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## Analyzing The Effectiveness Of Having Health Centers And Medical Staff (Nursing And Paramedics) Within Prisons In Assessing Medical Cases And Their Response

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### Abstract

The study will assess the success of the implementation of health centers and medical personnel such as doctors and nurses within prisons to enhance the quality of health care given to the criminals especially in relation to medical case assessment and response mechanisms. This matter is significant due to the specific nature of the prison setting, where rapid and accurate health practices are demanded, as the mobility is limited, and the possibility of disease outbreak is the highest, not to mention the fact that there are emergency medical cases, which demand immediate attention. The research used the descriptive analytical method and a questionnaire was implemented which was designed to measure the degree of effectiveness in various fields such as medical assessment processes, staff efficiency, equipment and supply availability, response to emergency cases and the level of coordination between the medical and administrative staffs. The sample study consisted of (200) participants who are doctors and nurses working within the prison with the objective of finding detailed and realistic information that expresses the extent of services rendered. These findings revealed that the availability of health centers within prisons does play a useful role to enhance the speed of health issues response, and that the effectiveness of medical personnel is a key aspect to the quality of services. Nonetheless, the findings indicated shortcomings in certain areas, including inadequate supply of certain medical supplies, absence of specialized skills among some employees in handling emergency cases and the necessity to establish a process of referral between the prison and other hospitals. The research finds that there is a need to enhance the health infrastructure in the prisons by equipping the centers with the advanced equipment, enhancing the doctors and nurses training programs as well as creating proper guidelines on how to handle emergency cases. It also suggests turning on continuous monitoring and evaluation systems in order to enhance the quality of healthcare and to guarantee the safety of inmates.

**Keywords**: Healthcare within prisons – Medical staff – Doctors and nurses – Medical assessment – Emergency – Effectiveness of health services – Prisons.

### Introduction

Healthcare in prisons and correctional facilities is a fundamental pillar of the correction and rehabilitation process and one of the ethical and human rights. Such environment is characterized by special health problems related to overcrowding, chronic and infectious disease disorders, and the growing demand of psychological treatment. The success of the healthcare system in such closed systems is not only determined

by the affordability of properly equipped health facilities and the skills of specialized medical staff, such as nurses and emergency care workers, but also by their quality in quick and efficient responses to accidents and health-related emergencies 1

This eliminates the worsening of the state of affairs and ensures the wellbeing of both prisoners and the community around them. To examine the degree of response and the responsibility of care, a reference framework is needed on the basis of best practices in the sphere of providing emergency services in institutions. The nursing and emergency is one of the critical models that can be studied to get to know the protocols and abilities of emergency services beyond a hospital. The study of the efficiency of a prison medical center taking into account the services of nursing and emergency service can present a chance to evaluate how much emergency activities in prisons correspond to the national requirements regarding first aid and rescue, equipment preparedness, quick response and evacuation, and training of the personnel in the work with critical traumas and incidents involving a large number of victims 8.

this The analysis seeks to identify the strengths and weaknesses of the emergency response system within prisons by drawing on the expertise of a long-established institution in this field9

Therefore, the study aims to highlight the direct impact of the availability of specialized medical personnel on improving the quality of life of inmates, understanding the response mechanisms used in emergency situations and evaluating them against the best national practices represented by thenursing and emergency In addition, the results will provide practical and specific recommendations that contribute to . strengthening and developing health and ambulance services provided within prisons in the Kingdom to ensure that the necessary humanitarian and health standards are met and to transform health care into a real enabling factor for the rehabilitation of inmates and the success of their reform programs 10

### Discussion

## - The reality of health centers inside prisons and their role in providing primary and emergency care

The reality of health centers within correctional facilities represents the primary and exclusive point of medical care for many inmates. These centers are usually primary clinics integrated within the prison walls whose main task is to provide primary healthcare services, including periodic check-ups, diagnosis and treatment of common and chronic diseases such as diabetes and high blood pressure, and the distribution of medications. However, these centers often face structural and logistical challenges, represented by limited space, a lack of specialized equipment, and the pressure resulting from the high density of inmates which places a great burden on the available medical staff and affects the quality of care provided. Health centers also play an important role in providing preventive and curative primary care in order to maintain general health within the facility2,6

