American Journal of Biology and Natural Sciences
https://biojournals.us/index.php/AJBNS
**ISSN: 2997-7185**

# Evaluation of Health Visitor and Family Medicine Units in Babylon's Healthcare Centers

**Ayad abbas Anied**
Community Health Dep., Technical Institute of Babylon, Al Furat Al-Awsat Technical. Uni., Babylon, Iraq

**Received:** 2024, 15, Dec
**Accepted:** 2025, 21, Jan
**Published:** 2025, 11, Feb



**Annotation: Background:** The Iraqi Ministry of Health (MoH) has developed a standardized package of basic health services for all primary healthcare (PHC) facilities to enhance service quality. This study evaluates service availability and facility needs in the family health units in Babylon. Methods: This cross-sectional study was conducted in three family healthcare sectors (the first Al-Hillah sector, Al-Musayyib sector, and Al-Hashemiyyah sector), which includes 6 out of 23 primary healthcare centers in the Babylon Governorate. The data collection started on March 3, 2022, and ended on August 27, 2022, and was randomly chosen from all sectors. Results: According to this study, the family health unit had a poor mean score of 48.03±17.97. Similarly, the health visitor indicators had an inadequate level of assessment, with a mean score of 46.87±14.09. In conclusion, this revealed a study that the primary health care centers evaluated had poor scores in all the final evaluation indicators for the family health unit and the health visitor unit.

**Keywords:** Health visitor units, family medicine units, primary health care, Babylon.

## Introduction

Prioritizing high-quality care is crucial for the healthcare delivery system. Primary health care centers (PHCCs) are vital public health services in developing countries, established under the Alma Ata Declaration of 1978. In Iraq, the main centers in the governorate are a fundamental part of the healthcare system [1].PHCCs are the first point of contact between the population and the healthcare system. good healthcare system performance leads to good health indicators.

The implementation services of primary care, including maternal and obstetric care, family planning, immunization, dietary improvement, emergency care, and infant care, have unequivocally reduced morbidity and mortality among females of childbearing age and teens. [2,3]. The World Health Organization (WHO) has supported this strategy for three years since it reduces costs, increases provider efficiency, and improves results.[4,5]

The Alma Ata Declaration emphasizes primary care as the crucial first point of contact for individuals, families, and communities with the national health system. It aims to bring healthcare as close as possible to where people live and work, serving as the foundational element of the ongoing healthcare process [6] The Institute of Medicine (IOM) defines the function of primary care as "providing integrated, reachable healthcare helping hand via clinicians who are accountable for addressing most personal health needs, developing a sustained partnership with patients, and practicing in the context of family and community [7, 8]. Primary health care (PHC) in Iraq faces challenges such as irrational use of services, poor hygiene environments, and patient lifestyles [9, 10]. Challenges include a surplus of specialists, unequal distribution of manpower, a lack of staff training, inconsistencies in salary systems, resource shortages, poor quality medical supplies, and inadequate information technology. Improving the system involves a family medicine approach and effective planning and monitoring [11].

Iraqi general medical practitioners lack formal coaching post-medical school, except for a two-year scientific internship in hospitals and twelve months in rural areas, despite an increase in specialized doctors and limited hospital positions [12]. Family medicine, a new specialization that emerged in the 1960s in the USA and UK, provides comprehensive health care for individuals and families. General practitioners are key providers of the UK National Health System, while in Cuba, household medical doctors are the chief providers of comprehensive health plans [13].

Family medicine is a medical specialty that provides comprehensive health care for individuals and families, irrespective of sex, age, or problem type [14]. Family medicine has evolved significantly, focusing on patient-based methods, bio-psycho-socio-ecological models, consultation models, and evidence-based medicine [15, 16]. also, Psychological interventions are clinically effective at managing depression. They are cost-suitable and preferred by women.

especially postnatal women, who face challenges with antidepressants [17, 18]. Health visitors to the UK are encouraging the use of primary care facilities to manage postnatal depression. Primary care is a crucial aspect of the healthcare system as it provides initial contact, accessible, continuous, comprehensive, and coordinated care. It is part of the primary health care services [19]. Technically, the health care system in Iraq has been on a centralized, curative, and hospital-oriented model. Such a system would not provide services that address the major health issues faced by the majority of the population equitably and sustainably [20]. A low level of confidence in the quality of services rendered at PHC centers is responsible for the low uptake of their services

## Materials and Methods

### Study design and setting

We conducted a cross-sectional study at 23 primary healthcare centers in the Babylon

Governorate. These centers were selected using simple random sampling and offer only 3 out of 6 units of family health services. The study also randomly selected health centers that provide health visitor services. In total, there are 46 primary health care centers in the Babylon Governorate, distributed across 5 primary health sectors. We randomly chose 23 centers (50% of the total) using multistage sampling techniques from all sectors and then selected randomized samples from each sector according to the sector aggregation map as in table 1.

