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Review article

Patient Safety Policies and Practices among Selected Middle East Countries: Are We Walking on the Right Path?

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Abstract

Background: The Ministry of Health (MOH) is the foremost authority for public health services in the Middle East through a network of primary, secondary and tertiary healthcare centres. In 2017, the healthcare policy was updated for patient safety by the MOH. Human errors have always been a prime topic of debate in complex systems, especially healthcare, due to the adverse consequences leading to cultural blame; this adversely affects the patient safety policy and quality care and also leads to financial strain. As a result, patients continue to suffer harm and substandard care, and This can be avoidable through proper healthcare information and awareness among the organizations. ***Methodology:*** This review article has been written after evaluating 15 articles published in peer-reviewed journals globally. PubMed, Scopus, Springer, Research Gate, and Embase are some of the databases utilized for the literature research. The article also includes various studies that focus on patient safety culture. ***Results:*** A thorough review has been conducted, including measures taken by countries in the Middle East to enhance patient safety policy. Studies conducted across these countries provide an evidence-based understanding of the patient safety culture. ***Conclusion:*** There is a compelling need to promote patient safety culture to improve healthcare quality in the Middle East; this includes policies and measures adopted by various healthcare organizations, healthcare professionals, and those involved in medical education.

Keywords: ***Patient safety, hazards, Middle East, Arab world, Ministry of Health, World Health Organisation, patient safety pledge.***

1. Introduction

Errors in the healthcare sector have a negative impact on the well-being of patients. In healthcare, errors can be life-threatening, causing temporary or permanent harm to patients. Patient harm leads to a significant strain on health finances and a burden on patients and their loved ones. Additional resources and increased patient care is of utmost importance during unfavourable events [1]. Hence, it is necessary to take appropriate actions to prevent these errors.

The Institute of Medicine defines safety as 'freedom or protection from unwanted risk, danger, harm, injury or damage'. On the other hand, the WHO defines patient safety as the 'reduction of unwanted or unnecessary healthcare hazard to an accepted limit'. Various healthcare organizations and institutions have been concentrating on improving the patient safety culture. To practice a positive change in healthcare, it is essential to understand and follow the safety culture norms and regulations. To evaluate the prevalence and nature of untoward events in patient care, a study was conducted by Murray and his team in following countries Jordan, Kenya, Sudan, Tunisia, Yemen, Egypt, South Africa, and Morocco. The study reviewed and evaluated 15548 records, 8.2% exhibiting at least one adverse or unfavourable event. Per country, these negative events were estimated to range between 2.5%-18.4%. Among these, the avoidable events were found to be 83%. As per this study, 30% of these unfavourable events led to the death of the patients. Nineteen Palestinian hospitals reported the prevalence of one in seven patients suffering from trauma [2].

This article focuses on the various patient safety practices which are followed in the Middle East.

2. Burden and impact of unsafe healthcare

To strengthen the health systems, the world health organization "WHO" undertook a challenging initiative to evaluate the global burden of hazards in healthcare as a significant step to guide global actions. A standard metric is used by various policymakers globally, which determines the amount of suffering caused by an individual disease, and this is known as the global burden of disease (GBD) [3]. In recent times, GBD has found a vast application in examining events such as road accidents and other public health hazards. The morbidity and mortality rates associated with risks and hazards are determined by GBD, which utilizes the disability-adjusted life year (DALY) measurement. DALY measurement evaluates the overall burden of any particular disease (expressed as the number of years lost due to ill health). It is imperative to understand the concept of GBD of harmful practices in medical care, which aids in assessing the degree to which the world's population suffers due to unethical and detrimental healthcare practices. Understanding This concept will facilitate the policymakers to compare the DALYs lost due to unsafe medical care and other causes of human suffering. This allows the policymakers to prioritize the healthcare interventions

which will enhance patient care and the health of the citizens globally. An observational analysis by Jha et al.3 estimated about 43 million injuries every year due to inappropriate medical practice resulted in a loss of 23 million DALYs [1]. The estimated cost of medication errors alone is US$42 billion annually. According to an epidemiological analysis by Khan et al.4, there was a change in the percentage of DALY in Saudi Arabia between 1990 to 2017. It was estimated to be -17.03 (-33 to -1.05) due to the adverse effects of ineffective medical treatment provided. A systemic approach is required, which focuses on identifying, developing and implementing evidence-based processes for catering to adequate healthcare despite DALY and mortality rates decreasing significantly worldwide [4].