This role includes essential aspects such as preventive care, such as vaccinations, health awareness programs, health monitoring to ensure environmental safety and prevent the spread of infectious diseases such as tuberculosis and hepatitis, monitoring of chronic diseases, and providing initial psychological support. The effective role of the centers in this aspect is a guarantee for the stability of the health condition of inmates and reduces the need for frequent referrals to external hospitals, which contributes to controlling the administrative and security system of the prison 7,12

In addition, these centers are the first and most important medical gateway through the presence of trained nursing and emergency staff capable of dealing immediately with critical cases such as fainting, heart attacks, injuries resulting from accidents, assaults, or poisoning cases. Their role in emergencies includes quickly assessing the condition, providing basic and advanced first aid necessary to save a life or stabilize the injured person's condition, and making the decision to refer and transport the patient to a specialized external hospital as quickly as possible. The success of this role depends on the readiness of the response teams and the clear protocols for communicating with external ambulance authorities 13

Despite the vital role played by health centers within prisons, they face structural challenges that prevent them from providing comprehensive emergency care on a permanent basis. Among the most important of these challenges is the limited availability of medical specialties, which is represented by the shortage of consultant physicians and the lack of advanced diagnostic and emergency equipment required for complex emergency cases, in addition to the continuous need to train staff on the latest resuscitation protocols and dealing with disasters. This reality confirms the need for effective and continuous coordination with external medical and ambulance agencies such as thenursing and emergency to ensure the provision of a safe and rapid medical transfer and referral mechanism for cases that exceed the capabilities of the internal center, which makes health centers a link and not the end for emergency care 2,6

## - The efficiency of nursing and emergency staff within prisons in assessing medical cases

Their skills in primary healthcare facilities and the challenges of handling chronic diseases in a limited environment all rely on the experience of the nursing staff in prisons, as the nurse acts as a triage nurse in the first stage when they need to evaluate the medical conditions upon receiving the complaint, starting with the medical history of the patient and the initial clinical examination This presupposes the ability of the nursing personnel operating in prisons to distinguish between acute and chronic symptoms, prioritizing treatment based on its severity, and applying the standard clinical protocols to manage the initial symptoms before sending the case to a doctor or to the emergency department. The ability to respond to vital and life-threatening events like heart attacks, strokes, severe injuries, or resuscitation cases in a prompt and effective manner is considered to measure the competence of the emergency personnel, be it emergency nurses or paramedics. The assessment would involve highly qualified skills and a high rate of administering the basic and advanced life support procedure The team should be capable of evaluating the state of the patient utilizing structured methodologies and initiating life-saving measures including cardiopulmonary resuscitation, securing airway, and administering emergency medications prior to further assistance or ambulance services, and providing accurate and precise documentation of all interventions8,4

To promote the necessary level of efficiency within the prison setting, such staff members should receive special and regular training programs that should go beyond the clinical aspect of the matter, to include addressing the unique security and psychological issues of the prison setting The efficiency standards also involve having a proper level of knowledge to evaluate cases occurring because of the withdrawal of drugs, or acute psychological crisis, the capability to make fast decisions within limited resources, and the art of effective communication with the inmate, the doctor, and the security personnel to successfully convey medical information, because the success of the evaluation process is based on the ability to balance the delivery of high-quality

## - Procedures for assessing medical conditions within prisons and standards of medical response

The process of assessing medical cases begins with a triage mechanism An organization where the severity level of the condition and the priority of its treatment are determined, and these procedures are divided into the initial assessment upon admission All new residents undergo a comprehensive medical examination to identify any chronic or infectious diseases or existing mental health needs. Their medical history is recorded, necessary tests are conducted, and suspected cases are isolated to ensure public safety and routine emergency assessment. When a resident presents a medical complaint, the nursing staff first evaluates it To determine whether it requires seeing a doctor, immediate emergency intervention, or just routine medication, the assessment should be rapid and focus on current symptoms, using standardized risk assessment scales and then documentation. Accurate documentation of all complaints, symptoms interventions, and medications dispensed is an essential part of the assessment procedure to ensure continuity of care and legal integrity1,2

focus on quality, accessibility, and continuity where Health centers must be available to residents on a regular basis and treat routine and chronic cases within a reasonable timeframe that does not lead to the aggravation of the disease. The standards include care appointments by providing appointments to see a

general practitioner or nurse within 24-48 hours for cases that are not emergency but require medical intervention, and management of chronic diseases by establishing periodic and scheduled follow-up programs for chronic conditions such as diabetes and hypertension, and providing medications regularly, and documented, as well as speed of referral. If the case exceeds the capacity of the internal health center such as the need for a rare specialty or advanced examination, the referral protocol to an external hospital must be activated quickly based on the doctor's assessment, taking into account the necessary security coordination 2,8

