Al-Qadisiyah Journal for Administrative and Economic Sciences ISSN$_{Online}$ : 2312-9883
*QJAE*, Special Issue (2024) ISSN$_{Print}$ : 1816-9171

# The auditor's role in evaluating health institutions' performance and its impact on improving service quality (Applied Research in Diwaniyah Health Department)

Tariq Hamid Sarhan
*Federal Board of Supreme Audit, cpa7911@gmail.com*
Haider Muhammad Qasim
*Federal Board of Supreme Audit.*
Helen Faleh Hassan
*Diwaniyah Education Directorate.*
Atared Saad Gabr
*Al-Mustaqbal University, dr.ataredsaad@uomus.edu.iq*
Abbas Mohsin Areef Alsaeedi
*Imam Kadhum College, abbasm@alkadhum-col.edu.iq*
*Corresponding Author: Dr. Tariq Hamid Sarhan*

***Abstract*** : Performance evaluation is one of the effective tools that helps the administration in achieving its goals in the efficient, effective and economic exploitation of available resources, which are the mainstay of the economic unit due to the relative scarcity of these resources to follow up on the responsibility of the monetary unit towards the relevant parties. Therefore, the scope of the evaluation has expanded to include all aspects of activity to evaluate the activity of administration at its various levels and agencies, as well as the organizational formations and its employees in terms of effectiveness in achieving the set goals, efficiency in implementing plans and programs, and economy in using available resources. The topic of performance evaluation has become one of the important topics not only at the level of economic units but also at the level of the national economy as a whole. The study addressed this aspect. The theoretical concept and definition of performance evaluation carried out by the auditor and the basic requirements for performance evaluation, while the practical aspect included evaluating the performance of the Diwaniyah Health Department, presenting the most prominent results, and concluding the research with conclusions for the most prominent points reached by the study and the necessary recommendations for that.

## 1. INTRODUCTION:

Health institutions are fundamental foundations that societies rely on to guarantee the well-being and security of its citizens. In Iraq, these institutions encounter significant obstacles concerning the quality and effectiveness of their operations, due to the fluctuating economic and political circumstances. In this regard, references play a crucial function as a fundamental instrument in assessing the performance of health institutions and striving to enhance the quality of services rendered. The auditor's responsibilities involve scrutinizing and assessing the processes and methods employed in healthcare facilities to guarantee adherence to health standards and regulations, while also identifying areas of proficiency and areas that need improvement. By doing this examination, the auditor may offer suggestions supported by trustworthy facts that help enhance the overall performance of healthcare organizations. The proposals encompass several domains, including human resources management, the integration of advanced technologies in diagnosis and treatment, enhancing the work environment, and establishing strategies for ongoing training and professional development of healthcare personnel. In addition, the reviewer assists in identifying the deficiencies and obstacles that health institutions encounter, and proposes pragmatic and efficient remedies to tackle them. By instituting a robust and ongoing evaluation system, significant enhancements may be made to the quality of health services offered in Iraq, resulting in a favorable impact on the health and well-being of its population. As a result, this boosts public trust in the healthcare system and promotes the most effective use of the resources that are now available. One of the fundamental ways to improve the performance of health institutions is to invest in the development of auditors' talents and provide them with essential assistance. Due to their expertise and skills, they are able to offer precise insights and analyses that help in making well-informed decisions aimed at enhancing the quality of healthcare services.

## Research problem

Administrative reform has become one of Iraq's most important topics due to the decline in the performance of ministries and various sectors. Therefore, we summarize the research problem as the decline in performance in Iraqi health institutions and the corresponding decline in the quality of health services provided. We derive the following questions from the research problem: What is the role of institutional performance evaluation in raising the efficiency of institutional performance in all work sectors in Iraq? Does institutional performance evaluation contribute effectively to achieving the goals of health institutions and the required administrative reform?

## Research objectives

1. Identifying obstacles to administrative reform and addressing them.
2. Measuring the institutional performance of health institutions to raise the quality of health services in Iraq.

## Research importance

The importance of the research derives from the importance of evaluating performance in Iraq and its role in diagnosing weaknesses and avoiding them to raise the quality of health services and achieve development in society.

## Research limits

1. Spatial boundaries: The research dealt with evaluating the performance of health institutions in Diwaniyah, including hospitals, sectors, and specialized centers.
2. Temporal boundaries: The temporal boundaries of the research consisted of selecting data on the Diwaniyah Health Department for the years (2018, 2019, 2020, 2021, and 2022).

## Research hypotheses

H1: Evaluating institutional performance has an important and prominent role in raising the efficiency of institutional performance in all work sectors in Iraq.

H2: Evaluating institutional performance effectively contributes to achieving the goals of health institutions and the required administrative reform.