3. Patient safety culture Summit 2019

The Patient Safety Culture Summit (2019) was held in Saudi Arabia. The summit's theme was "Encouraging patient safety in low and middle-class groups in various countries". Around 1500 people, including 50 national delegates and 30 respected health ministers, attended The Fourth Global Ministerial Summit on Patient Safety in March 2019. These Summits are essential as the discussions are led by the following international delegates: i) having expertise in patient safety, ii) political decision-makers, and iii) other stakeholders who are involved in the global movement for patient safety. Thus, novel and crucial improvisations and changes are recommended in such Summits [5].

4. The Jeddah Declaration on Patient Safety

The Jeddah Declaration on Patient Safety was released by The Fourth Global Ministerial Patient Safety Summit in 2019. This was held in Jeddah, Kingdom of Saudi Arabia. The Declaration has a set of rules of an international calibre as guidelines to address the globally prevalent patient safety issues with a strong emphasis on low- and middle-income countries (LMICs). The Declaration summarises 11 crucial strategies that can help strengthen patient safety in the Middle East [5].

Table 1: Strategies aiding in strengthening patient safety culture for Low- and Middle-Income Countries [5]

Sr. No	Strategies helping in strengthening patient safety culture
1.	Promoting Patient Safety in Low- and Middle-Income Countries (LMIC) by Patient Safety Outreach initiative.
2.	Utilizing Digital Health to support Patient Safety across the globe by launching collaborative virtual platforms
3.	Promoting Patient Empowerment & Community Engagement for Patient Safety by reinforcing Patient Safety Root Cause Analysis
4.	Leveraging the ICD (International Classification of Diseases) through the creation of ICAE (International Classification of Adverse Events) for Patient Safety in-order to standardize the taxonomy of adverse events
5.	Implementing and sustaining National Reporting & Learning Systems for Patient Safety at various institutional, local, national and global levels to promote standardization through the presence of unified Taxonomy for Adverse Events
6.	Investing in Physical and Psychological knowledge and safety in healthcare workers as the drivers for Patient Safety by spreading education and awareness among medical and para-medical staff, also supporting the victims by relevant departments within healthcare facilities.
7.	Encouraging countries to learn from Best Practices in Safety from other industries such as Aviation, Nuclear, Oil / Gas, Aerospace, and Auto. Therefore, the Saudi Patient Safety Center initiative focuses on launching a Safety Collaborative including safety experts from various industries for collective safety improvement in all sectors.
8.	Promoting Medication Safety in Community Pharmacies to improve medication safety and strengthen the efforts of patient empowerment and community engagement.
9.	Considering Medical Devices and Human interface as crucial factors for Patient Safety by adopting human factors engineering (HFE) strategies to introduce resilience and minimize medical devices related adverse events.
10.	Enforcing Infection Prevention Control (IPC) & Antimicrobial Resistance (AMR) strategies for Patient Safety by promoting antimicrobial stewardship and hand hygiene practices.
11.	Reducing the 2nd Translational Gap by supporting implementation and sustainable scale-up of patient safety interventions of known efficacy/effectiveness at the national and global levels. Thus, maximizing the added value of the expansive evidence base on the patient.

5. Change in the culture of patient safety in the Middle East

Cultural transformation is a shift which takes place throughout an organization or in individual work teams. Leadership quality and workforce skills must be improved to enhance the desired work atmosphere or culture [6,7]. However; safety culture is defined as 'the capability of an organization or individual department in healthcare, dealing with risks and hazards, to avoid any damage. There have to be appropriate patient safety norms followed by the organization to encourage better information disclosure and problem-solving agendas. Healthcare organizations and setups in the Arab continent should opt for an appropriate work culture which acknowledges errors effectively to learn from those errors and improve patient care. In other words, employees should be given the freedom to acknowledge errors. Positive work culture will enhance good patient safety. This will encourage honesty and foster learning by balancing the accountability between the organization and the individual to achieve better care [8,9].

6. Patient safety in Lebanon and Jordan

Lebanon and Jordan have yet to implement any commitment towards improving the quality and efficiency of patient safety. The patient safety national policies and reforms have also yet to be demonstrated at the operational level. The Ministry of Public Health (MOPH) has taken control in Lebanon to provide quality care and patient safety measures. But there is a need for a unit to evaluate quality improvement and a quality directorate which would look after all the quality improvement projects. The Jordanian's 2025 Vision, the High Council's National Strategy for Health Sector (2015-2019), and the MOHs Strategic Plan (2013-2017) have incorporated the concept of quality healthcare. In Jordan, this concept has been gaining immense popularity among different stakeholders. Both these countries need to gain knowledge and understanding about quality improvement and policies regarding patient safety. It effectively defines the scope for quality care and the government's objectives to assure patient safety. It aids in determining the roles and responsibilities and identifying the incentives and disincentives towards quality improvement and patient safety initiatives [10].