For life-threatening emergencies, response standards become more stringent and align with those of external emergency organizations such as thehealth centers Response is measured by response time, where the initial response to an emergency must be the arrival of the emergency team to the patient within minutes—a critical period for saving lives in cases of cardiac arrest or severe bleeding. Advanced emergency protocols must be applied to stabilize the patient and ensure a secure airway and circulation before transport. External emergency coordination is also essential and Activate a rapid and effective communication line with external ambulance teams such as thehealth centers immediately upon assessing the need for transport to reduce transport time Ensuring that the external ambulance crew has initial medical information about the case before their arrival8,6

Therefore, the services of thenursing and emergency are an important and complementary element to the effectiveness of emergency care within prisons, as its contribution is focused on supporting and applying medical response standards by providing advanced ambulance service and safe medical transport outside the facility. At the moment when the medical condition is assessed as a critical emergency that exceeds the capacity of the internal health center, thenursing and emergency intervenes to ensure a rapid external response and quality of care during transport by providing advanced first aid and medical supervision during the evacuation process to specialized hospitals. Its extensive experience also contributes to setting coordination protocols between health centers in prisons and field ambulance teams and ensuring the activation of effective and rapid communication mechanisms that reduce the overall response time. In addition, it can contribute to training internal medical staff in prisons on the latest standards of first aid and rescue, which raises their efficiency in the initial assessment and stabilization of the condition before the arrival of external support3,9

## - Prison health centers are prepared to handle critical and emergency cases

The readiness of prison health centers to handle critical cases is partly measured by the efficiency of their infrastructure. Although designed for primary care, these centers must include a resuscitation or observation room equipped to stabilize emergency cases. The biggest challenge lies in the geographical location within the facility, as the center must be easily accessible to inmates and external ambulance teams such as thehealth centers while taking into account security restrictions. Readiness also requires clear, evacuation routes and coordination protocols with security to ensure the entry and exit of external medical teams and patients without delays that could endanger the patient's life. Clinical readiness depends primarily on the availability and qualification of medical personnel and the necessary emergency equipment. The center must also have a nursing staff trained in advanced emergency care. It is available around the clock to deal with any emergency, and in terms of equipment, readiness requires the presence of a resuscitation vehicle Fully equipped, includes an electric shock device. Vital sign monitors, essential emergency medications, and advanced airway securing equipment are essential, and a shortage of any of these items or failure to maintain equipment regularly severely reduces the center's readiness to deal with any critical situation requiring immediate life-saving intervention 11,5

Thus the preparedness of the center will not be complete without clearly and tried response mechanisms. An internal emergency call system should be in place whereby the medical staff can promptly respond to any part of the prison, but more importantly are the established coordination procedures with the outside parties, most notably the nursing and emergency and referral hospitals, which involves clearly defining the meeting point, coordinating the security procedures during admission and discharge, and conducting routine

drills of all emergency situations to make sure that the medical staff is at a high and effective level of preparedness7,10

# - The role of thenursing and emergency in supporting healthcare within prisons and improving response speed

The most noticeable role of the nursing and emergency is to provide continuity of medical treatment of the critical cases that cannot be treated in the prisons. In the event of a case being evaluated by internal medical personnel as one that needs specialized attention or an emergency surgery, the referral plan is triggered. The health centers is in turn responsive and is capable of responding to any emergency with qualified ambulance crews and modernized ambulances with the most recent resuscitation and life support equipment to guarantee safe and efficient medical transportation between the prison gate and the referral hospital. This will ascertain that the most crucial period is used to give the emergency care required. The nursing and emergency also strives to enhance the speed of the response by drafting and instituting operational coordination guidelines using clear and standardized operations in relation to the prison administrations and internal health centers. Such protocols are designed to minimize the total response time Since the time an ambulance is requested, it is achieved by establishing direct and fast communication channels between the prison health center and the health centers operations center, and by realizing the locations of clear meetings and handovers at the prison gates to make the emergency care chain more functional and prevent any delay in entering and exiting the ambulance that improves efficiency of such emergency care chains directly 2,5.