## 2. LITERATURE REVIEW

In order to achieve better achievement and achieve the set goals efficiently, effectively and economically, performance must be measured to determine what has been achieved and what goals have not been achieved.

**The concept of performance evaluation**

Poister defined performance evaluation as information related to programs or organizational performance that can be used to enhance management to reach the results of the decision-making process (Poister, 2015:4). Performance measurement is defined as measuring the efficiency and effectiveness of work using performance measures or indicators (Makila: 2014:6). Performance evaluation is defined as an organized systematic process through which actual performance is compared to the plan in terms of effectiveness in achieving goals. Efficiency in implementing programs, and economic use of available resources with the aim of detecting deviations and explaining their causes, by using a number of indicators and adopting quantitative and qualitative standards to diagnose and measure strengths and weaknesses. To provide appropriate proposals and solutions to raise the level of performance and achieve the required goals. (Al-Karaawi & Al-Baghdadi, 2015:14). Measuring or evaluating performance is also defined as an organized process concerned with collecting and analyzing information for the purpose of determining the degree of achieving goals and making decisions regarding them to address weaknesses and provide sound growth by enhancing aspects Power (Hafez & Abbas, 2014:60).

**The importance of performance evaluation**

Evaluating the performance of departments through the activities they carry out will be reflected in the success of the institution as a whole, as the human resource is the most important resource for the success of the institution in achieving its goals, and if the senior departments succeed in this, it means success for the institution (Hafez & Abbas, 2014:124).

The importance of measuring performance lies in the following; It helps economic units understand their own operations. Making improvements to the unit's programs that need improvements. Performance measurement helps discover strengths and weaknesses (Sadeghian et al., 2012:23).

**Performance evaluation objectives**

The process of performance evaluation represents an essential link in the integrated administrative process. It is a partial process within the scope of a broader and more comprehensive administrative activity, which is oversight. It is one of the tools of comprehensive administrative oversight. Therefore, the process of measuring performance is nothing but a process of making decisions based on oversight information to redirect the paths of activities to ensure It achieve specific goals, and among these goals (Hamza et al., 2019: 364)

- Providing decision-makers with information about employee performance.

- It helps the organization's officials judge the extent to which employees contribute to achieving the organization's goals and their personal achievements.
- It is one of the means of (reverse) feedback.
- It provides officials of human resources departments with realistic information about the performance and conditions of employees in the organization, which is a starting point for conducting applied field studies that address the conditions of employees, their problems, their productivity, and the future of the organization itself.

**External auditor**

The auditor is "the person who is academically and professionally qualified, officially licensed to practice the profession and who is appointed by the owners to audit their accounts" (Oraka & Okegbe, 2015: 69). The Arab Society of Certified Public Accountants defined the auditor as "that natural or legal person who practices the auditing profession with enjoys the qualifications, independence, quality of competence and high mental ability. and who collects measurable evidence to prepare a report on the degree of correspondence between measurable information and the legislated or established standards that do not depart from its framework and writing" (Elbayoumi et al., 2029:212).

**Fundamental Requirements for Performance Evaluation**

1. Setting goals: Evaluating the performance of any economic unit requires identifying the goals that you want to achieve, which must be clearly and precisely defined using numbers, ratios, and appropriate descriptions. The role of the economic unit in policy-making does not depend on the general goal of its activity, but rather it should expand to include all its detailed goals (Veerabhadrappa, 2023:3).
2. Determining the centers of responsibility: The center of responsibility means each organizational unit that is specialized in performing a specific work and has the authority to make decisions that will manage part of the activity of the economic unit and determine the results that it will obtain. On this basis, the responsibility of each center of the economic unit should be known in advance in order to determine on the level of performance in each center and the frequency of deviations that occurred during the implementation process (Shen, 2019:66).
3. The necessity of having clear standards and indicators for performance: Performance evaluation procedures require setting standards for this purpose, which are a set of standards, ratios, and foundations by which the achievements achieved by the economic unit are measured. Indicators are indications of the level of activity. These standards and indicators should be accurate, clear, realistic and able to reflect the various aspects of the economic unit's performance. The standard refers to the measurement method used, such as ratios, while the indicator is the result obtained from using the ratio. This indicator can serve as a guide for a general evaluation of the economic unit of its various types, provided that the conditions required for each indicator's use are met, thereby determining the nature of the standards (Schuhmacher et al., 2008:4). To evaluate performance, it is necessary to have a set of characteristics or considerations for standard selection, which include (Kennedy et al., 2000:304; Tavares et al., 2009:95; Alsaeedi & Kamyabi, 2023:116).