**Table1: Multistage Sampling from Primary Health care Sectors in Babylon Governorate and Names of Centers Taken Randomly According to Catchment Maps of Sectors**

| Primary health care sector | No of all center | No | % |
|---|---|---|---|
| First AL-Hillah sector | 11 | 5 | 21.73 |
| Second AL-Hillah Sector | 11 | 6 | 26.08 |
| AL-Musayyib sector | 9 | 5 | 21.73 |
| AL-Mahawil Sector | 5 | 2 | 8.69 |
| Al-Hashemiyyah sector | 10 | 5 | 21.73 |
| Total | 46 | 23 | |

The data collection began on March 3, 2022, and concluded on August 27, 2022, from primary healthcare centers in the first Al-Hillah sector, the Al-Musayyib sector, and the Al-Hashemiyyah sector. The study involved randomly selecting health centers, providing family health services, and interviewing all the workers in these units using the convenience sampling technique. Data was collected using a standardized quality checklist package from the Iraqi Ministry of Health (MoH) and by interviewing the workers in these units as well as 26 employees from all primary healthcare centers providing family health services.

Inclusion criteria encompassed healthcare personnel in the primary healthcare center's family health and health visitor units, while those in other units were excluded.

Scoring Criteria

The evaluation of primary health care (PHC) services is based on a set of criteria, including the actual percentage score for each indicator. The Ministry of Health (MoH) has developed a checklist format consisting of three evaluation scores for all units in primary health center programs. These scores assess the quality of PHC services provided to patients:

| | | | |
|---|---|---|---|
| Score 0 ( poor score) | (not applicable) | ➡ | (< 50 % ) |
| Score 1 ( Fair score) | (Partially applicable ) | ➡ | (50-79 % ) |
| Score 2 (good or excellent score) | (applicable ) | ➡ | ( ≥80 % ) |

To find the percentage for each unit, you can use the following formula: Actual Degree / (Standard Degree x 2) x 100%

The standard degree for each unit is calculated by multiplying several items by two. On the other hand, the actual degree for each unit is calculated by summing up the scores obtained during appraisal.

**Results**

**Funding sources:**

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors

## Results

### Family Health Unit

The study found that 66.6% of Family Health Units received a good score (2) for having a doctor, as well as a community health technician or community health medical assistant. The number of medical units is appropriate for the families registered within the health center and the health staff is consistent with the structure. Only one indicator received a full score (100%) for having an employee responsible for documenting and organizing family health files. However, most of the other indicators received poor and fair scores (0, 1) for the majority of the study centers as in Table 2