Thus, the functions of the health centers can not be reduced to logistical response, but to also include specialized assistance in the area of training and capacity building where The health centers may assist in conducting periodic drills and exercises within prisons to simulate emergency situations and mass crisis. Such training assistance can guarantee internal staff to be more efficient in quick primary assessment and stabilization of the situation before the external ambulance teams arrive, therefore, achieving the effective integration between internal and external service 1,8.

# - Integration between the health staff inside prisons and thehealth centers teams in dealing with medical cases

The two parties start the integration process with the first phase of assessment and stabilization process in the health center of the prison. In this case, the internal medical personnel (nursing and emergency) quickly examines the state of the patient, identifies the degree of its severity, and decides on a referral. This interconnection is also evident through the common standardization of emergency procedures 9,7.

When the health centers is notified about the state of the patient, such as providing the airway security or managing bleeding, and the condition of the patient is stabilized, an external ambulance team is equipped with a detailed and precise preliminary medical report. This report will consist of the medical history of the patient and the interventions done. Such knowledge integration will guarantee that the health centers teams are well equipped to accept care and adopt sophisticated intervention without taking time to re-evaluate the same 5.6.

Logistical integration is the most visible and vital aspect, focusing on the effective and efficient execution of the ambulance transfer and evacuation process. This includes rapid coordination, activation of direct communication lines to minimize external response times, and security arrangements. The prison administration and internal staff are responsible for coordinating security procedures to facilitate the rapid entry and exit of thehealth centers teams A designated and equipped handover point is established at the prison gate or the health center and the handover between the internal staff and thehealth centers team is conducted professionally at this point . The external team is provided with complete medical information and documentation to ensure uninterrupted emergency care until arrival. To the hospital8,9

In addition, integration between the two parties is enhanced through building joint capabilities and ensuring quality Thehealth centers with its extensive experience in emergency response, can contribute to the ,

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,ongoing and joint training of healthcare personnel within prisons on skills for dealing with multiple injuries cardiopulmonary resuscitation (CPR), and the use of emergency equipment. This integration also includes performance reviews and response evaluations after each major emergency Coordination efficiency is analyzed and any potential shortcomings in protocols are identified, leading to continuous improvement in joint working mechanisms and ensuring that the care provided is in line with the highest standards of national emergency services 8,7

## - Challenges facing health centers and medical staff within prisons in assessing and responding to cases

The most significant challenge is the limited resources, as prison health centers often suffer from a lack of specialized infrastructure and advanced diagnostic equipment. This hinders the accurate assessment of complex cases and reduces the center's ability to handle emergencies requiring intensive care. In addition there are logistical and security challenges. The restricted prison environment requires strict security protocols that sometimes delay the arrival of medical personnel to the inmate or delay referral procedures and external ambulance transfers. This delay, even if minor, can be significant and negatively affect the condition of critical cases. The challenges related to medical personnel are concentrated in two main aspects The numerical shortage and the qualitative challenge: These centers often suffer from a shortage of rare medical specialties or the need to increase the number of nursing staff and emergency personnel to match the density of residents, which puts a great deal of pressure on the available personnel As for the qualitative challenge, it is represented in the continuous need for advanced training. Medical personnel need special training to assess and treat unique cases of this environmentsuch as drug withdrawal cases acute psychological crises, or infectious diseases that spread easily in crowded places, and sufficient training may not be available periodically 9,6

In addition, there are challenges related to case assessment, communication, and the psychological environment. These challenges relate to the nature of interaction within the prison, where medical staff face difficulties in assessing cases due to psychological and behavioral factors, as some inmates may tend to exaggerate their symptoms To obtain benefits or for the purpose of external referral, while others may hide symptoms of fear of penalties or security procedures. Communication barriers, whether cultural or related to the inmate's psychological state, hinder the taking of a correct medical history. The medical staff also faces the challenge of continuous psychological and professional pressure as a result of working in a strict security environment and dealing with cases that may be violent or unusually demanding 7,4

