

## The Insights of Experienced Pharmacists Regarding the Iraqi health Insurance Program: A Qualitative Study<sup>(Conference Paper )#</sup>

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### Abstract

The aim of study was to explore pharmacist insights toward the impact of prospective implementation of the Iraqi health insurance program on patients, providers and health system.

This was a qualitative study including semi-structured face-to-face (mostly) interviews with experienced pharmacists. The interview guide included open-ended questions about the impact of the national health insurance program on patients and healthcare providers at three levels: quality of services, costs, and frequency of visits. Potential challenges were also discussed. Interviews were conducted in four provinces from April to May 2022. Thematic analysis was used to analyze the interview findings and generate themes and subthemes.

The study recruited 21 pharmacists till the saturation point has been reached. Most of the participants were aware of the new health insurance law. Most participants believed that the program could enhance patient health and would increase the income of healthcare providers (HCPs) in the private sector. They also expected that patients would use private-sector services more frequently. Additionally, the implementation of the health insurance can improve the quality of healthcare services and reduce the financial burden regarding private sector fees. The potential challenges of the program include people's resistance to paying a monthly premium, difficulties in claims processing, potential delays in the reimbursement of HCPs, potential patient misuse of the insurance program, and the absence of an electronic system and database. There are not an adequate number of priced and tested medications.

The health insurance program has several potential advantages, but at the same time it can face several technical challenges. The program should be well studied before implementing and it needs to be piloted at small scale before national implementation. The electronic system must be implemented by healthcare settings to facilitate transferring of the information/bills to the health authority. It is recommended to hire international team of experts to supervise the management this new system.

**Keywords:** National Iraqi Health insurance law, Iraqi patients, Iraqi Pharmacists, Service quality, Challenges, Perception, Qualitative study

رؤى الصيدالدة ذوي الخبرة تجاه برنامج الضمان الصحي العراقي: دراسة نوعية (بحث مؤتمر) #  
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# المؤتمر العلمي العاشر لكلية الصيدلة، جامعة بغداد ٢ - ٣ حزيران ٢٠٢٢  
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### الخلاصة

كان الهدف من الدراسة هو استكشاف تصورات الصيدالدة تجاه تنفيذ وتأثير برنامج الضمان الصحي على المرضى ومقدمي الخدمات والنظام الصحي العراقي.

كانت هذه دراسة نوعية تضمنت مقابلات شبه منظمة وجهاً لوجه مع صيدالدة ذوي خبرة. تضمن دليل المقابلة أسئلة مفتوحة حول تأثير برنامج الضمان الصحي الجديد على المرضى ومقدمي الرعاية الصحية على ثلاثة مستويات: جودة الخدمات والتكلفة وعدد الزيارات. كما تمت مناقشة التحديات المحتملة. تم إجراء المقابلات في أربع محافظات من نيسان إلى ايار ٢٠٢٢. تم استخدام التحليل الموضوعي لتحليل نتائج المقابلة وتوليد الموضوعات والمواضيع الفرعية.

شملت الدراسة ٢١ صيدالدياً حتى الوصول إلى نقطة التشبع. كان معظم المشاركين على علم بقانون الضمان الصحي الجديد. واتفقوا جميعاً على أن القانون يمكن أن يعزز صحة المريض. يعتقد معظم المشاركين أن الخطة ستزيد من دخل مقدمي الرعاية الصحية في القطاع الخاص. كما يتوقعون أن يستخدم المرضى خدمات القطاع الخاص أكثر من القطاع العام. بالإضافة إلى ذلك، يمكن أن يؤدي تطبيق نظام التأمين الصحي إلى تحسين جودة خدمات الرعاية الصحية وتقليل العبء المالي المتعلق برسوم القطاع الخاص. تشمل التحديات المحتملة للخطة معارضة الناس لدفع الأقساط الشهرية، والصعوبات في معالجة المطالبات، والتأخيرات المحتملة في السداد لمقدمي الرعاية الصحية، وإساءة استخدام المريض لخطة الضمان، وعدم وجود نظام إلكتروني وقاعدة بيانات وعدم وجود عدد كافٍ من الأدوية المسعرة والمفحوصة.