**Table 2: Evaluating Scores for Family Health Unit in Babylon according to Iraqi MoH standardized**

| Family health unit (3 centers only) | Poor(0) (<50%) | | Fair(1) (50%-79%) | | Good(2) (=>80%) | |
|---|---|---|---|---|---|---|
| | No | % | No | % | No | % |
| The manager is a specialist in family medicine, a community doctor or a practicing physician trained in the field of family medicine. | 2 | 66.6 | - | - | 1 | 33.3 |
| Carrying out a population survey within the geographical area of more than 80% | 1 | 33.3 | 2 | 66.6 | - | - |
| The percentage of families registered within the health center is more than 80% | 1 | 33.3 | 2 | 66.6 | - | - |
| The presence of a family doctor of specialization or practitioner for every 750 families. | 2 | 66.6 | - | - | 1 | 33.3 |
| The presence of (doctor + community health technician or community health medical assistant) in each medical unit. | - | - | 1 | 33.3 | 2 | 66.6 |
| The number of medical units is suitable for families registered within the health center. | 1 | 33.3 | - | - | 2 | 66.6 |
| The presence of an x-ray machine and photographer. | 1 | 33.3 | 1 | 33.3 | 1 | 33.3 |
| The presence of sonar with a trained doctor. | 3 | 100.0 | - | - | - | - |
| The presence of an employee responsible for documenting and organizing family health files | - | - | - | - | 3 | 100.0 |
| The health staff is identical to the structure | - | - | 1 | 33.3 | 2 | 66.6 |
| The percentage of files that have been inventoried annually is over 80%. | 1 | 33.3 | 2 | 66.6 | - | - |
| The percentage of files created is more than 80% | 1 | 33.3 | 2 | 66.6 | - | - |
| The percentage of completed files is more than 80% | 1 | 33.3 | 2 | 66.6 | - | - |
| The percentage of inactive files is less than 20% (more than 3 years unused) | 1 | 33.3 | 2 | 66.6 | - | - |
| Documenting the family health file for all | - | - | 3 | 100.0 | - | - |

| | | | | | | |
|---|---|---|---|---|---|---|
| **family members.** | | | | | | |
| **The center is suitable for family health applications.** | **-** | **-** | **2** | **66.6** | **1** | **33.3** |
| **Using the computer to store data.** | **-** | **-** | **3** | **100.0** | **-** | **-** |
| **Mean ± SD (Range)** | **48.03± 17.97(32.35-67.64)** | | | | | |

**Health Visitor Indicators**

This study revealed that one indicator received a full evaluation score (100%) for inputting information into the main computer. A high percentage of (95.7%) PHCCs achieved an excellent score (>80%) in terms of training for field surveys and having an executive order for health visitor team members. Additionally, 78.3% and 69.6% of the study centers were rated good for conducting updated field surveys every two years and entering immunization information into the computer, respectively.

On the other hand, all PHCCs (100%) scored poorly in areas such as not sending emails to the population through the program, not using barcode or electronic population cards, failing to use GIS, lack of viewing screens, inadequate computers for all units, absence of daily maintenance and data storage, and no analysis of program outputs.

Overall, the average percentage for health visitor indicators was 46.87%, as detailed in Table 3