a. The standards should be appropriate to the unit's objectives because the objectives reflect the policies pursued by the unit to achieve these objectives.
b. The standards must be reliable, such that they give the same results when used by another auditor in the same circumstances, and there may not be duplication in applying the standard to those similar activities.
c. The standards should be characterize by simplicity and clarity, in order to be understandable, clearly expressed and not subject to widely different interpretations.
d. The standards must be realistic and take into account the conditions for performing normal work. It is assumed that unrealistic standards are not set, which makes them inapplicable in practice or difficult for the unit to achieve despite the sobriety of its theoretical structure. It is not reasonable to assume work without interruptions, without damage, and the presence of qualified workers as should...etc.
e. Officials and those concerned with evaluation so that it builds their enthusiasm while working according to it and making efforts to achieve it must accept the standard.
f. The standards include all activities of the unit, or the standards include all activities and aspects that are influential and of relative importance for evaluating performance.
g. Being satisfied with one standard may make it impossible to give a complete judgment or vision about the performance of a particular activity, and setting more than one standard helps to encompass and address the various aspects of the activity and not one side alone.
h. The standards must be comparable, express the situation to be measured, and have the ability to indicate any existing deviations or problems.

## 3. The Practical Framework

An introductory overview of the Diwaniyah Health Department, research sample. The Iraqi Ministry of Health was established in the year 1920 to be the ministry that sponsors medical and health services and its various institutions

throughout Iraq. In the year 1952, health zones established in administrative units at the district level, including the Diwaniyah District, which includes a general hospital and health centers. It is administratively and technically linked to the Directorate of Public Health in Baghdad. In 1958, the Diwaniyah Health Presidency was established, and this classification used until 1/17/1984. It transformed into the Diwaniyah Health Department. A set of laws issued that included the work of health departments and institutions, as follows:

- Public Health Law No. (89) Of 1981 (and its amendments).
- Ministry of Health Law No. (10) Of 1983 (and its amendments).

Based on the above laws, health departments established in the governorates, to which all government hospitals and primary health care sectors operating in the governorate linked technically and financially. They later expanded to create a number of specialized centers, popular clinics, and health homes, as shown below:

Table (1) Number of health institutions in Diwaniyah Governorate

| Details | number |
|---|---|
| Hospitals | 6 |
| Primary healthcare sectors | 5 |
| Main health centers | 43 |
| Sub-health centers | 41 |
| Healthy homes | 53 |
| Specialized centers | 9 |
| Popular clinics | 15 |
| Dental centers | 2 |

Source: Ministry of Health, annual statistical reports and Records.

**Established goals and their clarity**

The second and third articles of the amended Ministry of Health Law No. 10 of 1983 and the amended Public Health Law No. 89 of 1981 clarified the general objectives of the work of the Ministry of Health and its health departments in the governorates, including:

1. Establishing and managing health, preventive and curative units and developing them in the country and contributing to raising the health standard.
2. Taking care of primary health care services, including maternity, childhood, old age, school health, and family health.
3. Combating, controlling and monitoring communicable diseases and preventing their leakage from outside the country to inside it and vice versa.
4. Taking care of the citizen's psychological and mental health and contributing to providing the necessary services for it.
5. Providing medicines, supplies and various medical equipment necessary to perform preventive and curative medical services.
6. Contributing to the preparation of allied health cadres and raising the scientific level of workers in the health sector.
7. Regulating, monitoring and practising the medical and health professions in coordination with the relevant authorities.

**Plans, policies and implementation results**

We examined the department's plans for the years under evaluation to determine the clarity of the objectives and the percentage of achievement of the five-year strategic plan for the years 2018-2022, which the Ministry issued to the health departments in Baghdad and the governorates. This was done in accordance with the circular of the Ministry of Health—Department of Planning and Resource Development—Department of Policies and Planning Health No. D.T./3/3/29807 on 5/16/2018. The circular included 18 goals distributed among the department's departments, all aimed at developing medical services and medical and support personnel these goals specifically focused on the following areas:

1. An updated organizational structure for the Ministry of Health and its affiliated departments and institutions.
2. Comprehensive health coverage for all governorates of Iraq.
3. Develops comprehensive and approved quality management systems for occupational health and safety to protect workers from environmental risks.
4. Improving oversight systems for government health institutions.
5. Developing human resources working in the health sector and raising their capabilities.
6. An advanced health information system (HIS) for the Ministry of Health.
7. Reducing the incidence of tuberculosis and the rates of drug-resistant tuberculosis in Iraq.
8. Improved community health awareness in the field of health promotion.
9. Increased rates of absolute breastfeeding during the first six months of the child's life.

10. Improves the health of mothers and children under the age of five.
11. Maintaining low AIDS endemicity throughout Iraq.
12. Improvement in the implementation of international health regulations at border crossings.
13. Reducing morbidity and mortality rates and reducing the occurrence of communicable disease outbreaks.
14. Reducing the death rate due to drug resistance.
15. Development of surgical and emergency medicine services.
16. Improving health services in the field of cancer diseases.
17. Improving preventive and therapeutic services, achieving psychological sustainability, and combating drugs.
18. Comprehensive coverage of the needs mandated to be provided by the General Company for Marketing Medicines and Medical Supplies, Kimadia.