تتمتع خطة الضمان الصحي الجديدة بالعديد من المزايا المحتملة، ولكنها في نفس الوقت يمكن أن تواجه العديد من التحديات الفنية. يجب دراسة الخطة جيداً قبل تنفيذها ويجب تجربتها على نطاق صغير قبل التنفيذ الوطني. يجب أن يتم تنفيذ النظام الإلكتروني من قبل عيادات الأطباء والصيدليات والمستشفيات لتسهيل نقل المعلومات/ الفواتير إلى هيئة الصحة. يوصى بالاستعانة بفريق دولي من الخبراء ذوي الخبرة في إدارة خطة الضمان للإشراف على هذا النظام الجديد.

الكلمات المفتاحية: قانون الضمان الصحي، المرضى العراقيون، الصيدالدة العراقيون، جودة الخدمة، التحديات، التصور، دراسة نوعية.

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## Introduction

For more than three decades, the Iraqi healthcare system has been experiencing several difficulties and challenges which have negative impacts on the quality of healthcare services <sup>(1)</sup>. Everyone in Iraq is insured by the government's health care system <sup>(2)</sup>. Every single health care facility that is part of the public sector is owned by the government and falls under the purview of the Ministry of Health (MOH). Every single health care provider that contributes to the public health system is an employee of the government. Because private health insurance is not widely used in Iraq, there are no reliable statistics available for the sector <sup>(3)</sup>. The main current challenge for the public sector is inadequate funding to the MOH as the budget allocated in 2019 was US \$ 5.0 billion. In other words, the healthcare sector received just 4.5% of the state budget This proportion is low when compared to other Middle Eastern nations with similar budgets <sup>(4)</sup>. The State Company for Marketing Drug and Medical Appliances (KIMADIA) which is responsible for importing and distributing medicines, medical devices, and equipment for public healthcare settings in all 18 governorates of Iraq. It was able to secure only 60% of the essential medicine list in 2019 because of the low budget<sup>(4)</sup>.

The Iraqi population has risen exponentially over the last four decades, growing from a population of about 14.0 million in the 1980s to 40 million in 2020 <sup>(5)</sup>. The Directorate of Population and Manpower Statistics in Iraq indicated that the population census estimates in Iraq for the year 2030 will reach 51,211,700 people<sup>(6)</sup>. This large number afflicts burden on an already underdeveloped health sector and creates new challenges that need substantial solutions.

Health insurance is defined as an insurance system which covers medical expenses by a third party <sup>(7)</sup>. A new Iraqi Health Insurance Law (IHIL) has been approved in 2021. The beneficiaries

(participants) should pay a monthly premium of 1.0% of the salary of almost all governmental employees, except those with high-ranking positions, who should pay 2.5% of their monthly income. This premium fee can cover the family members including jobless spouse, parents and children less than 21 years who are still studying. Low-income people disabled and people with terminating diseases will have free coverage. Emergency services in the public sector and preventive public health services such as vaccination and screening will still be provided for free by the MOH <sup>(8)</sup>. Most of insured patients should pay co-insurance of 25% for prescriptions, lab tests, X-ray and medical dental services<sup>(8)</sup>. They also should pay 10% of the physician visit fees. Health Insurance Authority (HIA) is governmental entity will regulate the new Iraqi health insurance. HIA will receives monthly bills from providers, premium from people and reimburses providers. Each patient should register at a doctor in public or private sector and beneficiaries will have a health insurance card <sup>(8)</sup> (Figure 1). The network can include healthcare providers from both the private and public sectors. Current study was the first in-depth study investigating the pharmacist perceptions toward the prospective national health insurance. The pharmacists' recommendations can help health officials to evaluate the potential barriers facing the national health insurance program. The study can explain in-depth the pharmacists' concerns and requirements of successful implementation of the national health insurance. Interview-based studies can provide in-depth information through follow-up questions which cannot be provided by survey-based studies. Additionally, the interviews were interactive between the researcher (interviewer) and participants (interviewees) to have daily practice details about the topic.

