

**Objective assessment tool of pharmacist skills**Ahmad Hassan Raheem\*<sup>1</sup>**Abstract**

The objective of this study is to assess the pharmacist skills and focus on the certain important defects in pharmacist work up and possible causes for these defects and suitable resolution ways. A cross sectional study was involved fourteen pharmacists in two government hospitals in al-Muthana, Iraq. Ten pharmacist in hospital A and Four in hospital B and include collection of data over one week of April 2015. In this study we concentrate on following vital activities (VA.s) with high importance in production of sufficient health services: pharmacist daily tour with the specialist doctors and active participation in patient's management; observation of patient's records including prescribed treatment, with determination of any mistake for example: in doses, interactions, presence of contraindications or cautions; regulation of drugs administration in proper way; helping of specialist doctors to find suitable substitution for unavailable drug; presentation or attending at the scientific lectures about medical treatments and new sorts of drugs. The assessment of these Vital activities (VAs) is presented as value from hundred percent. Regarding the hospitals A and B the study show poor (< 50 %) average results of the pharmacists five vital activities, that was mentioned in the methods above. There is significant defect in the pharmacist's performance that is multifactorial in origin and assessment activities should be sequenced throughout effective program to produce most applicable resolutions

**Keywords:** Pharmacist; Pharmacist skills average (PSA); Vital activities (VAs); Assessment

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**Introduction**

The world oldest known prescriptions, cuneiform tablets dating back to 2000 B.C.

from Nippur and Sumer they are described how to make poultices, salves and washes. The ingredients, which included mustard, fig, myrrh, bat dropping, turtle shell

powder, river silt, snake skins and "hair from the stomach of a cow," were dissolved into wine, milk and beer [1]. The history of modern pharmacy in Iraq began in 1936, when the first college of pharmacy was founded; at the time, it was called the Royal College of Pharmacy and Chemistry. Administratively, it reported to the Ministry of Health (MOH), which was founded in 1920. Throughout the first decades of pharmacy in Iraq, practitioners were called "chemical pharmacists" because they graduated from the college as specialists in both pharmacy and chemistry.

In 1957, the college was merged with the University of Baghdad and renamed as the college of pharmacy [2]. After that, new graduates received a bachelor's degree in pharmaceutical sciences. Master's and doctorate level studies in the college of pharmacy were first offered in 1972 and 1975, respectively [3]. The pharmacist's workday in public hospitals is generally 6.5 hours (from 8:30 a.m. to 3:00 p.m.). After 3:00 p.m., pharmacists may have their own private business in a community pharmacy; this is known as part-time community pharmacy practice. Pharmacy is a branch of the health sciences dealing with the preparation, dispensing, and proper utilization of drugs. It is a place where drugs are compounded or dispensed [4].

"Pharmacy" in the law means an area, place, or premises licensed by the board in which the profession of pharmacy is practiced and where prescriptions are compounded [5]. Regarding Clinical pharmacy definition, the American College of Clinical Pharmacy (ACCP) defines clinical pharmacy as an area of pharmacy concerned with the science and practice of rational medication use. Clinical pharmacy is a health science

discipline in which pharmacists provide patient care that optimizes medication therapy and promotes health, and disease prevention. The practice of clinical pharmacy embraces the philosophy of pharmaceutical care, blending a caring orientation with specialized therapeutic knowledge, experience, and judgment to ensure optimal patient outcomes. As a discipline, clinical pharmacy also has an obligation to contribute to the generation of new knowledge that advances health and quality of life [6]. Year after year the effect of clinical pharmacist become wider and many details are added. Unfortunately there is very inadequate number of clinical pharmacists in the hospitals of our country so the defect covered by other pharmacists. The medical field is team work and defect in any part of this team lead to improper health services that reach to the patients, further more finding of the suitable means for assessment of pharmacist work is very important subject and objectives of our study will try to focus on certain vital points that can give summarized picture of pharmacist activities in the hospitals that are involved in this study, and we try to find the best way to correct the obvious defects that are noted by this research as much as possible.

