OPEN ACCESS

A Descriptive Study Of Beneficiary Satisfaction Levels With Saudi Red Crescent Services In Major Cities

Mohmmd Abrahim Ali Moafa¹, Maymun Saeid Muhamad Alzahrani², Majid Abdallah Maeid Al-Ghamidi³, Abdullah Saed Saleem Al-Ghamidi⁴, Fayez Ali Alshehri⁵, Faisal Dhaifallah Ahmed Alzahrani⁶, Aedh Mohammed Alghamdi⁷

¹⁻⁷Technician-Emergency Medical Services, Saudi Red Crescent Authority, Al Baha, Saudi Arabia.

Abstract

The study aimed to assess the level of beneficiary satisfaction with the Saudi Red Crescent services in the major cities of the Kingdom by analyzing the quality of field performance and ambulance response. To achieve this objective, the study focused on evaluating several essential dimensions related to the efficiency and effectiveness of prehospital emergency care. These dimensions included the speed of ambulance response, the level of preparedness of ambulance teams, the quality of communication and coordination between emergency dispatch centers and field units, and the overall satisfaction of beneficiaries with the professionalism, empathy, and behavior of paramedics while providing emergency care. The study also explored the adequacy of medical equipment available inside ambulances and its impact on the perceived quality of service. Furthermore, it investigated the extent to which geographical factors—such as the size of major cities, traffic congestion, and population density—affect the response time and service delivery. Demographic factors, including age, education level, and previous experience with emergency services, were analyzed to understand their influence on beneficiary satisfaction levels. Additionally, the research examined public awareness regarding the correct procedures for requesting emergency assistance, the appropriate use of emergency numbers, and the level of community understanding of the Saudi Red Crescent's role in providing prehospital care. By integrating these elements, the study provides a comprehensive understanding of the strengths and weaknesses of emergency medical services in major urban centers. The findings aim to support decision-makers in enhancing response efficiency, improving beneficiary satisfaction, and developing targeted awareness programs that promote optimal use of emergency services.

Keywords Beneficiary Satisfaction – Saudi Red Crescent Authority – Emergency Medical Services – Response Time – Service Quality – Major Cities – Descriptive Study – Prehospital Care – Community Perceptions – Healthcare Accessibility.

- Introduction

The Saudi Red Crescent Authority is a key component of the healthcare and emergency system in the Kingdom of Saudi Arabia. It undertakes vital tasks including rapid response to accidents provision of emergency ambulance services, medical transport, and support during disasters and crises. The success and efficiency of these services are directly linked to the safety and lives of individuals, making performance evaluation of paramount importance. This importance is amplified in major cities characterized by high population density, traffic congestion, and a high frequency of accidents requiring immediate ambulance intervention.

Therefore, the quality of services provided in these urban environments must be at the highest levels to ensure the effectiveness of humanitarian and medical responses. Beneficiary satisfaction is the most

accurate indicator for evaluating service quality and measuring its alignment with citizens' needs and expectations. Despite the Authority's ongoing efforts to develop its infrastructure and train its staff, there remains a need for a comprehensive and in-depth descriptive study to objectively assess the level of this ,satisfaction in major cities. This study aims to identify strengths and weaknesses in various service aspects such as the speed of ambulance team arrival, the efficiency of field medical personnel, the quality of care provided during transport, and the professional handling of cases. It seeks to answer the following questions What is the actual level of beneficiary satisfaction with the Saudi Red Crescent services in major cities, and what are the most influential factors in this level5

The contribution of the study is that it provides a reliable database and information for decision-makers in the Red Crescent Authority, which can be used to develop sustainable improvement plans and programs aimed at improving the services provided and raising their performance to meet the best international standards in the field of emergency response, in line with the Kingdom's 2030 goals and vision to enhance the safety and quality of life of citizens and residents6

Discussion

- The concept of ambulance and emergency services

Emergency and ambulance services are defined as an integrated set of rapid and crucial medical interventions provided to patients or injured persons outside the hospital setting, i.e., at the scene of the accident or at home. The primary goal of these services is to preserve the life of the beneficiary, stabilize their condition, and prevent its deterioration until they reach the final healthcare facility. This concept includes immediate response to emergency calls, dispatching trained teams to the location, providing advanced first aid such as cardiopulmonary resuscitation (CPR), controlling bleeding, immobilizing fractures, administering emergency medications, and preparing the patient for safe transport. To ensure the provision of an effective emergency service, this system relies on three main interconnected components which can be explained as follows: starting with the communication and reporting system, such as the unified emergency number, which ensures the rapid receipt of the report and its location; followed by the field response, which consists of trained paramedic teams, whether emergency technicians or advanced paramedics, equipped with medically equipped ambulances to reach the beneficiary and then care during transport and safe transport, where the patient is transferred to the hospital's emergency department while .continuing to monitor their vital signs and providing the necessary medical care throughout the journey The efficiency of these services requires the integration of modern technology, continuous training of personnel, and the availability of advanced medical equipment8,6