We show below the most important findings in this regard:

- Despite the expiration of the five-year strategic plan, no goals have been achieved on the ground, such as an increase in the rate of supplying medicines, medical devices, or examinations, or adding a new hospital to the service.
- No financial sums have been allocated for the purpose of achieving these goals, as they aim to establish new infrastructure, which indicates the formality of this plan.
- The plan was general indicators that were not linked to numbers or quantities and were not measurable so that its main and sub-objectives could be translated and deviations, if any, could be identified.
- This plan did not accommodate the Corona pandemic that struck the country at the beginning of the year 2020. As health institutions suffered from a severe shortage of medical materials, medical supplies, and oxygen. and the lack of a place designated for the lying of the injured, and reliance was placed on a caravan hospital that was established by the Imam Hussein Shrine.

**Efficient use of service delivery supplies**

**First: Management and use of human resources**

Table (2) a decrease in the rate of beds available for hospitalization in hospitals affiliated with the Diwaniyah Health Department compared to the number of specialist doctors during the calendar years.

| Year | The number of beds prepared for lying down | Number of specialty doctors | Bed/doctor rate |
|---|---|---|---|
| 2018 | 1163 | 313 | 4 |
| 2019 | 1173 | 345 | 3 |
| 2020 | 1134 | 352 | 3 |
| 2021 | 1155 | 439 | 3 |
| 2022 | 1155 | 552 | 2 |

Source: Ministry of health, annual statistical reports and Records.

Table (3) the table below shows the number of operations and the number of surgeons and anesthesiologists during the calendar years

| Year | Number of operations (1) | Number of surgeons (2) | Number of anesthesiologists (3) | Rate of operation/ surgeon (1/2) | Operation rate/ anesthesiologist (1/3) |
|---|---|---|---|---|---|
| 2018 | 48719 | 100 | 10 | 487 | 4872 |
| 2019 | 52529 | 109 | 13 | 481 | 4040 |
| 2020 | 35984 | 113 | 13 | 318 | 2768 |
| 2021 | 42751 | 152 | 15 | 281 | 2850 |
| 2022 | 45986 | 111 | 59 | 414 | 779 |

Source: Ministry of health, annual statistical reports and Records.

From the table above we find the following:

a) The average number of operations per surgeon decreased during the calendar years, reaching (318, 281, 414, 481) respectively.

b) (B) The rate of operations per anesthesiologist increased during the calendar years, reaching (4040, 2768, 2850, 779) respectively, which indicates a severe shortage in the number of anesthesiologists.

Table (4) there is a shortage in the number of clinical pharmacists compared to the standard indicator (one clinical pharmacist for every 25 beds), which requires coordination with the Ministry of Health to complete the shortage in the number of clinical pharmacists, as shown in the table below:

| Year | The number of beds prepared for lying down | Clinical pharmacists | Standard number of pharmacists | Shortage of clinical pharmacists |
|---|---|---|---|---|
| 2018 | 1163 | 5 | 46 | (187) |
| 2019 | 1173 | 6 | 46 | (150) |
| 2020 | 1134 | 7 | 45 | (117) |
| 2021 | 1155 | 10 | 46 | (70) |
| 2022 | 1155 | 12 | 46 | (50) |

Source: Ministry of Health, annual statistical reports and Records.

Table (5) there is a shortage in the number of anesthesiologists compared to the standard indicator of one anesthesiologist per operating bed, which requires coordination with the Ministry of Health to complete the shortage in the numbers of anesthesiologists, as shown in the table below:

| Year | Total operating beds | Number of anesthesiologists | Shortage of anesthesiologists |
|---|---|---|---|
| 2018 | 28 | 10 | (18) |
| 2019 | 28 | 13 | (15) |
| 2020 | 28 | 13 | (15) |
| 2021 | 28 | 15 | (13) |
| 2022 | 28 | 17 | (11) |

Source: Ministry of Health, annual statistical reports and Records.

Table (6) the high rate of nursing staff and health professionals compared to the number of specialist doctors for each specialist doctor during the calendar year indicates the inefficiency of hospitals to invest in the human resources of nurses and health professionals. Which reflects negatively on the level of health and therapeutic services provided to patients, as shown in the table below:

| Year | Total number of nursing staff | Number of health professionals | Number of specialty doctors | Nurse/doctor ratio | Rate of health professionals/specialist doctors |
|---|---|---|---|---|---|
| 2018 | 5065 | 2859 | 313 | 16 | 9 |
| 2019 | 5816 | 3493 | 345 | 17 | 10 |
| 2020 | 5274 | 3447 | 352 | 15 | 10 |
| 2021 | 6782 | 4610 | 439 | 15 | 11 |
| 2022 | 7204 | 6000 | 552 | 13 | 11 |

Source: Ministry of Health, annual statistical reports and Records.