The aim of study was to explore pharmacists' insights toward implementation and impact of new national health insurance program on patients, providers and health system.



Figure 1. The prospective Iraqi Health Insurance Program.

## Methods

This qualitative study included face-to-face or phone semi-structured interviews with pharmacists working in public and/or private healthcare settings. The interview guide included open-ended questions covering the pharmacist perceptions about the impact on adopting the new health insurance program on patients and healthcare providers at three levels: Quality of services, service cost and frequency of visits. Potential challenges were also discussed. Face-to-face interviews were conducted at public or private healthcare settings by one master student (pharmacist) in person or over the phone. The interviews were conducted from April through May 2022 in four provinces in Iraq: Dhi Qar, Baghdad, Wasit and Al-Muthanna. Most interviews were audio-recorded to transcribe every word.

### Setting

A total of twenty-one pharmacists have been interviewed by the researcher. He had met ten pharmacists in person (3 pharmacists at hospitals; five pharmacists at the Pharmacy Department; one pharmacist at a health centre in a rural area; and one pharmacist in the Training and Development Center) and eleven pharmacists over the phone. Thirteen of them agreed to be audio recorded, and the interviews lasted between 20 and 40 minutes.

### Inclusion criteria

All pharmacists must have at least five years of experience in the Iraqi healthcare system, and all are registered with the Syndicate of Iraqi Pharmacists (both public and private sectors). In other words, they should have completed their rotation and hospital residency at the public sector and had their own private pharmacy license.

### Pharmacists' recruitment

Two methods of sampling were used: purposive and snowballing. Initially, the researcher used the purposive technique to target pharmacists in the public and private sectors in order to identify pharmacists with adequate experience in both public and private sectors. In addition, the researcher used a snowball strategy, which included asking participants about additional pharmacists who are interested to participate and meeting the inclusion criteria. In addition, several pharmacists who met the inclusion criteria refused to participate because of the excessive burden during work hours. Before the interview, the participants got a guide for the interview and a brochure about the new IHIL (Figure 1) through WhatsApp or Telegram. We kept recruiting pharmacists until the saturation point was reached. Before the interviews, interviewees gave their verbal permission, and their comments were made anonymous to protect their privacy. Thirteen interviews were audio-recorded after obtaining the participants' consent. To overcome any language

barrier, the interviews were conducted using a combination of English and Arabic languages. Then, two bilingual authors translated all interview transcripts to English.

### Ethical approval

Study proposal was approved by the Central Scientific Committee of the University of Baghdad College of Pharmacy. Before the interviews were conducted, verbal permission was acquired from the participants. Participation was voluntary, and recording the interview was optional. To maintain participant anonymity, the interviews were unidentified. The participants received no reward.

### Thematic analysis

The qualitative data obtained from the interviews was analyzed using thematic analysis. The researchers gathered qualitative data from the participant responses to discover and develop themes. Braun and Clarke's (2006) six steps for thematic analysis were followed by the researchers<sup>(9)</sup>. These steps include becoming familiar with the data (the comments), making initial codes, looking for themes, evaluating themes, defining and labeling themes, and writing the report.

## Results

Interviews were conducted with 21 experienced pharmacists in four governorates, namely Baghdad, Dhi Qar, AL- Muthanna , and Wasit. They were 16 men and five women. Table 1 shows the demographic and professional information of the participants.