Ambulance service often refers specifically to the process of transport and the care provided during transport by ambulance The concept of emergency services is broader, encompassing the entire response system, including disaster management planning, hospital emergency department equipment, and fire and police rescue services that may precede or complement the role of paramedics. The common ultimate goal is to reduce mortality and disability rates resulting from accidents, injuries, and sudden illnesses that require urgent and rapid intervention. This makes it a vital humanitarian and health service that directly impacts the quality of life and health security of the community8,1

Therefore, ambulance and emergency services are usually managed by specialized national institutions such as the Saudi Red Crescent Authority or through licensed governmental or private sectors. They are subject to strict health regulations and oversight to ensure adherence to quality and professional standards. The role of these services is not limited to the medical aspect only, but extends to include providing psychological and social support to the injured and their families during moments of crisis, as well as raising community awareness on how to deal with emergency situations and providing basic first aid. Thus these services operate as an essential part of the comprehensive health security system that contributes to building a more resilient and responsive society to unexpected events 10,5

WWW.DIABETICSTUDIES.ORG 582

Levels of quality of health and ambulance services

The quality levels of health and ambulance services are explained through the internationally followed .framework, which usually includes three main levels: structural quality, process quality, and results quality These levels can be explained as follows 5,11

Structural quality focuses on the physical and organizational resources and environment in which the service is provided. It represents the foundation and capacity of the system to deliver care and emergency services. Structural quality includes human resources in terms of The efficiency and qualification of paramedics, doctors, and operational staff, and the number of available personnel compared to the need equipment and supplies, through the modernity and availability of ambulances, communication technologies, and the availability of advanced medical devices inside ambulances such as defibrillators and vital signs monitors, as well as the organizational environment, the existence of clear and unified work policies and procedures, and the availability of sufficient funding and official licenses and accreditations for the authority The strength of this level determines the possibility of providing a good service. The second level is the quality of the process, and this level focuses on how the service is provided and the interaction between the patient or injured person and the service provider, the paramedic. It measures the extent of adherence to correct and effective medical standards and steps during intervention in ambulance services. The quality of the process includes important indicators such as the speed of response, which is the time between receiving the report and the arrival of the ambulance team at the site. It is a vital indicator of quality and adherence to medical procedures through the extent to which paramedics apply the approved medical protocols correctly, such as assessing the condition quickly and accurately, dealing with the airway and managing shock. Also, the quality of communication with beneficiaries and their families and the professional and humane treatment that alleviates their anxiety. This level clarifies and determines the way the service is provided and the extent to which it conforms to standards 10,6

The third level is the quality of outcomes. This level is considered the most important, as it measures the actual impact and final outcome of the service provided on the patient's health and well-being. Since the goal of all interventions is to improve the patient's condition, outcomes are the true measure of the system's success. Outcome quality includes clinical outcomes such as reduced mortality or disability rates resulting from specific incidents after receiving emergency care, or improved vital signs before hospital arrival. It also includes patient satisfaction, which measures the extent to which the service meets the patient's expectations and needs, and the contribution of emergency care in reducing hospital stay length or accelerating overall recovery Thus, we find that the three levels are interconnected: strong structural quality supports excellent process quality, ultimately leading to high-quality outcomes 7,5