(6) Training and development: It shows the number of courses held and the number of participants from the department's employees and its affiliated health units during the calendar years, as follows:

| Year | 2018 | | 2019 | | 2020 | | 2021 | | 2022 | |
|---|---|---|---|---|---|---|---|---|---|---|
| cycle Type | Courses | Participants | Courses | Participants | Courses | Participants | Courses | Participants | Courses | Participants |
| Medical (1) | 13 | 620 | 11 | 252 | 4 | 94 | 10 | 387 | 9 | 502 |
| Nursing (2) | 30 | 1519 | 26 | 940 | 10 | 785 | 27 | 900 | 25 | 982 |
| Geometric | 8 | 128 | 3 | 45 | 2 | 33 | 3 | 34 | 6 | 112 |
| Administrative | 40 | 1034 | 21 | 599 | 13 | 651 | 31 | 598 | 9 | 434 |
| Statistic | 10 | 171 | 7 | 137 | 8 | 200 | 6 | 66 | 17 | 481 |
| Computer | 18 | 507 | 10 | 207 | 2 | 112 | 5 | 178 | 3 | 221 |
| Total(3) | 119 | 3979 | 78 | 2180 | 39 | 1875 | 82 | 2163 | 69 | 2732 |
| Percentage of change | - | - | (34) | (45) | (50) | (14) | 110 | 15 | (16) | 26 |
| Ratio 1/3 | 11 | 16 | 14 | 12 | 10 | 5 | 12 | 18 | 13 | 18 |
| Ratio2/3 | 25 | 38 | 33 | 43 | 26 | 42 | 33 | 42 | 36 | 36 |

Source: Ministry of Health, annual statistical reports and Records.

From the table above we find the following:

(a) A decrease in the percentage of doctors participating in training courses compared to the total number of doctors by (46%, 25%, 8%, 30%, 37%) during the calendar years, which requires increasing the number of medical training courses for the purpose of obtaining and learning about the latest developments in the medical fields.

(b) A decrease in the percentages of total courses for the years (2019, 2020, and 2022) by (34%, 50%, and 16%), respectively.

(c) A decrease in the total number of participants for the years (2019, and 2020) by (45% and 14%), respectively.

**Second: Management and use of financial resources:**

Table (7) The budget implementation rates during the calendar years ranged between (99%-109%), as the Health Department exceeded its allocated allocations for the years (2018, 2020, 2022), as shown in the table below:

| Year | Allocations/ dinar | Actual expenses/ dinar | Execution percentage % |
|---|---|---|---|
| 2018 | 156278289802 | 161058009982 | 103 |
| 2019 | 211238583481 | 208492546529 | 99 |
| 2020 | 211699088334 | 231306199442 | 109 |
| 2021 | 260890286762 | 260695705502 | 100 |
| 2022 | 271055745849 | 277663619295 | 102 |

Source: Ministry of Health, annual statistical reports and Records.

Table (8) A decrease in the amounts of medicines supplied to the Department of Health from the General Company Kimadia for the years (2019, 2021) by a change rate of (40%, 17%) respectively, noting that these amounts were not recorded as expenses in the records of the Department of Health for the calendar years, nor were they recorded. Preparing health institutions according to their annual needs for medicines and medical supplies. The Pharmacy

Department indicated that the percentage of supplying these medicines constitutes only 25% of the Diwaniyah Health Department's need, despite the need of hospitals and health and specialized centers affiliated with the department for many scarce and missing medicines, as shown in the table below:

| Year | Amount/dinar | Percentage of change |
|---|---|---|
| 2018 | 28895259778 | - |
| 2019 | 17257368511 | (40) |
| 2020 | 31480321961 | 82 |
| 2021 | 26194509088 | (17) |
| 2022 | 30195660376 | 15 |

Source: Ministry of Health, annual statistical reports and Records.

Table (9) The Ministry of Health, Department Planning and Resource Development, Financial Planning Department No. 12583, on 2/25/2019, reported a decrease in the percentages of revenues generated for the years 2019, 2020, and 2022 by 25%, 37%, and 15%, respectively. This was due to the Ministry cancelling most of the health financing fees and consolidating them into lump sums limited to fees (review and receipt).

| Year | Actual revenues/dinar | Change rate % |
|---|---|---|
| 2018 | 5753152698 | - |
| 2019 | 4288656783 | (25) |
| 2020 | 2718011294 | (37) |
| 2021 | 2919155282 | 7 |
| 2022 | 2486203421 | (15) |

Source: Ministry of Health, annual statistical reports and Records.