**Table 1. Demographics characteristics of the participating pharmacists**

The code	Gender	Specialty	Degree	Workplace	Total years of experience
Ph 1	Male	Chief Senior Pharmacist	Higher Diploma	Dhi Qar Health Department/Training and Development Center	19
Ph 2	Male	Practitioner pharmacist	BSc	Dhi Qar Health Department / Pharmacy Department	8
Ph 3	Male	Practitioner pharmacist	BSc	Dhi Qar Health Department / Al-Haboubi Teaching Hospital	8
Ph 4	Male	Clinical Pharmacist	Master	Wasit Health Department / Fairuz Hospital	10
Ph 5	Female	Practitioner pharmacist	BSc	Department of Pharmacy / Department of Health Dhi Qar	14
Ph 6	Male	Practitioner pharmacist	BSc	Dhi Qar Health Department/Aljamiah Health Center	7
Ph 7	Male	Practitioner pharmacist	BSc	Store manager in Al Muthanna province	14
Ph 8	Male	Practitioner pharmacist	BSc	Dhi Qar Health Department	8
Ph 9	Male	Practitioner pharmacist	BSc	Dhi Qar Health Department/Mohammed Al Mousawi Hospital	11
Ph 10	Male`	Practitioner pharmacist	BSc	Department of Pharmacy / Department of Health Dhi Qar	21
Ph 11	Male	Practitioner pharmacist	BSc	Dhi Qar Health Department	6
Ph 12	Male	Practitioner pharmacist	BSc	Dhi Qar Health Department	9
Ph 13	Male	Master of Clinical Pharmacy	Master	Pharmacy Department/ Dhi Qar Health Department	18
Ph 14	Female	Practitioner pharmacist	BSc	Pharmacy Department/ Drug Monitoring Unit/ Dhi Qar Health Department	9
Ph 15	Female	Practitioner pharmacist	BcS	Mohammed Al Mousawi Hospital/ Dhi Qar	6
Ph 16	Male	Master of Pharmaceutics	Master	Azizia Hospital/ Wasit	7
Ph 17	Male	Practitioner pharmacist	BSc	Al-Shuyoukh Suq sector / Dhi Qar Health Department	10
Ph18	Female	Master's degree	Master	Al-Amal Hospital for Cancer / Baghdad	12
Ph 19	Male	Practitioner pharmacist	BSc	Al-Hussein Teaching Hospital/ Dhi Qar Health Department	7
Ph 20	Male	Practitioner pharmacist	BSc	Dhi Qar Health Department	8
Ph 21	Female	Practitioner pharmacist	BSc	Dhi Qar Health Department	11

According to the participating pharmacists, the national health insurance program has several potential gains on patient clinical and economic outcomes, but at the same time it can face several technical challenges and requirements. The main themes and subthemes of the findings are summarized in Table 2.

**Opinions of the pharmacists participate in current study about the new Iraqi health insurance law**

All pharmacists who were interviewed supported the implementation of the new Iraqi health insurance program because it would subsidize medical services and reduce the financial burden on insured people:

*"I am supportive of this law because it allows patients who were not able to visit the private healthcare settings due to financial barriers. Through this program, they will be able to follow up on their health condition"*(Ph-9).

*"Health insurance is a good thing because when the patient visits hospitals or the private sector, the fees paid are low because the services are subsidized"*(Ph-14).

**The health insurance can enhance quality of medical services**

Most pharmacists believed that the health insurance can enhance the quality of medical services in both the public and private sectors because there will be more competition among health care providers:

*"I'd like to add that competition between health care providers helps to make sure that provided services will be good"*(Ph-2).

*"As a result of competition between pharmacies, it is assumed that the level of services provided will improve, and the performance of workers in pharmacies will also improve. As for the public sector, the less workload on workers, the more time they will have to take care of patients in order to fully communicate information"*(Ph-18).

Some pharmacists suggested having financial penalties for low quality services.

*"Healthcare providers should face financial penalties for short-term failures and low-quality services, so that the hospital bears the costs"*(Ph-8).

**The health insurance will increase the workload and providers' income in the private sector**

According to the perspectives of most pharmacists, the short waiting list and high quality of services in the private sector will make insured people more likely to go there. This will increase the income of HCPs who have contracts with the Health Insurance Authority.