- The concept of beneficiary satisfaction and its dimensions

Beneficiary satisfaction is defined as a positive emotional and psychological state that arises when a beneficiary evaluates the service or product they received and compares it to their prior expectations. This means that satisfaction is achieved when the actual performance of the service exceeds or at least meets the beneficiary's expectations. In humanitarian and health services, such as those provided by the Red Crescent, satisfaction is not limited to the technical quality of the service or the medical outcome, but also includes functional or interactive quality such as the method of service delivery, interaction, and empathy To accurately determine the level of satisfaction, researchers rely on measuring a set of interrelated dimensions that constitute the beneficiary's experience. The most widely used model in this field is the .Service Quality Model, which is defined by five key dimensions of quality that directly affect satisfaction These can be explained as follows: Reliability, which is the service provider's ability to deliver the service accurately and reliably, such as the ambulance arriving on time Responsiveness, which is the service ;provider's willingness and readiness to assist beneficiaries and provide prompt and immediate service Assurance, which is the knowledge and courteousness of staff and their ability to instill confidence and security in the beneficiary, such as the competence and appearance of paramedics; Empathy, which is the individual and personalized attention the service provider gives to the beneficiary, treating them kindly and

understandingly; and finally... Materials, which are the physical appearance of facilities equipment, staff and means of communication such as the cleanliness and equipping of ambulances, as these dimensions can be viewed as elements for evaluating the performance of the Saudi Red Crescent Authority 8,10

Therefore, in ambulance and emergency services, beneficiary satisfaction is not merely a marketing indicator, but a crucial quality indicator A satisfied patient is often more cooperative with the ambulance crew, which facilitates the provision of care. Measuring satisfaction also enables the organization to identify unseen gaps such as poor communication or lack of empathy. These non-medical aspects may negatively affect the patient's psychological state Therefore, understanding and measuring these dimensions enables the Saudi Red Crescent Authority to develop its strategies not only to save lives but also to provide a humane experience characterized by respect, trust, and speed, which enhances public confidence in the health system6,9

- Models for measuring beneficiary satisfaction in healthcare services

There are three most common models for measuring beneficiary satisfaction in health services which can be explained as follows

The expectations-based model is the broadest and most widely used theoretical framework in patient satisfaction studies, including healthcare services. It simply states that patient satisfaction is the result of a comparison made by the patient between their prior expectations of the service and the actual performance ,they perceive after receiving it. Satisfaction is achieved when the actual performance exceeds expectations neutrality is achieved when the actual performance matches expectations, and dissatisfaction occurs when the actual performance falls below expectations. In the healthcare system, this evaluation means whether the waiting time, the medical team's interaction, or the clinical outcome met or exceeded the patient's expectations based on their previous experiences or the information provided. The second model is the Dimensions of Service Quality (DQS) model5,1

This is a more advanced applied model based on the concept of expectations, but it breaks down quality into five measurable dimensions reliability, responsiveness, assurance, empathy, and tangibles. This model is distinguished by its focus on the gaps between patients' expectations in each of the five dimensions and their actual perception of performance in those same dimensions. The smaller the gap—meaning the performance exceeded expectations—the higher the satisfaction. The model provides a structured questionnaire consisting of two sets of statements, typically 22 in total: one to measure expectations and the other to measure perceived performance, making it a quantitative measurement tool. Very common in ambulance services 3,9

The third model is the service performance model. This model adopts a simpler approach assuming that perceived service performance alone is the most important element in determining satisfaction, without the need to measure prior expectations. It posits that beneficiaries judge quality solely based on their actual experience. In addition to general models, there are specific healthcare service models, such as the HCAHPS index in the United States, which focuses on specific areas related to care, such as communication between doctors and nurses, pain management, hygiene, and quality of care upon discharge. All these specific models share the same fundamental objective He is Converting user feedback into analyzable data to improve quality2,9

- Factors affecting beneficiary satisfaction with ambulance services

Response time is the most important and influential factor in customer satisfaction with ambulance services. In emergencies, every minute counts and is considered an indicator of quality and trust. These factors are divided into the speed of receiving and transmitting the report Through the extent The efficiency of the operations room staff in receiving the call, accurately determining the location, quickly dispatching the ambulance, and also the speed of arrival at the location This refers to the actual time it takes for an ambulance to reach the patient's location. It is affected by external factors such as traffic congestion and

internal factors such as the distribution of ambulance stations. It also includes the time it takes for the ambulance team to begin providing first aid and stabilizing the patient. Any delay in any of these stages is a major source of dissatisfaction and translates directly into a lack of trust and responsiveness 2,11

There are also factors related to the quality of the process, including functional or interactive quality of service. These are directly related to assurance and empathy, and they determine how the patient felt while interacting with the team, encompassing professionalism and technical competence through The extent to which the beneficiary perceives the paramedics' competence, their skills in handling the case, their knowledge of procedures, and their ability to use equipment, all contribute to reassurance and confidence in addition to the quality of communication and empathy through The ability of paramedics to communicate effectively, provide clear explanations of the situation and procedures, and deal kindly, respectfully, and with understanding of the fear and anxiety experienced by the patient and their family Effective human and professional handling can partially compensate for a slight delay in arrival, but poor handling negates the value of any speed in performance 12