Cost of providing the service:

(A) There is no cost system in the Diwaniyah Health Department to calculate the patient cost for each year, and therefore we relied on the expenses and amounts of medicines supplied by the public company Kimadia for each financial year.

(b) The table below shows the patient cost extracted based on purchases (medicines, medical and laboratory supplies, and amounts of medications supplied by Kimadia Company) for each year and the numbers of patients during the calendar years, as it appears that costs fluctuate during the calendar years and increased significantly during the year/2020 despite the decrease in numbers. Inpatients and patients in the same year. The reasons for the increase are due to the outbreak of the Corona pandemic and the increase in the supply of medicines and medical supplies from the General Company Kimadia, as shown in the table below:

**Third: Use of assets:**

Table (10) Ambulances: There is a shortage in the number of cars, approximately (69) ambulances, compared to the standard number specified in accordance with Ministerial Statement No. (27) On 4/2/2009, which specified one car for every (10,000) people, as shown in the table below:

| Statement | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| Number of ambulances | 70 | 70 | 70 | 72 | 71 |
| Number of idle cars | 11 | 11 | 11 | 9 | 3 |

Source: Ministry of Health, annual statistical reports and Records.

Table (11) Medical devices: Most of the health institutions affiliated with the Diwaniyah Health Department suffer from a shortage of medical and laboratory equipment during the calendar years, and according to the position of the devices presented to us by the Diwaniyah Health Department according to its letter No. (1309) dated 3/30/2023, the following are some examples:-

| the device name | Name of the health institution |
|---|---|
| Automated system for microbial ID | Al Hussein Children's Hospital |
| Bubble CPAP (continuous positive air 15-way pressure neonate) | |
| Microscope | Diwaniyah First Sector |
| Microcentrifuge | |
| Amalgamator | |
| Blood gas analyzer | Thalassemia Center |
| PCV centrifuge | |
| Centrifuge | |

Source: Ministry of health, annual statistical reports and Records.

During the evaluation years of health institutions, inventories of fixed and stored assets were not unified at the institution level. This meant that the inventories of fixed and stored assets, which sent in at the department, division, and warehouse levels, not matched with the correct records, and the head did not receive any reports on the inventory and reconciliation date. The Department had to figure out the results of the inventory, which made it less important, which was against the rules in Paragraph (7-F) of Chapter Five of the instructions for the government/decentralized accounting system sent out by the Ministry of Finance/Department of Accounting-

Decentralized/904 No. (7584) on April 19, 2015. At the end of each year, the department conducts a periodic inventory of fixed assets to confirm their possession and utilization within the unit's activities. They also compare the inventory results with the administration's fixed asset records, identifying any discrepancies and the corresponding responsibilities. The Department of Health's main committee's oversight and follow-up procedures for the subcommittees' annual inventory of fixed and warehouse assets during the calendar years are inadequate. This negatively affects the subcommittees' performance, leading to delays in their work and non-compliance with the annual inventory instructions, which are crucial for preparing financial statements on time.

Table (12) Efficiency of service provision: First: The table below shows the number of inpatients, the number of beds, and their utilization rates during the calendar years, as follows:

| Year | Number of inpatient patients | The number of beds prepared for lying down | Actual days of stay | Bed occupancy rate % = (number of days patients stay / number of beds x 365) x 100 |
|---|---|---|---|---|
| 2018 | 90325 | (1) | (2) | 43 |
| 2019 | 97917 | 1163 | 183845 | 46 |
| 2020 | 64771 | 1173 | 198432 | 33 |
| 2021 | 69456 | 1134 | 138641 | 31 |
| 2022 | 78324 | 1155 | 131642 | 38 |

Source: Ministry of health, annual statistical reports and Records.

From the table above we find the following:

(1) A decrease in the bed occupancy rate for beds prepared for lying down for all calendar years compared to the World Health Organization's standard index of (80%), which reflects the efficiency of optimal use of the bed, which in turn indicates a decrease in treatment costs.

(2) The Diwaniyah Health Department did not seek to increase the number of inpatient beds for the last two years (2021 and 2022), despite the increase in the number of inpatient patients.

Table (13) An increase in the mortality rate of children under one year of age for two years (2021, 2022), which indicates a decrease in primary health care for newborns provided inside and outside health institutions during the calendar years, as shown in the table below:

| Year | Number of births | | | The number of deaths | | | Ratio of number of deaths/number of births % |
|---|---|---|---|---|---|---|---|
| | Within the institution | outside the institution | the total | Within institutions | outside institutions | the total | |
| 2018 | 30674 | 4825 | 35499 | 2261 | 2599 | 4860 | 14 |
| 2019 | 30864 | 3886 | 34750 | 2293 | 2558 | 4851 | 14 |
| 2020 | 31128 | 4018 | 35146 | 2462 | 2445 | 4907 | 14 |
| 2021 | 30259 | 3079 | 33338 | 2888 | 3504 | 5392 | 16 |
| 2022 | 29784 | 2523 | 32307 | 2477 | 2784 | 5261 | 16 |

Source: Ministry of Health, annual statistical reports and Records.