*"Patients go to the private sector more than the public sector, because the public sector is a collapsed sector, and the services are mostly unavailable, and you may need to wait, so the private sector is better in terms of speed and is supported at the same time"* (Ph-9).

*"The turnout of citizens participating in this program will be on the private sector because of the care, cleanliness, and easy access to medical services"* (Ph-18).

*"Those who work in the private sector benefit more because they receive more patients, and this is accompanied by an increase in daily financial income"* (Ph-15).

*"The financial return will be better, especially in the private sector, because the number of patients for this sector is greater"* (Ph-12).

**The role of a family physician in organizing workflow within the new National Iraqi Health Insurance Program.**

The majority of pharmacists agreed that having family doctors involved in this project is important because they will have all patient's medical history and will be able to decide if patient needs to see a specialist doctor. This will reduce the workload on healthcare providers and give them time to keep track of important disease cases:

*"The family doctor is a sophisticated and necessary system to be applied for the purpose of knowing the history of the patient and their family as well. As you know, there are rare genetic diseases, and there is also sensitivity to certain drugs, and this information will be present with the family doctor, and he is also the decision-maker in referring patients to the specialized doctor"*(Ph-8).

*"It is better that the program includes a family doctor, because he knows all the health details of the patient and determines whether the patient needs to see the specialist doctor, thus reducing the time and effort for the specialist doctor"*(Ph-20).

*"I currently go to an ophthalmologist every six months because I have eye problem, and this is a result of late detection because we do not have a family doctor, and therefore early detection of diseases, including rare ones, is important so that we do not reach advanced stages"*(Ph-10).

**The clinical and economic effects of the new Iraqi health insurance program on patients**

All the participating pharmacists expected the health program will reduce the financial burden on patients and this will reflect positively on their health:

*"It can reduce the financial burden on the patient because the services provided, such as operations and medicine, are subsidized"*(Ph-11).

*"Every day I live with the suffering of patients because some medicines or doctors' prescriptions are expensive, and this law, if it is actually applied, will save them"*(Ph15).

*"The percentage of deduction from the employee's salary is small, and therefore this monthly deduction will not affect them. Therefore, when the employee is exposed to an emergency health situation in which they need a sum of money, the health insurance provides him with financial support"*(Ph-16).

"On health, the effect of this program is very significant and realistic. Before implementation, citizen is not screened for health issues except in very necessary cases, but if the program is implemented, even in simple cases, he and his family will be seen by healthcare providers"(Ph-9).

#### **Potential challenges could face the implementation of the Iraqi health insurance program**

The participants listed several potential challenges facing the implementation of the health insurance at national level. The potential challenges can be people resistance to pay monthly premium, inadequate expertise in management of financial bills, potential delay in the reimbursement of HCPs, patient overuse of the insurance program and absence of electronic system and database.

#### **Not adequate number of priced and quality tested medications**

According to seven pharmacists, one of the challenges that will face the implementation of this program is the testing and pricing of all medicines available in the public and private sectors, as there is currently a slowdown in the testing and pricing process. That is, after the program is put into place, there must be enough safe and effective medicines to go around.

"Will medicines in the Iraqi market be tested and priced throughout Iraq? because, to my knowledge, only one testing center is available, and it is impossible to quickly test medicines if only one is available"(Ph-8).

"When implementing this program, the medicines are supposed to be priced and tested, and this is a challenge for the state because most of the medicines in the pharmaceutical market are neither prices nor tested and entered the country through unofficial methods"(Ph-11).

#### **People may not like the idea of monthly payment for the Iraqi National health insurance**

Nine pharmacists stated that getting people to accept this point related with health insurance is one of the main challenges and some people may even be against the implementation of this national program:

"A large percentage of citizens will object to the program, and the reason for this is that they do not realize the importance of the health insurance law. This is considered the biggest challenge because this is expected at the beginning of the implementation of the program, but over time and when the benefits of its application are felt, the rejection will decrease"(Ph-19).