There are also factors related to resources and outcomes, which focus on structural quality and service results. These cover aspects of equipment and tools, as well as the quality of outcomes They include equipment readiness, such as the condition of the ambulance in terms of cleanliness, modernity, and lack of odors, and the quality and safety of the medical devices and equipment used. Beneficiaries link the quality of equipment to the overall quality of service and clinical outcomes. Although difficult to measure in real time, the perception of immediate improvement in the patient's condition, its stabilization, or safe transport to the hospital without complications significantly impacts overall satisfaction, in addition to the quality of the transport process itself The smoothness of the transfer process, choosing the appropriate route, and prior coordination with the receiving hospital to ensure there are no delays or problems when handing over the case in the emergency department. Thus, we find that all factors confirm that satisfaction is formed from a combination of speed, efficiency, equipment, and human compassion5,8

- Performance indicators in the ambulance and emergency system

Time indicators are the most important and sensitive in ambulance and emergency services because they measure the efficiency of response and operations. Response time is the most important indicator and is measured from the moment the report is received until the first ambulance unit arrives at the scene of the accident. Dispatch time is the period from the moment the report is received until the ambulance is dispatched. This time must be very short, usually less than a minute, in addition to the time the ambulance team spends at the scene of the accident to provide initial care and stabilize the patient's condition. This time must be effective and concise, especially in cases of critical injuries. Clinical indicators and results focus on the quality of medical care provided and its direct impact on the patient's condition. The quality of care at the scene is measured by the extent of adherence to approved medical protocols, such as the application of cardiopulmonary resuscitation procedures, the administration of emergency medications and the control of bleeding. Survival rates are measured by the percentage of patients who survived certain critical medical conditions after receiving ambulance care, such as the survival rate from out-of-hospital cardiac arrest. They also assess the effectiveness of the paramedic's intervention in alleviating the patient's main symptoms, such as reducing the level of pain reported before and during transport, and measure the percentage of cases that were transported safely without unexpected deterioration or complications during transport 7,1

In addition to these indicators, there are operational and satisfaction indicators, which measure overall operational efficiency and resource utilization, as well as measuring beneficiary interaction. These integrate structural quality and process quality by measuring the readiness rate of ambulances and operational equipment at any time, the availability rate of medicines and supplies, the number of cases handled compared to the number of available ambulances or working hours, the percentage of employees who have completed mandatory and continuous training, their degree of qualifications and specializations, and beneficiary satisfaction, which is the indicator that measures the overall beneficiary experience using

satisfaction questionnaires It includes an evaluation of humane treatment, professionalism, and the quality of ambulances Thus, all these indicators provide a comprehensive picture of the health of the ambulance and emergency system and its ability to achieve its goals efficiently and effectively 1.12

- Standards for improving the quality of ambulance services

The standards of operational efficiency and speed, which focus on improving operational efficiency and adhering to international time standards, are the cornerstones of enhancing ambulance services. This is achieved by reducing response time, the most important criterion. Improvements are made through enhanced automated dispatch management strategically deploying ambulances to locations near densely populated and high-accident areas, utilizing advanced positioning technologies, and improving call management by training operations room staff to quickly and accurately assess the severity of cases to ensure proper classification and dispatch of the appropriate resource as quickly as possible. This also includes ensuring immediate and effective coordination with receiving hospitals to minimize patient transfer times in the emergency department, allowing ambulance crews to return to duty quickly. In addition, clinical excellence and training standards are crucial focusing on the technical quality of care provided and the qualification level of personnel. This ensures a safe and effective service. These standards include advanced and continuous training to ensure all paramedics and ambulance staff undergo regular and intensive training programs on the latest international clinical protocols and guidelines, such as trauma and CPR protocols. International certification standards are adopted, and standardized medical guidelines are developed and implemented for all common emergency cases to ensure consistency in the quality of care provided between different teams. Furthermore, the latest diagnostic and therapeutic equipment is provided. Inside ambulances, such as advanced monitoring and breathing equipment, and ensuring their regular maintenance and calibration 12