**Table 3: Evaluating Score for health visitor indicators in Babylon according to Iraqi MoH standardized**

| Health visitor | Poor (0) (<50%) | | Fair ( 1) (50%-79%) | | Good (2) (≥80%) | |
|---|---|---|---|---|---|---|
| | No | % | No | % | No | % |
| **Training on field survey** | **1** | **4.3** | **-** | **-** | **22** | **95.7** |
| **Conducting a field survey (updated) every two years, with the numbering of the role** | **5** | **21.7** | **-** | **-** | **18** | **78.3** |
| **Entering information into the master's computer** | **-** | **-** | **-** | **-** | **23** | **100.0** |
| **Entering the immunization information in the computer** | **1** | **4.3** | **6** | **26.1** | **16** | **69.6** |
| **Printing the color card or the unified card according to the housing areas** | **6** | **26.1** | **3** | **13.0** | **14** | **60.9** |
| **The existence of an administrative order for members of the health visitor team** | **1** | **4.3** | **-** | **-** | **22** | **95.7** |
| **Training the health visitor team to use the electronic system** | **3** | **13.0** | **5** | **21.7** | **15** | **65.2** |
| **The existence of administrative orders in training sessions for members of the health visitor team trained in providing health services** | **-** | **-** | **13** | **56.5** | **10** | **43.5** |
| **The presence and use of health visitor bags during field visits** | **8** | **34.8** | **6** | **26.1** | **9** | **39.1** |
| **The presence of the houses numbering maps** | **9** | **39.1** | **-** | **-** | **14** | **60.9** |
| **The presence of a healthy visitor's clothes** | **18** | **78.3** | **-** | **-** | **5** | **21.7** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **The presence of an internal network** | **8** | **34.8** | **-** | **-** | **15** | **65.2** |
| **Program outputs** | | | | | | |
| **Statistical reports are released for the dropouts from the vaccine.** | **3** | **13.0** | **8** | **34.8** | **12** | **52.2** |
| **Statistical reports are released for pregnant/up-to-date dropouts.** | **3** | **13.0** | **9** | **39.1** | **11** | **47.8** |
| **Statistical reports are released on the number of children under one-year-old + under five years old / updated.** | **2** | **8.7** | **8** | **34.8** | **13** | **56.5** |
| **Statistical reports are released on the number of women of childbearing age / updated.** | **4** | **17.4** | **9** | **39.1** | **10** | **43.5** |
| **Statistical reports are released on the number of pregnant/up-to-date women.** | **2** | **8.7** | **10** | **43.5** | **11** | **47.8** |
| **Statistical reports are released on the number of families within the geographical area** | **3** | **13.0** | **7** | **30.4** | **13** | **56.5** |
| **Enter information for the mother and child care unit** | **5** | **21.7** | **15** | **65.2** | **3** | **13.0** |
| **Personnel working in the care and immunization units work to enter their information** | **5** | **21.7** | **15** | **65.2** | **3** | **13.0** |
| **The center operates an archiving system according to the health visitor** | **12** | **52.2** | **-** | **-** | **11** | **47.8** |
| **Electronically, the targeted group's immunization campaigns are statistically analyzed** | **18** | **78.3** | **-** | **-** | **5** | **21.7** |
| **the sending of an e-mail to the population through the program** | **23** | **100.0** | **-** | **-** | **-** | **-** |
| **Working with a barcode or electronic population card** | **23** | **100.0** | **-** | **-** | **-** | **-** |
| **The program's paper reports are withdrawn daily** | **23** | **100.0** | **-** | **-** | **-** | **-** |
| **Working with the GIS System** | **23** | **100.0** | **-** | **-** | **-** | **-** |
| **Presence of view screens** | **23** | **100.0** | **-** | **-** | **-** | **-** |
| **Availability of a computer for all units** | **23** | **100.0** | **-** | **-** | **-** | **-** |
| **Daily maintenance and preservation of the program** | **23** | **100.0** | **-** | **-** | **-** | **-** |
| **Availability and use of work guides (work according to it)** | **14** | **60.9** | **6** | **26.1** | **3** | **13.0** |
| **Arranging the files according to the health visitor** | **13** | **56.5** | **6** | **26.1** | **4** | **17.4** |
| **Analysis of program outputs (health center benefits from program outputs in improving health service)** | **23** | **100.0** | **-** | **-** | **-** | **-** |
| **Mean ± SD (Range)** | **46.87± 14.09 (18.75-71.87) Poor evaluation** | | | | | |

## Discussion

In this study, only 33.3% of the Primary Health Care Centers (PHCCs) had a supervisor specializing in family medicine, a neighborhood doctor, or a practicing doctor trained in family medicine. This finding aligns with a previous study in Kurdistan, which found that only one in five PHCCs met the quality standards for having a supervisor specializing in family medicine. On another note, more than half of the PHCCs (66.6%) had a satisfactory rating for documenting the family health file for all family members and using a computer to store data. This result differs from a previous study in Kirkuk Governorate, which reported that four out of five centers had a good rating for documenting the family health file for all family members, and all PHCCs had a perfect rating (100%) for using the computer to store data. This difference in findings may be attributed to variations in sample size and demographics between the two studies.

The current study found that, on average, 48.03% of family health unit indicators were used, which is similar to a study conducted in Baghdad that found most primary health care centers (PHCs) had an unacceptable percentage [21, 22]. In this study, most PHCs had acceptable percentages for various indicators, including training on field surveys (95.7%), entering statistics into the main computer in all health centers, storing immunization data (69.6%), and training the health visitor team to use computers (65.2%). These results coincide with research conducted in the Thi-Qar governorate [23], which also found that the majority of health centers were rated superb in terms of training related to surveys, conducting updated subject surveys every two years, data storage in the main computer, storage of immunization data, and training of the health care traveler team to use the electronic system.

The research results showed that 78.3% of the PHCCs received a satisfactory rating for conducting a field survey every two years. This finding is in agreement with a previous study in the Maysan governorate, which reported that 89.06% of the surveyed sample was suitable for conducting a field survey every two years [24]. However, when it came to sending emails to the population, using a barcode or electronic population card, and providing computers for all units, the study revealed that all PHCCs scored poorly. It is worth noting that a previous study conducted in Nigeria found that all health facilities in the 11 states evaluated did not have email access or computers [25].