"Employees, especially young people, refuse this thing [health insurance] because they do not complain about illness, so they must be educated that this law will greatly benefit them and their families"(Ph-9).

"Citizens refuse to participate because they see that the state takes the money and does not provide services at the expected level"(Ph-5).

#### **Expected problems or delaying in the payment to healthcare providers**

Most of the pharmacists revealed that there could be payment problems, which could affect the work of healthcare providers.

"Our work depends on the availability of medicine to provide the service. Delaying payment to pharmacies will delay payment to the drug stores. Therefore, payment must be made by the Health Insurance Authority within a period of time not exceeding one month"(Ph-2).

One pharmacist was pessimistic and expected failure in the program after implementation. He thought that HCPs may cancel the contract with the Health Insurance Authority due to payment problems:

"Realistically, I do not think that there will be any development in the two sectors after the implementation of the program. It is possible that healthcare providers will withdraw from the program, and I believe that the patient will not benefit greatly from the service"(Ph-13).

#### **No electronic health records are adopted currently**

Seven pharmacists mentioned that the program cannot be carried out properly without the electronic database.

"We do not have accurate statistics about the diseases. This issue will negatively affect the implementation of the program. As you know, most of patients have chronic diseases, so we need to study the topic carefully from an economic point of view "(Ph-19).

"We do not know how many people have high blood pressure, etc. I don't think we have an electronic system in Iraq. Do we have statistics about the number of healthcare settings in each region? I mean, are the settings sufficient to cover insured patients? For example, in Nasiriyah, we do not have hospitals that can cover all residents "(Ph-8).

#### **Expecting difficulties in claims processing**

Most pharmacists expected difficulties in management and processing of the insurance program claims.

" We need qualified, experienced and trained staff people who can visit to institutions that have implemented this program, or attracting a team from abroad to supervise this system management"(Ph-1).

"The program must have a correct beginning, because poor programming means failure" (Ph-4).

#### **Potential patient misuse of the insurance program**

Insured people may overuse the health insurance by increasing their unnecessary visits to healthcare providers because they are subsidized.

"Because the health services will be subsidized, insured individual can overuse of healthcare

services particularly in the private sector which puts additional strains on the fund. Therefore, there are supposed to be programs to guide patients and set certain limits" (Ph4).

"It is also possible to give the health insurance card to other people, as long as the card is used by more than one person"(Ph-3).

#### **Pharmacists' recommendation to HIA for proper implementation of the health insurance program**

The participating pharmacist provided several recommendations toward a correct implementation of the health insurance including pilot adoption, using electronic system for claims' processing, implementing electronic health records and hiring international team to help supervising the program management.

#### **Pilot adoption before national implementation of the program is necessary**

Some pharmacists recommended that the program should be piloted in certain regions or governorates. The pilot implementation can identify problems and obstacles and come up with solutions before the program is adopted at national level.

"Experiment with this law in a specific governorate to know the positives and negatives and the obstacles for the purpose of studying them, then the program will be gradually circulated to the country"(Ph-11).

"We must implement this program in specific governorates to monitor its progress, solicit the opinions of citizens in those governorates about the health insurance, determine how much they support the program and whether or not they enrolled into the health insurance "(Ph-14).

#### **Electronic system is pivotal for bill management**

All participants agreed that this program needs an electronic system. The electronic system is important for expediting work, keeping track of patients, and sending bills to the Health Insurance Authority:

"An electronic system is necessary because through it we can record and follow-up patients, and this is important. We also know the percentage of diseases for each disease through a database"(Ph-8).

#### **Electronic Health Records are essential to have clinical statistics about diseases**

The pharmacists recommended adoption electronic health records in all participating healthcare settings to have electronic medical data available on request. "There must be a successful and robust electronic system taken from countries that have previously used it because this system gives you information such as statistics for diseased cases, for example, statistics on diabetes, hypertension, and rare

diseases. Therefore, we will get good statistics, and here the system can be developed by directing a correct orientation, whether it is a private or public sector. "(Ph2).