In addition to the previous standards, there are standards of beneficiary-centered care and continuous improvement, which focus on the human aspect and empathy By setting clear behavioral standards for staff that focus on respect, kindness, effective communication, and providing psychological support to the beneficiary and their family, as this directly affects satisfaction, and by creating regular mechanisms for collecting beneficiary satisfaction data such as questionnaires and comments and analyzing them periodically to identify weaknesses and use the results of this measurement as a tool to guide improvement efforts11

- The relationship between service quality and customer satisfaction

The relationship between service quality and customer satisfaction is one of cause and effect where service quality represents an objective or perceived measure of excellence or superiority in service and is the independent and influential factor, while customer satisfaction is the effect It is the emotional response or affective evaluation generated by the beneficiary, and it is the dependent and resulting factor. When the Saudi Red Crescent provides high-quality service in terms of response speed, staff efficiency, and equipment cleanliness, this positive and reliable performance leads the beneficiary to feel satisfied. Thus we find that the higher the quality of service provided, the higher the level of satisfaction. The relationship between service quality and beneficiary satisfaction is mediated by the perception and evaluation process carried out by the beneficiary. Service quality is measured through five dimensions, which are compared to rior expectations. If the beneficiary realizes that the actual performance of the Red Crescent represented by the quality of service, has exceeded their expectations, a strong feeling of satisfaction arises However if the beneficiary realizes that the service was of lower quality than expected, dissatisfaction arises In ambulance services specifically, the rapid recognition of the paramedics' competence, which represents the quality of assurance and rapid access, is the quality of response that enhances the immediate satisfaction of the beneficiary at the critical moment 1,9

Therefore, the impact of service quality is not limited to immediate satisfaction, but extends to long-term strategic results that affect the organization as a whole. The beneficiary who is satisfied with the quality of

ambulance service increases his loyalty to the organization and his confidence in its ability to provide support when needed again. Therefore, the continuous pursuit of improving service quality through performance indicators and training is in fact a direct investment in raising the level of beneficiary satisfaction and supporting the reputation of the Saudi Red Crescent Authority8,5

Methodology

The study employed a descriptive analytical method to assess beneficiary satisfaction with Saudi Red Crescent services. A structured questionnaire was developed to collect quantitative data from beneficiaries in major cities across the Kingdom. The population of the study consisted of all individuals

- Results and recommendations

Results

- The results showed that the overall level of beneficiary satisfaction with the Saudi Red Crescent services in major cities was relatively high, reflecting the general confidence in the vital role of the organization
- The results showed that the highest levels of satisfaction were in the two dimensions of assurance and reliability. This indicates the beneficiaries' awareness of the high technical competence of the ambulance crew and the reliability of the service
- The results showed that after response speed Some equipment items received lower satisfaction ,ratings, indicating that beneficiaries are aware of the challenges associated with delays in arrival especially during peak times, or the need to improve ambulance equipment
- The results confirmed a strong positive correlation between perceived service quality and customer satisfaction levels, supporting the theory that improving the five dimensions directly leads to increased satisfaction
- The results also showed that response time It is the strongest performance indicator that negatively or positively affects satisfaction, as each time delay is associated with a decrease in the satisfaction index

:Recommendations

- The Saudi Red Crescent Authority must implement continuous improvement programs The focus is on reducing average response time in major cities, especially in areas with the lowest satisfaction levels, and increasing the strategic deployment of ambulance units in hotspots is recommended Which witnesses frequent traffic accidents and high population density
- The infrastructure of emergency operating rooms must be upgraded to ensure the use of geolocation technologies. The most accurate and integrated systems with traffic and navigation guide teams through the fastest available routes, reducing transmission time. Below the current rate
- The need to introduce advanced training programs that focus on soft skills Such as the art of effective communication under pressure and providing psychological and humanitarian support to beneficiaries and their families to enhance the dimension of empathy Especially in cases requiring management of high anxiety
- must be put in place for the periodic evaluation and updating of service equipmentincluding the renewal and maintenance of the ambulance fleet and accompanying medical equipment, to ensure that it meets international standards and thus raises the level of satisfaction
- It is recommended to include a beneficiary satisfaction index As a key performance indicator(KPI) at the executive directorate level, it is directly linked to annual improvement goals and periodic evaluation of ambulance team performance
- The need to establish a specialized unit to review and analyze the statistical differences in satisfaction levels between different cities or geographical areas in order to identify the

environmental or operational challenges specific to each city and to develop intensive remedial plans to improve performance in lagging areas