The most recent study indicates that, on average, health visitor services were utilized at a rate of 49.18%. This finding contradicts a previous study conducted in Maysan Governorate [24], which reported that 82.64% of health visitor program services had a proper percentage (>80%). One possible explanation for this difference in results could be the variation in sample sizes. Hospital medical practitioners who rotate to THPHs often excel in a specific medical specialty but may lack familiarity with a wide range of important care activities, which limits their ability to provide the expected level of care. They typically provide basic "OPD-like" care, for which they are trained, but this may not fully meet the needs of service users who are seeking continuity of care and a patient-centered approach [26]. This study adds to the existing literature by providing a comprehensive evaluation of family health units and health visitor units in primary health care centers in the Babylon Governorate in Iraq. This study adds to the existing literature by providing a comprehensive evaluation of family health units and health visitor units in primary health care centers in the Babylon Governorate in Iraq. The study emphasizes the importance of training on field surveys, conducting updated field surveys every two years, and utilizing technology for data entry and analysis. By addressing these aspects, the family health units and health visitor units can enhance their effectiveness and efficiency in providing healthcare services to the population. This highlights the need for improvement in several areas, including the presence of specialist supervisors, documentation of family health records, and the use of computer systems for data storage. These findings provide valuable insights for policymakers and healthcare providers in addressing these deficiencies and implementing necessary improvements. .

## Conclusion

The study concluded that the final evaluation indicators for the family health unit and the health visitor unit had poor evaluation scores in all the primary healthcare centers. It is recommended to create a program that focuses on developing the capacity of family medicine and primary healthcare centers. This program should improve the registration process of patients' files and ensure that standard medication protocols are followed. Education should be provided to health visitors to help them recognize and manage ethical and practical tensions that arise from contradictory expectations. Changes to current health visitor education should also be considered to include all necessary content in initial qualifying programs.

## Competing interests

The authors declare no competing interest.

## Acknowledgment

The authors would like to express their gratitude to the individuals who generously agreed to participate in this survey. Additionally, we extend our sincere appreciation to employees working in all primary healthcare centers.

## REFERENCES

1. World Health Organization, United Nations Children Fund, World Bank, United Nations Development Program, "Primary health care joint report: international conference on Primary Health Care working papers," Mar. 9, 1984. [Online]. Available: PubMed | Google Scholar.
2. Regional Health System Observatory, World Health Organization, "Health System Profile. Iraq," 2006. [Online]. Available: PubMed | Google Scholar.
3. World Health Organization, "Renewing Primary Health Care in the Americas. A Position Paper of the Pan American Health Organization / World Health Organization (PAHO/WHO)," 2007, [Updated Nov. 10, 2011]. [Online]. Available: http://apps.who.int/medicinedocs/en/m/abstract/Js19055en/.
4. S. Tollman, J. Doherty, and J. A. Mulligan, "Primary Health Care: Key to Delivering Cost-Effective Interventions," Fogarty International Center of the U.S. National Institutes of Health, The World Bank, World Health Organization, 2006. [Online]. Available: PubMed | Google Scholar.
5. J. MacInko, B. Starfield, and T. Erinosho, "The impact of primary healthcare on population health in low- and middle-income countries," *Journal of Ambulatory Care Management*, vol. 32, no. 2, pp. 150–171, 2009. [Online]. Available: pmid:19305227. PubMed | Google Scholar.
6. T. L. Rice, "Lessons from across the pond. U.K.'s NHS gets better outcomes at less cost by emphasizing primary-care docs," *Modern Healthcare*, vol. 40, no. 37, p. 17, 2010. [Online]. Available: pmid:21322315. PubMed | Google Scholar.
7. World Health Organization, "Primary Health Care: Now More Than Ever," Geneva: World Health Organization, 2008. [Online]. Available: PubMed | Google Scholar.
8. S. Nitayarumphong, "Annex 8: achieving universal coverage of health care in Thailand through the 30 baht scheme," in *World Health Organization*, New Delhi: WHO Regional Office for South East Asia, 2005. [Online]. Available: PubMed | Google Scholar.
9. D. Hughes, S. Leethongdee, and S. Osiri, "Using economic levers to change behaviour: the case of Thailand's universal coverage health care reforms," *Social Science & Medicine*, vol. 70, pp. 447–454, 2010. [Online]. Available: PubMed | Google Scholar.
10. Iraqi Ministry of Health, "Health in Iraq. The Current Situation, our Vision for the Future," 2nd ed., Dec. 2004. [Online]. Available: PubMed | Google Scholar.