7. Patient safety in Saudi Arabia

There have been many loopholes and weaknesses in the patient safety culture in the healthcare systems in Saudi Arabia. Many factors have been obstacles to patient safety, such as increased workload, poor leadership quality, blame culture, inadequate staffing and improper communication. Due to the fear of being punished, many unwanted incidents have been underreported. Healthcare organizations in Saudi Arabia have been putting in a lot of effort to improve the calibre of healthcare services to enhance patient safety, mainly due to the immense media attention, public pressure and increased problems with medical errors. Assessment of patient safety using the Agency for Healthcare Research and Quality (AHRQ) tool should be conducted every two to three years; The Central Board also highlighted this for the Accreditation of Healthcare Institutions (CBAHI) in Saudi Arabia. Hence, patient safety assessments should be recommended on an annual basis. A study conducted in Riyadh confirmed teamwork and organizational setup were the areas of strength, whereas staffing, communication and identification of errors were areas of weakness. The MOH s Strategic Plan (2013-2017) has been vital in setting up patient safety policies to enhance quality care [11-13].

8. Contribution of UAE healthcare organizations to patient safety

It is necessary to understand the values and beliefs of patient safety to achieve efficient patient safety norms in a healthcare organization [14] in order to create a positive patient safety climate in an organization, the following criteria must be fulfilled: executive commitment, enthusiastic resources, good communication, and shared trust by the members [15]. Various healthcare organizations such as World Health Organisation (WHO), the Joint Commission International (JCI), National Patient Safety Foundation (NPSF) and the Institute for Health Care Improvement (IHI) are being encouraged to develop an efficient patient safety culture as an effective strategy. A national patient safety pledge has been introduced by Dubai HealthCare City (DHCC) in association with the US-based Patient Safety Movement Foundation (PSMF). This is launched to establish the patient safety culture by healthcare organizations and professionals in the UAE. The main aim of this pledge was to attain zero preventable patient deaths in hospitals by 2020. The DHCC plays a vital role in influencing patient safety in the UAE. A cooperation agreement has been signed and initiated between the DHCC and PSMF to launch the national patient safety pledge in 2019. It aims to prevent harm to patients during treatment and care [16].

The national patient safety pledge promises the following agenda to [14]

- Commit: The organization will be recorded with the global Patient Safety Movement Foundation once the pledge is taken.
- Act: Develop solutions by adopting Actionable Patient Safety Solutions after determining the challenges faced due to patient safety in the clinical environment.
- Share: Practice models that are applicable according to the zones are presented or shared at the Dubai HealthCare City Best Practice Conference 2019 in association with PSFM.

PSMF has developed free, evidence-based solutions known as Actionable Patient Safety Solutions (APSS). This was introduced to address the 31 leading obstacles to patient safety, which has proven to prevent various hospital errors and enhance patient safety. In 2017, 4,500 hospitals across 44 countries had already adopted the APSS, thereby saving 81,533 lives.

9. Initiatives in the Middle East for patient safety

9.1. Patient Safety Friendly Hospital Initiative (PSFHI) standards - this is an initiative backed by WHO, which helps to support organizations in various countries to begin a global patient safety plan. This was launched by the Eastern Mediterranean Regional Office of the WHO in 2007 to enhance patient safety levels in different zones [17]. MOH in seven developing countries, i.e. Egypt, Morocco, Pakistan, Yemen, Tunisia, Jordan, and Sudan, have been evaluated using the PSFHI. At least one hospital per country was assessed against the PSFHI standards. At the end of the study, the results yielded that none of the included hospitals achieved a baseline score of at least 50%.

9.2. Hospital Survey on Patient Safety Culture (HSPSC) is a widely used, certified tool for evaluating patient safety. The Agency for Healthcare Research and Quality (AHRQ), USA, is responsible for developing it. As shown in Table 1, the tool comprises 12 dimensions. Each dimension consists of either 3 or 4 survey items. This makes up to 42 items in total. The survey applies the Likert Response Scale, which is based on the level of agreement ('Strongly Disagree' to 'Strongly Agree') or based on the prevalence ('Never' to 'Always').