Conclusion

The study results showed that the overall level of satisfaction with the Saudi Red Crescent services in major cities was relatively high, especially with regard to the good treatment and professionalism of paramedics 'during the provision of field care. However, it highlighted some challenges that affect the beneficiaries experience, such as the existence of a difference in arrival time between crowded urban neighborhoods and outlying areas, and the lack of some equipment in critical cases. The results also indicated that community awareness of the role of the Red Crescent and the mechanisms for requesting service in emergency situations still needs to be strengthened through targeted awareness campaigns. The study recommends the need to improve the efficiency of field communication networks, increase the number of ambulance teams in densely populated cities, and develop continuous training programs to raise the quality of service and ensure the highest levels of beneficiary satisfaction in the pre-hospital care system in the Kingdom

References

- 1. Bayked, E. M., Toleha, H. N., Zewdie, S., Mekonen, A. M., Workneh, B. D., & Kahissay, M. H. (2024). Beneficiaries' satisfaction with community-based health insurance services and associated factors in Ethiopia: a systematic review and meta-analysis. Cost Effectiveness and Resource Allocation, 22(1), 73
- 2. Ananga, E. O., Agong', S. G., Acheampong, M., Njoh, A. J., & Hayombe, P. (2020). Examining the effect of community participation on beneficiary satisfaction with the work of water management committee in urban community-based operated water schemes. Sustainable Water Resources Management, 6(3), 49.
- 3. Henning-Smith, C., Hernandez, A., Neprash, H., & Lahr, M. (2021). Differences by rurality in satisfaction with care among Medicare beneficiaries. The Journal of Rural Health, 37(1), 114-123.
- 4. Ding, L., Shi, Y., He, C., Dai, Q., Zhang, Z., Li, J., & Zhou, L. (2021). How does satisfaction of solar PV users enhance their trust in the power grid?-Evidence from PPAPs in rural China. Energy, Sustainability and Society, 11(1), 31.
- 5. Park, S., White, L., Fishman, P., Larson, E. B., & Coe, N. B. (2020). Health care utilization, care satisfaction, and health status for Medicare Advantage and traditional Medicare beneficiaries with and without Alzheimer disease and related dementias. JAMA network open, 3(3), e201809-e201809.
- 6. Lahariya, C. (2020). Access, utilization, perceived quality, and satisfaction with health services at Mohalla (Community) Clinics of Delhi, India. Journal of family medicine and primary care, 9(12), 5872-5880.
- 7. Reed, N. S., Boss, E. F., Lin, F. R., Oh, E. S., & Willink, A. (2021). Satisfaction with quality of health care among Medicare beneficiaries with functional hearing loss. Medical care, 59(1), 22-28.
- 8. Alshamrani, A. A. A., Alnefaie, N. H. M., Althagafi, K. A. O., Alharthi, N. E., Aldunayyish, S. M. A., Alsuwat, M. M., ... & Alghamdi, S. S. S. (2025). Analysis Of The Role Of Volunteers In Supporting The Red Crescent's Capabilities During Major Religious Seasons In Kingdom Of Saudi Arabia. The Review of Diabetic Studies, 132-142.
- 9. Alhousseni, R. M. Z., Al Mobtei, S. S. A., Sultanalshehri, T., Albattah, A. K. A., Alzahrani, A. J. S., Aljoid, A. A. M., ... & Al-Sharif, A. A. (2025). Innovative Humanitarian Response Practices In Red Crescent Societies A Systematic Review (2020–2025). The Review of Diabetic Studies, 153-162.
- 10. Alqutub, S. T. (2022). Assessment of beneficiaries' satisfaction with access to health care and barriers within the health delivery system in Saudi Arabia. Saudi Journal of Health Systems Research, 2(4), 156-163
- 11. Sabr, M. K., Al-Barakati, M. N., Aal, O. A. M. A., Al-Buraidi, A. A. A., Al Saadi, A. R. A., Sabr, A. K., ... & Aljohani, A. H. (2024). Effectiveness of establishing seasonal medical centers designated to meet

WWW.DIABETICSTUDIES.ORG 588

- the health needs of pilgrims and Umrah performers (Prince Sultan Armed Forces Hospital initiative in Medina as a model). Ijrsp, 5(51), 219-230.
- 12. Henning-Smith, C., Hernandez, A., Neprash, H., & Lahr, M. (2021). Differences by rurality in satisfaction with care among Medicare beneficiaries. The Journal of Rural Health, 37(1), 114-123.

WWW.DIABETICSTUDIES.ORG 589