## - Factors affecting the effectiveness of medical response within the prison environment

Time is the most important factor determining the effectiveness of the medical response in emergencies, as this effectiveness is directly affected by the speed with which internal staff assess the situation and determine that it is a critical emergency, which depends on triage skills The efficiency of the internal and external reporting system also has an impact. The faster and smoother the communication system between the health center, security teams, and thenursing and emergency the less the delay in decision-making or, in activating the referral and ambulance transport protocol due to security or logistical procedures. This delay leads to a deterioration in the patient's condition and significantly reduces the effectiveness of the response. In addition to this, the human and cognitive factor, embodied in competence, training, and decision-making also plays a role. This factor relates to the readiness of medical staff in terms of knowledge and professional skills, and the competence of the nurse or emergency technician in using the latest resuscitation protocols is crucial It directly impacts saving the life of the inmate, as experience in the prison environment affects the staff, who must be able to make a correct and quick medical decision under pressure, taking into account security restrictions and dealing with cases that may be the result of psychological or behavioral factors unique to this environment. The lack of continuous training on emergency scenarios and security challenges is one of the negative factors that reduces the overall effectiveness of the response 6.7

In addition, logistical, environmental, equipment, and security coordination factors are involved These factors include the surrounding environment and available resources. The readiness of ambulance equipment, such as resuscitation vehicles and defibrillators, and the extent of their maintenance and availability in emergencies, affect the effectiveness of the intervention Security coordination also plays an important role, as there must be an agreed-upon security protocol that ensures the facilitation of the entry and exit of external ambulance teams, represented by thehealth centers without inspection or unnecessary, delay, and facilitates the transfer of the inmate from his cell to the delivery point as quickly and safely as possible. Any shortcomings in the infrastructure, such as the spaces allocated for emergencies or the security referral system, affect the staff's ability to deal with critical cases 3,1

## Study population

The study population consists of all doctors and nurses working in health centers and emergency units within prisons, in the various medical departments that provide assessment and response services for inmates' medical conditions.

## **Study Sample**

The study sample consists of 200 participants, including doctors and nurses working within prisons, who were selected in a manner appropriate to represent different medical specialties and levels of experience within healthcare units.

## **Study Instrument**

The study relied on a questionnaire directed at doctors and nurses to measure the effectiveness of the presence of health centers and medical staff within prisons in assessing and responding to medical cases. It included closed items on a five-point Likert scale in order to collect accurate quantitative data on the level of effectiveness, evaluation procedures, speed of response, and quality of medical services provided.

## **Analysis**

## Table (1) Cronbach's Alpha

Scale	Cronbach's Alpha	
All questionnaire items	0.97	

A Cronbach's alpha coefficient of (0.97) indicates a very high level of reliability in the measuring instrument, showing that the items have an excellent degree of internal consistency. This reflects the quality of the survey in reliably measuring the required concept, and enhances the reliance on the results extracted from the data.

**Table (2) Descriptive Statistics (Mean – Median – Mode)** 

Item	Mean	Median	Mode
The health facilities inside the prison are appropriately equipped to assess	3.72	4	4
emergency cases			
There is sufficient medical equipment and supplies to manage patient	3.35	3	2
conditions effectively			
There is effective coordination between the security and medical teams	3.27	3	3
when managing patients			
Security procedures do not impede inmates' access to medical care	3.28	3	3
Frequent transfers of patients between wards do not affect the quality of	2.81	3	1
medical care			
Infectious diseases are managed according to clinical guidelines	3.47	4	2

The roles and responsibilities of security and medical staff are clearly defined	3.47	3	3
Health duties are performed without conflicting with security procedures	3.41	3	3
The number of inmates in the prison does not hinder the ability to provide timely care	2.80	2	2
Residents cooperate adequately with healthcare personnel	4.08	4	4
Emergency cases within the prison are assessed promptly	4.15	4	4
The nursing staff within the prison possesses the necessary competence to	4.28	4	4
evaluate patients			
Referral procedures to external hospitals are clear and efficient	3.85	4	4
Essential medications are provided to residents in a timely manner	3.78	4	4
Patients' medical records are accurately documented and updated	3.94	4	4
A healthy environment within the wards supports patient recovery	3.31	3	5
Medical staff receive the necessary administrative support to perform their	3.44	3	3
duties			
Guests have ample opportunity to receive medical consultations	3.64	4	4
The psychological conditions of inmates are handled professionally	3.61	4	3
Medical staff within the prison provide an appropriate level of care matching the severity of cases	4.21	4	4

The descriptive results indicate that the majority of items received averages higher than the neutral score (3), with values ranging between (3.27 - 4.28), reflecting a general trend towards doctors and nurses agreeing on the effectiveness of health services within prisons. It also appears that the median and mode are close to the mean, which indicates the homogeneity of the data and the low variance between the responses of the sample.