Table (14) Third: Public Health Department: An increase in the number of medical cases for the year 2022 compared to other calendar years due to an increase in infections with some epidemic diseases such as (chickenpox, animal bites, acute diarrhea, scabies, acute jaundice, viral hepatitis, pneumonia), which indicates the weakness of preventive measures. To limit the spread of these diseases by the Epidemiological Monitoring Unit working in the Diwaniyah Health Department and according to the objectives assigned to it in reducing the incidence of communicable diseases and anticipating and early detection of them by developing emergency plans to confront any new disease cases as shown in the table below:

| Name of the disease | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| Flaccid paralysis | 29 | 50 | 18 | 48 | 48 |
| Measles | 2 | 541 | 24 | 5 | 1 |
| Mumps | 338 | 190 | 21 | 59 | 36 |
| Chickenpox | 850 | 589 | zero | 208 | 1686 |
| typhoid | 31 | 183 | 46 | 36 | 32 |
| Cutaneous leishmaniosis | 347 | 111 | 189 | 640 | 445 |
| Black fever | 36 | 38 | 18 | 17 | 22 |
| Malta fever | 26 | 59 | 19 | 6 | 65 |
| Animal bite | 967 | 944 | 476 | 571 | 1532 |
| Viral hepatitis | 433 | 89 | 18 | 12 | 174 |
| Viral meningitis | 48 | 35 | 18 | 4 | 10 |
| Pneumonic | 964 | 1226 | 1182 | 472 | 2351 |
| Severe diarrhea | - | - | 17089 | 10334 | 28828 |
| Scabies | - | - | 182 | 205 | 854 |
| Severe jaundice | - | - | 143 | 457 | 1027 |

Source: Ministry of health, annual statistical reports and Records.

There is no comprehensive central plan to organize the activities of the Communicable Diseases Division in disease control, but rather reliance placed on plans issued by its affiliated units, which are often repetitive or stereotypical in performance. Not planning or implementing any vaccination campaigns for the communicable diseases mentioned above, despite the recording of many infections and their recurrence annually."

Table (15) Despite the diversity and increase of communicable diseases during the calendar years, we noticed the lack of activities of the Communicable Diseases Division/Epidemiological Monitoring Unit, which were limited to implementing educational seminars for citizens, as shown in the table below:

| Year | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| Number of seminars | 2 | 2 | 2 | 2 | 6 |

Source: Ministry of health, annual statistical reports and Records.

Table (16) the lack of implementation of the vaccination campaigns planned by the Polio Immunization Division for some years and their absence for others, despite their importance in reducing the incidence of that disease, in addition to "recording infections during the calendar years for those diseases, as well as" the lack of a plan or implementer during the years. (2018, 2021, 2022) and as shown in the table below:-

| Planned | | Implemented | |
|---|---|---|---|
| 2019 | 2020 | 2019 | 2020 |
| 2 | 1 | 1 | 0 |

Source: Ministry of health, annual statistical reports and Records.

Table (17) the competent division failed fully implement its planned activities, including laboratory visits, store visits, and liquefaction water models. Additionally, it failed to plan for other activities such as individual and joint health campaigns, granting and renewing health leaves, and seminars, as indicated in the table below:

| the details | 2018 | | 2019 | | 2020 | | 2021 | | 2022 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | a plan | outlet | a plan | outlet | a plan | outlet | a plan | outlet | a plan | outlet |
| Laboratory visits | 697 | 417 | 791 | 449 | 805 | 424 | 823 | 443 | 786 | 475 |
| Store visits | 18297 | 16785 | 21037 | 17830 | 22353 | 17489 | 22315 | 19274 | 22837 | 19929 |
| Individual and joint health campaigns | - | 543 | - | 461 | - | 637 | - | 694 | - | 842 |
| Granting and renewing health leaves | - | 1210 | - | 1071 | - | 998 | - | 1067 | - | 1680 |
| Drawn liquefaction water models | 5080 | 4861 | 5236 | 4632 | 3913 | 2445 | 3573 | 3028 | 3498 | 3214 |
| Number of seminars | - | 181 | - | 187 | - | 199 | - | 215 | - | 447 |
| Number of food forms withdrawn | 1100 | 1109 | 1344 | 1101 | 1544 | 1049 | 1444 | 1214 | 1432 | 1231 |

Source: Ministry of Health, annual statistical reports and Records.