Table 2: 12-dimension Scale for Hospital Survey on Patient Safety Culture [17]

A unit-level aspect of safety culture
Supervisor/Manager Expectations & Actions Promoting Safety (4 items)
Organisational Learning - Continuous Improvement (3 items)
Teamwork Within Units (4 items)
Communication Openness (3 items)
Feedback and Communication About Error (3 items)
Non-punitive Response to Error (3 items)
Staffing (4 items)
Hospital-level aspects of safety culture
Hospital Management Support for Patient Safety (3 items)
Teamwork Across Hospital Units (4 items)
Hospital Handoffs and Transitions (4 items)
Outcome variables
Overall Perceptions of Safety (4 items)
Frequency of Event Reporting (3 items)

9.3. Building a digital safety content

A study was conducted by Al Tuwaijri, where 122 health websites in Arab countries were evaluated for providing exclusive health information, and only five of these websites fulfilled the criteria of delivering authentic health information to the readers [18]. Hence to overcome this drawback, many healthcare organizations in Saudi Arabia began to invest in the publication of internet-based health information. The King Abdullah Bin Abdul Aziz Arabic

Encyclopaedia (KAAHE) is one of the most significant initiatives on the web, which is currently under development. The Saudi National Guard Health Affairs is leading this initiative with the sole purpose of providing authentic health information to the Arab world. This initiative is completely unique when compared to other local initiatives, which focus only on a specific population or disease group4. KAAHE aims to extend its availability to the Arab-speaking world, which consists of 22 countries with a population of approximately 300 million citizens. The KAAHE project is expected to be a reliable source of information in healthcare, which is thoughtful towards the Arab and Muslim populations within the zones. Health literacy and patient safety would improve through KAAHE by providing reliable and authentic health information resources. The estimated internet usage is considerably low among Arab countries. However, it is surprisingly high in the UAE (70%) and the weakest in Iraq (4%). So, the focus is inclined towards spreading awareness regarding the use of digital platforms and providing authentic health information such as KAAHE.

9.4. Developing Electronic Medical Records (EMR)

EMR is considered the backbone which facilitates the incorporation of various tools such as telemedicine, electronic prescription, digital imagery, test ordering, and decision support systems, which improves evidence-based clinical decisions [17]. Such evidence-based clinical applications enable an efficient and digitally intelligent healthcare system. In a study by El-Hassan et al. an Electronic Medical Record Adoption Model (EMRAM) was assessed through the EMRAM score in UAE. It was observed that between 2011 and 2016, the number of participating hospitals increased from 23 to 33. In 2016, it was noted that Dubai's median EMRAM score was the highest (2.5), and Thailand's was the lowest (0.5). Other scores were reported from Australia, New Zealand, Malaysia and the Philippines, which were 2.2, 2.3, 0.06 and 0.06, respectively. The EMR execution was introduced to enhance healthcare delivery, quality care and patient safety [19].

10. Conclusion

There is a need to promote patient safety culture as a strategy to improve the quality of healthcare provided to patients in the Middle East. This includes policies and measures adopted by various healthcare organizations, healthcare professionals, and those involved in medical education.

List of abbreviations

DALY: disability-adjusted life year
GBD: Global burden of disease
LMICs: Low- and middle-income countries
ICD: International Classification of Diseases
ICAE: International Classification of Adverse Events
MOPH: Ministry of Public Health
CBAHI: Central Board for the Accreditation of Healthcare Institutions
JCI: Joint Commission International
NPSF: National Patient Safety Foundation
IHI: Institute for Health Care Improvement
DHCC: Dubai HealthCare City
PSMF: Patient Safety Movement Foundation
APSS: Actionable Patient Safety Solutions
PSFHI: Patient Safety Friendly Hospital Initiative
HSPSC: Hospital Survey on Patient Safety Culture
KAAHE: King Abdullah Bin Abdul Aziz Arabic Encyclopaedia

Conflict of interest

The author declares no conflict of interest.

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References

[1] Slawomirski L., A. Auraaen, N. Klazinga, "The economics of patient safety: Strengthening a value-based approach to reducing patient harm at national level", OECD Health Working Papers, Pages 67, No. 96. 2017. DOI: https://doi.org/10.1787/5a9858cd-en.

[2] Murray CJ, Lopez AD. “Mortality by cause for eight regions of the world: Global Burden of Disease Study”. Lancet. 1997 May 3; Volume 349(9061): Pages 1269-76. doi: 10.1016/S0140-6736(96)07493-4. PMID: 9142060.

[3] Jha AK, Larizgoitia I, Audera-Lopez C, Prasopa-Plaizier N, Waters H, Bates DW. The global burden of unsafe medical care: analytic modelling of observational studies. BMJ Qual Saf. 2013 Oct;22(10):809-15. doi: 10.1136/bmjqs-2012-001748. Epub 2013 Sep 18. PMID: 24048616.