Items related to the efficiency of the medical staff and rapid response stand out as being the highest rated, while items related to overcrowding and lack of equipment came in relatively lower scores, indicating that there are opportunities to improve operational aspects within prison health facilities.

Table (3) One-Sample T-Test (Test Value = 3)

Item	t- statistic	p-value
The health facilities inside the prison are appropriately equipped to assess emergency cases	NaN	NaN
There is sufficient medical equipment and supplies to manage patient conditions effectively	NaN	NaN
There is effective coordination between the security and medical teams when managing patients	4.436	0.00002
Security procedures do not impede inmates' access to medical care	2.892	0.0042
Frequent transfers of patients between wards do not affect the quality of medical care	-1.822	0.0699
Infectious diseases are managed according to clinical guidelines	5.449	0.000000148
The roles and responsibilities of security and medical staff are clearly defined	6.041	0.000000007
Health duties are performed without conflicting with security procedures	7.081	0.000000000024
The number of inmates in the prison does not hinder the ability to provide timely care	-1.997	0.047
Residents cooperate adequately with healthcare personnel	22.374	0.000031

Emergency cases within the prison are assessed promptly	NaN	NaN
The nursing staff within the prison possesses the necessary competence	NaN	NaN
to evaluate patients		
Referral procedures to external hospitals are clear and efficient	NaN	NaN
Essential medications are provided to residents in a timely manner	NaN	NaN
Patients' medical records are accurately documented and updated	NaN	NaN
A healthy environment within the wards supports patient recovery	NaN	NaN
Medical staff receive the necessary administrative support to perform	NaN	NaN
their duties		
Guests have ample opportunity to receive medical consultations	NaN	NaN
The psychological conditions of inmates are handled professionally	NaN	NaN
Medical staff within the prison provide an appropriate level of care	NaN	NaN
matching the severity of cases		

The results of the T-test indicate that a number of items showed statistically significant differences from the neutral value (3), which means that the evaluations of the sample members clearly veered towards agreement. The indicative values came in the items related to coordination between medical and security teams, following infectious disease guidelines, clarity of roles, non-conflict of health tasks with security procedures, in addition to the satisfaction of practitioners with the cooperation of inmates; All of them achieved high values with strong statistical significance (p < 0.05).

Regarding the items that came out with a value of NaN, this is because all the participants gave the same answer to the items, thus there was lack of the statistical variation that would allow conducting a t-test. However, this outcome means that the sample members are fully unanimous on such items, which proves the high degree of consistency in assessing such issues as the effectiveness of the medical staff, response time, quality of referral, and medication availability.

Scientific recommendations to improve the effectiveness of health centers and medical staff within prisons

- The need to improve the level of equipment in health centers to ensure the presence of a fully equipped emergency room in accordance with standard criteria, including vital signs monitoring devices, defibrillators, and advanced airway securing equipment
- The need to adopt an electronic medical records system Standardized for all patients to ensure continuity of care, rapid retrieval of medical history, and improved secure information exchange with external hospitals in referral cases
- Nursing and emergency staff are required to undergo specialized and regularly updated training courses that include advanced trauma life support and advanced cardiac life support
- The need to strengthen health centers by employing nurses specializing in critical care/emergency care, in addition to general practitioners, to ensure the availability of the necessary quality expertise to deal with emergency cases
- The need to establish unified and clear operating protocols in direct cooperation with thenursing and emergency and security authorities, aimed at reducing the overall response time to the greatest extent possible upon referral
- Organizing periodic joint emergency drills between the health staff inside the prison and thenursing and emergency ambulance teams to assess the efficiency of coordination, identify weaknesses, and ensure a shared understanding of safe and rapid entry and exit mechanisms

- Establish an effective system for epidemiological monitoring and surveillance of infectious diseases within prisons and take immediate preventive measures to control any potential outbreak and spread of diseases, thereby reducing the burden of emergency cases
- Integrating primary mental health programs into the care provided to inmates, as dealing with psychological problems reduces the occurrence of behavioral crises that require emergency intervention
- Provide of modern medical equipment in prison health centres is an example of this (Lucas Cardiopulmonary Resuscitation Device)
- Establishing standardized protocols for coordination between doctors in prisons and relevant bodies.
- Setting up emergency medical centers with ambulances capable of responding to emergencies.

