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Original article

Clinical pharmacy in Kuwait: Services provided, perceptions and barriers

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ABSTRACT

Introduction: Pharmacy practice has considerably evolved from a dispensing role to a patient-centered profession. Kuwait has minimal clinical pharmacy services established in its healthcare settings.
Objectives: The objectives of this study were to document existing clinical pharmacy services in public hospitals, identify barriers to their implementation and assess perceptions regarding pharmacists providing clinical services.
Material & Method: A cross sectional study using self-administered questionnaires among a total of 166 pharmacists and 284 physicians across 6 public hospitals in Kuwait was conducted.
Results: Over half of pharmacists (54%) provided clinical services, with the most common service being education and drug information (86%). Forty percent (40%) of the pharmacists reported that clinical services offered were of their own initiative but most of them (71%) were not sure whether they would offer additional services in the future. The majority of physicians were receptive to an expanded patient-centered role of the pharmacist (97%), believed pharmacists add to patient clinical care (92%) and considered pharmacists members of the healthcare team (96%). Major barriers reported by pharmacists to implement clinical pharmacy services included lack of policy (49%), time (36%) and clinical skills (28%), which is similar to barriers reported by physicians.
Conclusion: Although clinical pharmacy is in its infancy in Kuwait, it is well perceived and requested by physicians. Major barriers must be addressed and in this context, having a national framework for pharmacy practice from Ministry of Health, supported by cutting edge education and a pro-active professional association would be key assets to evolve the practice in Kuwait.

1. Introduction

Clinical pharmacy introduces a great change from what was once a drug-oriented profession to a patient-centered pharmaceutical care approach. It involves the responsible provision of drug therapy to achieve optimal outcomes that improve the patients' quality of life (Hepler and Strand, 1990). The aim of clinical pharmacy in practice is to deliver a systematic, comprehensive and consistent quality of service to each individual patient. Clinical pharmacists are trained to provide medication therapy management (MTM) and adapt medicines to address individual patient's needs during their hospital stay (Odedina et al., 1997) and at every point of transition in care, including the community setting (ASHP, 2013). Pharmacists face challenges when implementing MTM, such as lack of adequate pharmaceutical care training, therapeutic knowledge and lack of appropriate areas for counselling (Aburuz et al., 2012; Al-Arifi et al., 2007; Al-Taweel et al., 2014; Awad et al., 2006; Dunlop and Shaw, 2002; Ngorsuraches and Li, 2006). Identifying those factors is critical to facilitate the implementation of an expanded scope of pharmacy practice.

Kuwait is a small country (4.2 million population) of the Arabian Peninsula where 97% of the population live in developed urban areas. The public healthcare system is divided into primary, secondary and tertiary care. Primary care is delivered through general and specialized polyclinics, spread throughout five healthcare regions. Secondary care is provided through six general hospitals, and tertiary care is provided through more than fifteen specialized centers distributed throughout all the healthcare regions

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(MOH, 2013). Kuwait has one Faculty of pharmacy, established in 1997, providing a 5-year baccalaureate degree and a 2-year add-on PharmD program. Approximately 30–40 students graduate annually since 2002. Clinical pharmacy represents a significant part of the curriculum, with a focus on MTM in different disease states. Despite that, clinical pharmacy activities are limited in practice, and only based on individual initiatives from motivated pharmacists with suboptimal support from the hospital administrations and Ministry of Health (MoH). This is consistent with a review published on pharmacy education in 13 Middle East countries (Kheir et al., 2008), which showed that pharmacy practice falling behind the improvements in pharmacy education in this region of the world.

Pharmacists in Kuwait, in contrast to North America (Tannenbaum and Tsuyuki, 2013), are not automatically included in the multidisciplinary patient circle of care. The extent of their involvement in patient care depends largely on improving the partnership with other healthcare professionals, including physicians and nurses, and with that, the ability to target individual patients who might best benefit from extended pharmaceutical services. The current situation in Kuwait, particularly for chronic disease management, represents a significant opportunity for improvement. It is difficult to determine how far clinical pharmacy has been implemented in Kuwait due to lack of research. Thus, the study objective is to document current clinical pharmacy services and existing barriers to implement such services in public hospitals, and to assess perceptions of healthcare professional towards the patient-centered pharmacist roles.