"It is necessary to use an electronic system in all health institutions and to be linked with the Health Insurance Authority for the purpose of smoothness and ease of work"(Ph-7).

#### **It is important to hire an international team to help carried out the program correctly**

The majority of the pharmacists recommended recruiting international team of experts to help in supervising the program implementation and management.

"It is necessary to bring in specialized teams that have experience from abroad to train the supervisors of this program in all the governorates"(Ph-9).

"We need a work team from abroad to supervise the staff of Health Insurance Authority and train them on how to manage this program to be implemented successfully "(Ph-17).

"We need companies from abroad to implement the program and follow it, and it is better to apply it to an area for a year and wait for the results"(Ph-13).

## **Discussion**

The goal of the Iraqi Health Insurance program is to make sure that insured people have full health coverage and access to healthcare services<sup>(8)</sup>. Iraqi health officials confirmed that the law is supposed to go into effect this coming August 2022, but that it depends on the approval of the federal budget<sup>(10)</sup>. All participating pharmacists supported the adoption of national health insurance as medical services would be subsidized, which could enhance patient accessibility to private healthcare services.

#### **The clinical and economic effects of the national health insurance on insured individuals**

According to the study findings, patient health is predicted to improve after implementing the health insurance because insured people would be able to access medical services at the private sector with subsidized fees. Similarly, an American study compared the patient accessibility to healthcare services between two states (Kentucky and Arkansas) that expanded coverage by the Affordable Care Act (ACA) to low-income people and non-expanded a state (Texas). Outcomes were evaluated after three years of the ACA's coverage expansion using survey data obtained from low-income individuals in three states. By the end of 2016, there were more access to treatment, lower out-of-pocket costs, and more people who said they were in "excellent" health among the people gaining coverage in the states expanded the coverage of the ACA<sup>(11)</sup>.



Some pharmacists believed that the poverty rate in Iraq is increasing which hinders people accessibility to paid healthcare services and expected this health insurance can help insured people to get these services. Their expectations are aligned with the collaborative assessment conducted by the Ministry of Planning, UNICEF, and the World Bank which found that the spread of COVID-19 has had a significant impact on income and access to basic services for Iraqi families. The proportion of children living in poverty in Iraq has nearly doubled from one in five before COVID-19 pandemic to two in five currently<sup>(12)</sup>. It is worth mentioning that the proportion of the Iraqi population that is at or below the poverty line reached 18.9% in 2016<sup>(13)</sup>. Unfortunately, the Iraqi health sector has been ignored by successive governments, and funding was inadequate over the last few years. This renders the preventive and curative health services and imposes financial burdens on low-income people. International health institutions say that more than 70% of treatment costs are paid for by the Iraqi patient, even though the WHO says this number shouldn't be more than 30%<sup>(14)</sup>.

#### ***The effect of national health insurance on workload in the public and private sectors***

Most of the pharmacists expected that insured patients would turn to private healthcare providers more frequently than the public sector and this would increase the workload on private providers. According to a systematic review of three studies from three countries about the effect of national health insurance on doctors in terms of workload and the level of services provided, most physicians work for long hours, up to 10 hours or more, and an average of ten minutes with each patient. Consequently, it can lead to mental health problems for doctors, which can lower the quality of care they give to their patients. It can also lead to medication mistakes that cost money<sup>(15)</sup>.

On the other hand, a majority of pharmacists believe it is necessary to allocate family doctor for patients after implementation of program since they know all patient medical history and can determine whether they need to visit a specialist. This can reduce the workload on specialists and give them time to keep track of important disease cases. It is worth noting that the primary health care settings suffer from a shortage in family medicine physicians. The estimated number of qualified doctors in this field is 500, while the required number exceeds 1000<sup>(1)</sup>.

#### ***The effect of the implementation of national health insurance on quality of services***

Most of the participating pharmacists believed that under this program there will be competition between healthcare providers to provide better quality of services. In contrast, a study in

Nepal found problems in the level of services provided after pilot implementation of a health insurance program. Those regions suffered from a scarcity of medicines as a result of the increased workload on providers and the participants waited a long time in hospitals<sup>(16)</sup>.