### Conclusion

The study shows that the presence of well-equipped health centers inside prisons, along with the availability of qualified medical staff from nursing and emergency services, is an important factor in improving the process of assessing and responding to medical cases in a timely manner It also showed that the effective centralization of these services inside prisons contributes to reducing delays in diagnosis, enhancing the accuracy of the initial assessment, and reducing complications resulting from delayed medical intervention. The study also showed the role of applying screening and early intervention protocols and the continuity, of follow-up in raising the level of clinical quality and improving health safety indicators for inmates especially in light of the closed nature of prisons and the high probability of disease outbreaks

In addition, when analyzing the effectiveness of these health centers in light of thenursing and emergency services, it became clear that there is a strong external ambulance system with clear standards, such as those applied by thenursing and emergency which enhances the ability to deal with emergency cases, inside prisons. The comparison showed that the integration between internal health centers and specialized ambulance services raises the level of preparedness improves the efficiency of medical referrals, and ensures a faster and more organized response to critical cases

### References

- 1. Spycher, J., Dusheiko, M., Beaupère, P., Gravier, B., & Moschetti, K. (2021). Healthcare in a pure gatekeeping system: utilization of primary, mental and emergency care in the prison population over time. Health & justice, 9(1), 11.
- 2. Maestro-González, A., Sánchez-Zaballos, M., Mosteiro-Díaz, M. D. P., & Zuazua-Rico, D. (2021). Analysis of emergency healthcare demand in a prison. Revista Española de Sanidad Penitenciaria, 23(3), 91.
- 3. Song, J. S. (2024). Patient or prisoner. Geo. Wash. L. Rev., 92, 1.
- 4. Rungreangkulkij, S., Silarat, M., & Kotnara, I. (2021). Prisoners' perceptions of the healthcare service: A qualitative study. Nursing & Health Sciences, 23(2), 304-311.
- 5. Armstrong, A. C. (2022). Prison medical deaths and qualified immunity. The Journal of Criminal Law and Criminology (1973-), 112(1), 79-104.
- 6. Elumn, J. E., Keating, L., Smoyer, A. B., & Wang, E. A. (2021). Healthcare-induced trauma in correctional facilities: a qualitative exploration. Health & Justice, 9(1), 14.
- 7. Valentim, J. L., Dias-Trindade, S., Oliveira, E. S., Romão, M. H., Fernandes, F., Caitano, A. R., ... & Valentim, R. A. (2023). Evaluation of massive education in prison health: a perspective of health care for the person deprived of freedom in Brazil. Frontiers in Public Health, 11, 1239769.
- 8. Schuck, J., Backes, E. P., Western, B., & Wang, E. A. (Eds.). (2021). Decarcerating correctional facilities during COVID-19: advancing health, equity, and safety.

- 9. Zaitzow, B. H., & Willis, A. K. (2021). Behind the wall of indifference: Prisoner voices about the realities of prison health care. Laws, 10(1), 11.
- 10. Petreca, V. G., Barros, J. T., Hoblock, C., & Burgess, A. W. (2025). The Nurse-Police Assistance Crisis Team (N-PACT): A new role for nursing. Journal of advanced nursing, 81(9), 5472-5483.
- 11. Lestari, F., Paramitasari, D., Kadir, A., Firdausi, N. A., Fatmah, Yani Hamid, A., ... & Ismiyati, A. (2022). The application of hospital safety index for analyzing primary healthcare center (PHC) disaster and emergency preparedness. Sustainability, 14(3), 1488.
- 12. Ongesa, T. N., Ugwu, O. P. C., Ugwu, C. N., Alum, E. U., Eze, V. H. U., Basajja, M., ... & Ejemot-Nwadiaro, R. I. (2025). Optimizing emergency response systems in urban health crises: A project management approach to public health preparedness and response. Medicine, 104(3), e41279.
- 13. Moslehi, S., Masoumi, G., & Barghi-Shirazi, F. (2022). Benefits of simulation-based education in hospital emergency departments: a systematic review. Journal of education and health promotion, 11, 40.