2. Methods

2.1. Questionnaire to pharmacists: Clinical pharmacy services available in Kuwait

2.1.1. Study design

A descriptive, cross-sectional study was carried out from January to May 2017 among pharmacists in government hospitals across Kuwait. All pharmacists working in these hospitals were eligible. Ethical approval was obtained from the Standing Committee for Coordination of Health and Medical Research, MoH.

2.1.2. Study tool

The study tool was a self-administered questionnaire to pharmacists consisting of 40 questions structured in 3 different sections assessing the clinical pharmacy services, as defined by American College of Clinical Pharmacy (ACCP) (ACCP, 2014), currently offered (8 questions), the characterization of those services (21 questions) and demographics (11 questions), and was distributed in English aligned with Arabic translation. This questionnaire was developed by the study investigators with the objective of documenting the current status of available clinical pharmacy services and major barriers to their further implementation. The intent was to create a tailor-made questionnaire to identify key information that would enable key stakeholders (e.g.: Faculty of Pharmacy, Ministry of Health, hospital heads/pharmacy heads) to refine their approach towards further developing pharmacy practice in Kuwait.

To test the content and face validity of the questionnaire and the feasibility of data collection methods, a pilot study was conducted among 17 pharmacists and after agreeing to participate, they were asked to answer an on-line survey in English. Results indicated that the online format was not easy to handle, some questions were unclear or redundant and some pharmacists suggested to have the survey available in Arabic. The questionnaire was then simplified, changed to a paper-based questionnaire and translated to Arabic. This modified questionnaire was piloted with 6 additional pharmacists and minor adjustments were made based on the feedback. Due to the nature of those changes, the questionnaire was resubmitted to the Ethics Committee and received approval from the above-mentioned committee. Pilot study data were excluded from the study results.

2.1.3. Sample recruitment, data collection procedures and data analysis

Pharmacists working in a governmental hospital in Kuwait were invited to participate. The questionnaires were distributed to all available pharmacists at the time of the study by the Pharmacy Directors of each hospitals, assisted by a pharmacy student. This represented a total of 246 available pharmacists at the time of study conduct. Consequently, questionnaires were distributed to 246 pharmacists. Only those who agreed to take part in the study by signing the informed consent were included. Pharmacy students distributed the questionnaires and followed-up on weekly during the data collection period. Data analysis was done using the Statistical Package for Social Sciences, (IBM SPSS Statistics 23, IBM Corporation, Armonk, NY, USA 2014). Descriptive statistics were used to calculate the mean, median, standard deviation and percentage of the results. Categorical variables were summarized as frequencies (%). Cross tabulation with chi-square test was used to identify any significant difference among pharmacists' responses. P value of <0.05 was considered as significant.

2.2. Questionnaire to physician: Perception of the expanded pharmacist scope of practice

2.2.1. Study design

A descriptive, cross-sectional study was carried out from January to May 2017 among physicians working in secondary and tertiary care government hospitals across Kuwait. All physicians working in these hospitals were considered eligible. Ethical approval was obtained from the Standing Committee for Coordination of Health and Medical Research, MoH and the Health Sciences Center (HSC) Ethics Committee for Student Research.

2.2.2. Study tool

The study tool was a self-administered questionnaire adapted from a previously published study (Cruthirds et al., 2013) consisting of 18 questions structured in 4 different sections assessing the physicians source of medication information (2 questions), the frequency of interactions with pharmacists and acceptance of their recommendations (3 questions), physician perception of pharmacists (8 questions) and demographics (5 questions), and was distributed in English. A pilot study was conducted with 10 physicians across 2 hospitals to test the content and face validity of the questionnaire. Minor formatting changes were made to improve clarity of some questions without changing their essence. Pilot study data were excluded from the study results.

2.2.3. Sample recruitment, data collection procedures and data analysis

Only physicians who agreed to take part in the study by signing the informed consent were included. Pharmacy students distributed the questionnaires and followed-up on weekly during the data collection period. The sample size was calculated using Raosoft Sample Size Calculator (Raosoft, 2004). A total of 3477 physicians work in the government hospitals in Kuwait; assuming a margin of error of 5% and a confidence interval of 90%, a sample of 252 physicians was required. To achieve this goal and assuming a response rate of 50%, a larger sample size of approximately 460 physicians will be approached. Descriptive statistics were used to calculate the mean, median, standard deviation and percentage

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