool can perform more than one tasks.

Student profile (Attendance, Attitude & Attributes).

Portfolio documentation and verification of student learning activities within the Hajj placement.

Assessment of individual and group assignments reports.

Workplace assessment by tutors during Hajj attachments (Task-Based Learning (TBL)-How to apply skills).

MCQs within Horizontal Modules.

Objective Structured Clinical Examination (OSCE).

Disclosure

The authors report no conflicts of interest in this work.

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