Table (18) Failure to provide a specialized center for cancer diseases, despite the high rate of infections and deaths for some calendar years, as part of the beds prepared for hospitalization in the Diwaniyah Teaching Hospital are being exploited, in addition to the unavailability of medications for them, as shown in the table below:

| Year | Injuries | Deaths | % change in injuries | % change in mortality |
|---|---|---|---|---|
| 2018 | 545 | 163 | - | - |
| 2019 | 633 | 286 | 16 | 75 |
| 2020 | 628 | 302 | (8) | 6 |
| 2021 | 753 | 367 | 20 | 22 |
| 2022 | 764 | 311 | 1 | (15) |

Source: Ministry of Health, annual statistical reports and Records.

**Conclusions**

1- The department's failure to achieve the strategic goals specified in a five-year plan for the years (2018-2022), which included a number of main and secondary goals, and we did not find any goal that achieved on the ground.

2- The lack of preparation of alternative plans prepared in advance to address the problems facing the implementation of the main objectives and detailed tasks contained in Public Health Law No. (89) Of 1981 (amended) and the Ministry of Health Law No. (10) Of the year 1983 to keep pace with and suit new circumstances.

3- The poor distribution of cadres (medical, nursing, health professionals, technicians and administrators) among the health institutions affiliated with the Diwaniyah Health Department is represented by the presence of an increase and shortage of these cadres by comparing the actual staff with the standard staff of these institutions.

4- Hospitals and health centers lack many of the medical and laboratory equipment necessary to perform their diagnostic and therapeutic tasks, such as MRI machines, arterial staining machines, dental devices, ultrasound devices, duodenoscopy, hysteroscopies, nervous system endoscopes, pulmonary function test device, function test device bladder.

5- Weak infrastructure of health institutions, as they are old and do not keep pace with modern technology and were designed for population proportions that do not fit the current population, which has increased by approximately five times.
6- No hospital was opened in the city center or the districts and districts during the calendar years, despite the city's urgent need for new hospitals to relieve pressure on the currently existing hospitals."
7- The percentage of energy utilization available for the number of beds decreased during the calendar years, reaching (43%, 46%, 33%, 31%, 38%) due to the insufficient number of beds compared to the number of inpatient patients, which indicates that most of the medical cases that were treated Not dangerous.
8- The small number of polio campaigns for the years (2019, 2020) and their absence for the years (2020, 2021), in addition to the non-implementation of the planned ones.
9- Health institutions suffer from missing and scarce medicines throughout the year.
10-There is a shortage of medical and laboratory equipment in health institutions, which has an impact on the lack of provision of health services.
11-The lack of ambulances for the department to carry out its work according to the approved standard indicators, in addition to the lack of immediate aid centers, and the Health Department not provided with any ambulance during the calendar years.
12-There is no cost system in place in the department to calculate the patient cost for each year. We have found that the extracted patient cost is high by relying on the expenses for each year and the numbers of inpatients and returning patients.
13-There is no specialized center for cancer diseases in the governorate, despite the increase in disease cases and deaths during the calendar years.

**Recommendations**

1- It is necessary to translate the goals of the five-year plan into quantities and numbers so that it is possible to follow up on implementation and measure results, in addition to preparing alternative plans to address developments that may occur.
2- Striving to provide medicines and medical supplies when health institutions suffer from an acute shortage of them, for the purpose of improving the health services provided
3- Providing health institutions with the necessary medical and laboratory equipment to perform their diagnostic and therapeutic tasks, such as (MRI machines, arterial staining machines, dental machines, ultrasound machines, duodenoscopes, hysteroscopes, nervous system endoscopes, lung function testers, bladder function tester).
4- Reconsidering the distribution of medical, nursing, health professions, and support staff according to the standard staffing specified in health institutions.
5- Striving to find appropriate solutions to address ongoing cases of bacterial contamination in operating theatres.
6- Addressing the shortage of specialized doctors, and working to reconsider the distribution of medical professionals, technicians, administrators, and health professionals according to the standard staffing specified in health institutions.
7- Striving to provide immediate ambulances and provide a sufficient number of immediate ambulance centers according to approved indicators
8- Working with the job description guide for placing the right man in the right place.
9- Seeking to provide modern and advanced equipment to treat solid medical waste and establishing units to treat liquid medical waste before discharging it into sewage networks.
10-It is necessary to strive seriously to establish modern, advanced hospitals that keep pace with development and technology.
11-Relieve pressure on old hospitals and increase the number of hospitals in proportion to the population increase in the governorate.
12-Adherence to the standard structure specified for health institutions and reconsidering the units that closed in violation of the standard structure in an effort to increase the service provided.
13-We suggest that future research should address the issue of evaluating institutional performance and ways to improve performance efficiency in all work sectors to achieve the goals of organizations and adhere to international and local standards.

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