11. N. Shabila, N. Al-Tawil, T. Al-Hadithi, E. Sondorp, and K. Vaughan, "Iraq primary care system in Kurdistan region: providers perspectives on problems and opportunities for improvement," *BMC International Health and Human Rights*, vol. 12, p. 21, 2012. [Online]. Available: PubMed | Google Scholar.

12. M. Moore et al., "The future of health care in the Kurdistan Region Iraq Toward an Effective, High-Quality System with an Emphasis on Primary Care," *RAND Health Quarterly*, 2014. [Online]. Available: PubMed | Google Scholar.

13. World Health Organization, "Family Medicine Report of a Regional Scientific Working Group Meeting on Core Curriculum," Colombo, Sri Lanka, 9-13 Jul. 2003, Regional Office for South-East Asia, New Delhi, Oct. 2003. [Online]. Available: PubMed | Google Scholar.

14. C. Gutierrez and P. Scheid, "The History of family Medicine and its Impact in US Health Care Delivery," 2002, University of California, San Diego, to the Department of Family and Preventive Medicine. [Online]. Available: PubMed | Google Scholar.

15. World Organization of Family Doctors - Europe, *The World Book of Family Medicine European Edition*, 2015. [Online]. Available: PubMed.

16. P. Bower and N. Rowland, "Effectiveness and cost effectiveness of counselling in primary care," *Cochrane Database Syst Rev*, no. 3, CD001025, 2006. [Online]. Available: PubMed.

17. M. R. Oates et al., "Postnatal depression across countries and cultures: a qualitative study," *Br J Psychiatry*, vol. 184, suppl. 46, pp. s10-16, 2004. [Online]. Available: PubMed.

18. Department of Health, "Into the mainstream, implementation plan: mainstreaming gender and women's mental health," London: Department of Health, 2003. [Online]. Available: PubMed.

19. R. Atun, "What are the advantages and disadvantages of restructuring a health care system to be more focused on primary care services?" Copenhagen, WHO, Regional Office for Europe, 2004. [Online]. Available: http://www.euro.who.int/document/e82997.pdf.

20. L. Baser and K. Khazeal, "Evaluation of primary health care services in the typical family care centers in the province of Kirkuk," *Journal of Kirkuk University For Administrative and Economic Sciences*, vol. 1, no. 8, pp. 342–366, 2018. [Online]. Available: PubMed | Google Scholar.

21. A. M. Fadhil and M. F. Khalifa, "Impact of Family Physicians' Practices upon the Quality of Family Medicine Health Care Services at Model Primary Health Care Centers in Baghdad City," *Iraqi National Journal of Nursing Specialties*, vol. 30, no. 2, pp. 13–24, 2017. [Online]. Available: PubMed.

22. A. A. H. M. AL-Sarray, "Evaluation of Application of Quality Improvement Program Among a Samples of Primary Health Care Centers In Thi-qar Governorate," *University of Thi-Qar Journal Of Medicine*, vol. 15, no. 1, pp. 12–28, 2018. [Online]. Available: PubMed.

23. G. D. A.-Z. Al-kaisi and R. A. A.-Q., "Assessment of Health Service Quality by Health Visitor Program: Field Research in Maysan Health Directorate," *International Journal of Science and Research (IJSR)*, vol. 6, no. 12, pp. 986–992, 2015. [Online]. Available: PubMed.

24. R. Pitt et al., "Annotated Bibliography of Urban Wet Weather Flow Literature from 1996 through 2000." [Online]. Available: PubMed.

25. Nigeria Ministry of Health, "Assessment of Primary Health Care Facilities for Decentralization of HIV/AIDS Services in Nigeria," MEASURE Evaluation, 2014. [Online]. Available: file:///C:/Users/PC/Downloads/tr-13-93.pdf.

26. Y. Pongsupap et al., "Assessment of the Thai Universal Coverage Scheme TOR 5.1.1: Impact on Primary Care," Nonthaburi: Health System Research Institute, 2012. [Online]. Available: PubMed.