#### ***Potential Challenges facing the implementation of the national health insurance***

The pharmacists expected that the insurance implementation would face obstacles including rejection of people, lack of a database, lack of electronic system, misuse/overuse of the insurance, and inability to test and price medicines. A study in Nigeria found extreme poverty, limited knowledge, little interest, superstitious beliefs, an inefficient payment method, a shortage of drugs, and inadequate supervision and monitoring are challenges facing the implementation of the national health insurance program<sup>(17)</sup>. Another study in four provinces in Ghana found that the sustainability of the health insurance scheme is threatened by problems like a lack of and uneven distribution of medical facilities and health care professionals, rising costs, fraud and abuse, and not paying providers<sup>(18)</sup>.

#### ***Electronic system in the national health insurance***

The electronic system was not implemented in the hospitals visited by the research, as most institutions in the government sector do not have an electronic system<sup>(3)</sup>. The participating pharmacists in this study have made it clear that it is important during the implementation of this program to have an electronic system for the purpose of processing bills, following up on patients, and for the purpose of creating a database. A recent Iraqi study found that inadequate documentation in most public hospitals which can negatively impact the monitoring of medication effectiveness and safety<sup>(19)</sup>.

#### ***Study limitations***

The study had some limitations such as unequal participation in terms of gender which may be due to the concern of female pharmacists about being audio-recorded. Additionally, some participants declined audio-recording.

#### ***Conclusion***

The implementation of the new Iraqi health insurance program has many potential advantages, as this program is expected to have a positive clinical and economic impact on insured individuals because it will reduce the financial burdens resulting from out-of-pocket expenditures on medical services. It is expected that there will be an improvement in the quality of medical services due to competition between HCPs which it will reflect



positively on insured individuals. HCPs who work in the private sector and have contracts with HIA will make more money because patients will visit them more often, which will be accompanied by an increase in workload for them. Family physicians play an important role in this program at primary care settings as they will contribute to the follow-up of patients and decide whether cases require referral to hospitals or specialized centers, which reduces the workload on HCPs. However, the program implementation needs several essential requirements which can threaten its successful adoption. The potential challenges can be people resistance to pay monthly premium, inadequate expertise in management of financial bills, potential

delay in the reimbursement of HCPs, patient overuse of the insurance program and absence of electronic system and database. The health insurance should be well thought out before being put into practice, and it should be tested on a small scale before implementing at national level. Physician clinics, pharmacies, and hospitals must adopt an electronic system to submit information and bills to HIA. It is also recommended to appoint an international team of experts to supervise the management of this new system. The quality of healthcare services provided by the insurance network of providers should be evaluated regularly. Timely processing of the medical claims can help to have well timed payments to healthcare provider bills.

**Table 2. Main themes and subthemes of pharmacist insights regarding the national health insurance**

Themes	Subthemes
All pharmacists are supporters for the health insurance implementation	Subsidized fees (decrease out of pocket) Decrease financial barriers to get services.
The health insurance would increase the workload and providers' income in the private sector	Waiting time and quality of service Increases patient visits to private providers Family doctor can secure continuity of care More private provider visits, more income to them
Insurance can enhance quality of services.	Competition among health care providers Financial penalties for low quality services.
They expected several types of potential challenges facing the implementation of the national health insurance	Not adequate number of priced and tested medications People may not like the idea of monthly payment for health insurance. Expected problems or delaying in the payment to healthcare providers. No electronic health records are adopted currently Expecting difficulties in claims processing Potential patient misuse of the insurance program.
The clinical and economic effects of the new Iraqi health insurance program on patients	Enhances accessibility Enhances affordability
Several essential requirements are needed for successful implementation of the national health insurance.	Pilot adoption before national implementation. Electronic system is pivotal for bill management Electronic health records are essential to have clinical statistics about disease.

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