Pharmacists and physicians often have trouble communicating with one another and both professionals are extremely busy. Many pharmacists are intimidated by physicians. To communicate effectively, pharmacists must be comfortable with their role on the health care team and confident in their unique knowledge and contributions to patient care [7]. The World Health Organization (WHO) has identified particular problems in developing countries

in relation to the supply and use of drugs. In response to these difficulties, the WHO believes that pharmacists can make an important contribution in health care, by promoting the safe and appropriate use of medicines [8]. The practice of pharmaceutical care requires pharmacists who are able to establish effective, therapeutic relationships with patients [9]. The quality of the relationship between a patient and pharmacist is, in turn, dependent upon the quality of the communication between pharmacist and patient over time and over multiple encounters and dependent also on honest performance of the standard specific health services and proper cooperation with other medical staff. Skills of effective communication do not necessarily improve with practice experience [10-11].

Indeed there are wrong ideas about pharmacist role in the hospitals that involved in this study, and these are a result of many factors, some of them related to pharmacist himself and the others related to physicians and shortage in the health system in our country. However we hope to make useful light spots on the health development way.

### Method

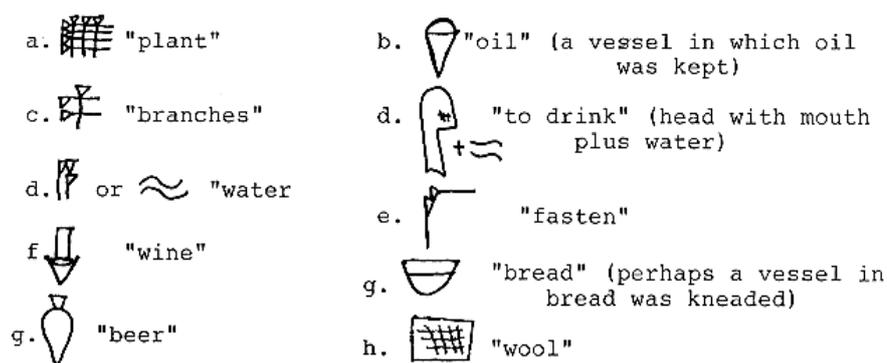
This research try to give brief assessment of pharmacist skills performance of: ten pharmacists as sample from total thirty pharmacists in hospital A, (33%) and four pharmacists from total sixteen pharmacists in hospital B, (25%). This assessment done through collection of related data by direct observation of daily pharmacists work up over one week of April 2015, and by many related questions that their answers obtained from residents and

seniors and pharmacists in the involved hospitals, and this concomitant with our experience for 12 years in medical field. The hospital A contain surgical wards and internal medicine wards while hospital B contain pediatric and obstetrical wards. We assess five pharmacist's vital jobs by giving average percentage for the pharmacists in each involved hospital about each determined activity in (table 1).

The research involve discussion of each result with pharmacists and physicians to show the possible causes of any negative point and to find the most applicable correction. This discussion was done separately to avoid any cornering or caching of the truth and we explain to physicians and pharmacists that the goal of this study is not to produce any castigation, instead of that we try to estimate the real carrying out of pharmacists activities. So for each point in table 1 we give percentage represent average level for performance of ten pharmacists in the hospital A and four pharmacists in hospital B, with clarification of the most influent causes of the weak result. In this study we try to avoid any shorty question can affect the proceeding of the research putting in our consideration the failings of confidence that frequently affect the relation between pharmacists and physicians.

### Results

According to the information that was obtained from this study there is marked deficit in fulfilling the pharmacists role in the health work of the hospitals that are involved in this study, and this role summarized as five vital activities (VAs) that are mentioned before. There is clear difference in the pharmacist's skills average



Symbols that appear in the 'world's oldest prescription'

## Sumerian medical terms in world's oldest pharmacopeia

**Table 1.**

Colleges and Schools of pharmacy in Iraq to 2014, \* privately operated.

INSTITUTION	FOUNDED YEAR
College of Pharmacy, University of Baghdad	1936
College of Pharmacy, University of Mosul	1992
College of Pharmacy, Hawler Medical University	1997
College of Pharmacy, University of Basrah	1999
College of Pharmacy, University of Kufa	1999
College of Pharmacy, University of Mustansiriyah	2000
Baghdad College of Pharmacy*	2000
College of Pharmacy, University of Tikrit	2002
School of Pharmacy, University of Sulaimania	2004
College of Pharmacy, University of Karbala	2006
Department of Pharmacy, Al- Yarmouk University College*	2006
School of Pharmacy, University of Duhok	2009
College of Pharmacy, University of Babylon	2010
Department of Pharmacy, Al-Rasheed University College*	2010
College of Pharmacy, University of AL-Anbar	2010
College of Pharmacy, University of Thi-Qar	2012
Department of Pharmacy, Al-Rafidain University College*	2012
College of pharmacy, Al-Esra University*	2013
College of pharmacy, Al-Mazia University*	2013
College of pharmacy, Iben Heian University*	2014
College of pharmacy, Al-muthena University	2014

\*: privately operated

**Table 2.**

VAs and PSA for hospital A.