[4] Khan MA, Soteriades ES, King J, Govender R, Hashim MJ, Masood-Husain S, Javaid SF, Debaib Mohammed Saeed Al Darei S, Dahi Al Sheryani S, Nauman J. “Global Trends and Forecast of the Burden of Adverse Effects of Medical Treatment: Epidemiological Analysis Based on the Global Burden of Disease Study”. Cureus. 2020 Mar 12; Volume 12(3): e7250. doi: 10.7759/cureus.7250. PMID: 32195068; PMCID: PMC7071843.

[5] Al Rabiah T. “Jeddah Declaration on Patient Safety. Fourth Global Ministerial Summit on Patient Safety, Jeddah, Kingdom of Saudi Arabia” [Internet]. Spsc.gov.sa. 2019 [cited 23 December 2022]. Available from: https://spsc.gov.sa/English/Summit/Documents/%D8%A7%D9%84%D9%85%D9%88%D9%82%D8%B9.pdf

[6] Reason J. “Achieving a safe culture: theory and practice”. Work & Stress. 1998 Jul 1; Volume 12(3): Page 293-306. DOI: https://doi.org/10.1080/02678379808256868

[7] James M. “Reason Safety paradoxes and safety culture”. Injury Control and Safety Promotion. (2000), Volume 7:1, Page 3-14, doi: 10.1076/1566-0974(200003)7:1;1-V; FT003

[8] Waring JJ. “Beyond blame: cultural barriers to medical incident reporting”. Soc Sci Med. 2005 May; Volume 60(9): Pages 1927-35. doi: 10.1016/j.socscimed.2004.08.055. PMID: 15743644.

[9] Elmontsri M, Almashrafi A, Banarsee R, Majeed A. “Status of patient safety culture in Arab countries: a systematic review”. BMJ Open. 2017 Feb 24; Volume 7(2): e013487. doi: 10.1136/bmjopen-2016-013487. PMID: 28237956; PMCID: PMC5337746.

[10] El-Jardali F, Fadlallah R. “A review of national policies and strategies to improve quality of health care and patient safety: a case study from Lebanon and Jordan”. BMC Health Serv Res. 2017 Aug 16; Volume 17(1): Page 568. doi: 10.1186/s12913-017-2528-1. PMID: 28814341; PMCID: PMC5559834.

[11] Albalawi A, Kidd L, Cowey E. “Factors contributing to the patient safety culture in Saudi Arabia: a systematic review”. BMJ Open. 2020; Volume 10(10): e037875. Published 2020 Oct 14. doi:10.1136/bmjopen-2020-037875

[12] Alahmadi HA. “Assessment of patient safety culture in Saudi Arabian hospitals”. Qual Saf Health Care. 2010 Oct; Volume 19(5): e17. doi: 10.1136/qshc.2009.033258. Epub 2010 Apr 29. PMID: 20430929.

[13] El-Jardali F, Sheikh F, Garcia NA, Jamal D, Abdo A. “Patient safety culture in a large teaching hospital in

Riyadh: baseline assessment, comparative analysis and opportunities for improvement". BMC Health Serv Res. 2014; Volume 14:122. Published 2014 Mar 12. doi:10.1186/1472-6963-14-122

[14] "Influencing UAE patient safety." | IMTJ [Internet]. Imtj.com. 2020 [cited 23 December 2022]. Available from: https://www.imtj.com/news/influencing-uae-patient-safety/

[15] Sorra J, Famolaro T, Dyer N. "Hospital Survey on Patient Safety Culture: 2011 User Comparative Database Report". AHRQ Publication No. 11-0030. Agency for Healthcare Research and Quality, Rockville, MD, 2011.

[16] Hellings J, Schrooten W, Klazinga N, Vleugels A. "Challenging patient safety culture: survey results". Int J Health Care Qual Assur. 2007; Volume 20(7): Pages-620-32. doi: 10.1108/09526860710822752. PMID: 18030963.

[17] Househ MS, Aldosari B, Alanazi A, Kushniruk AW, Borycki EM. "Big Data, Big Problems: A Healthcare Perspective". Stud Health Technol Inform. 2017; Volume 238: Pages-36-39. PMID: 28679881.

[18] Altuwaijri MM. "Empowering patients and health professionals in the Arab world: the King Abdullah bin Abdulaziz" Arabic Health Encyclopedia on the Web. Yearb Med Inform. 2011; Volume 6: Pages-125-30. PMID: 21938337.

[19] El-Hassan O, Sharif A, Al Redha M, Blair I. "Tracking the Implementation of Electronic Medical Records in Dubai, United Arab Emirates, Using an Adoption Benchmarking Tool". Stud Health Technol Inform. 2017; Volume 245: Pages-64-68. PMID: 29295053.