VAs	PSA
Pharmacist daily tour with the specialist doctors and active participation in patient's management.	59 %
Observation of patient's record including prescribed treatment, with determination of any mistake for example: in doses, interactions, presence of contraindications or caution.	5 %
Regulation of drugs administration in proper way	25 %
Helping of specialist doctors to find suitable substitution for unavailable drug.	25 %
Presentation or attending at the scientific lectures about medical treatments and new sorts of drugs.	20 %

**Table 3.**

VAs and PSA for hospital B.

AV	PSA
Pharmacist daily tour with the specialist doctors and active participation in patient's management.	0 %
Observation of patient's record including prescribed treatment, with determination of any mistake for example: in doses, interactions, presence of contraindications or cautions.	5 %
Regulation of drugs administration in proper way.	10 %
Helping of specialist doctors to find suitable substitution for unavailable drug.	0 %
Presentation or attending at the scientific lectures about medical treatments and new sorts of drugs.	0 %

(PSA) of hospital A from that of hospital B but in general the results are unaccepted. The best PAS for hospital A was 59% and worse result 5% (table 2), while in hospital B the best PSA was 10 % and worse PSA 0 % (table 3). These results involved many individual variations but we abbreviate theme as average results as our objectives are assessment of health system and finding

the optimal correcting means rather than dealing individually with each pharmacist

### Discussion

In Iraq although there are twenty one colleges and schools of pharmacy that six of them privately operated and nine not reach the final stage of study (table 1) , there are significant qualitative and quantitative deficit in the pharmacist's activities within health

institutions as appeared in this study. This defect partly due to the inadequate number of pharmacists comparing with number of patients and physicians in the involved hospitals, but the other more important causes include ineffective observation of daily pharmacist performance, weak pharmaceutical knowledge's of most pharmacists, lack of cooperation and confidence between the pharmacists and physicians in most situations. Other causes that mentioned by involved pharmacists themselves include:

- For pharmacist daily tour with the specialist doctors and active participation in patient's management, the PSA result mainly due to absence of fixed time for physician's tour in the wards of hospital and due to presence of more than one physicians at the same time and same ward in addition to default of the pharmacist himself and lack of the departmental controlling.
- For observation of patient's records including prescribed treatment with determination of any mistake, the low PSA mainly due to physician's disallowing of pharmacist's interference and poor pharmaceutical information.
- For regulation of drugs administration in proper way, most involved pharmacists consider this VA. not purely pharmacist's job; or Helping of specialist doctors to find suitable substitution for unavailable drug, involved pharmacists blame the physicians as they refuse their opinions and deficiency of many types of drugs is the other cause of low PSA of this VA.
- For presentation or attending at the scientific lectures about medical treatments and new sorts of drugs, the low PSA according to viewpoint of involved pharmacists is due to either disregard of pharmacists or their busyness with other

responsibilities. The assessment of the mentioned causes and their real effect in production of low PSA of VA is very important for planning of optimal management for each cause.

### Conclusion

There is big defects in performance of pharmacist's role in Iraq government hospitals and as this role is vital in health field, the end result of these defects is important disorder in patient's health care and this need sufficient and effective program that make priorities for real correction of these defects. We chose in this study five VAs and assessment of the fulfilling of these VAs reflect significant shortage in pharmacist's skills. We will concentrate in this study on certain resolving ways and these briefly include:

- Making an effective work program that regulate pharmacist's performance with close observation of pharmacist's application of this program.
- Appointing fixed time for physician's round in the wards of hospitals.
- Increase the role of pharmacists in treatment of the patients with promoting of pharmaceutical information of all pharmacists with preparation of cyclical effective examinations for assessment of pharmacist's scientific level.
- Support the confidence between physicians and pharmacists through free meetings and regular scientific conferences.

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## Competing interests

The author declare that there is no conflict of interest.

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