JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

CLINICAL PHARMACY PRACTICE: A REVIEW ON SCOPE GUIDELINES AND ITS PRACTICE IN INDIA, PAKISTAN AND SOUTH AFRICA.

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ABSTRACT

Clinical pharmacy practice is undergoing unprecedented changes as a standard profession of pharmacy practice in terms of pharmaceutical care. Although the clinical pharmacy practice is well known in many developed countries, the clinical pharmacy practice profession or practice still requires recognition in developing countries. This article focuses on clinical pharmacy practice in developing countries; along with a systemic view of amalgamation of existing pharmacy practice models, need for pharmacy practice research and clinical pharmacy practice guidelines has been reviewed in this article.

KEYWORDS: Clinical Pharmacy Practice, Pharmaceutical care, Medicine optimization, Practice guidelines, Medication review.

INTRODUCTION

Clinical pharmacy is a branch of pharmacy that provides patient care by optimizing the medication therapy and promoting health, wellness, and disease prevention by means of pharmaceutical care. [1] The major transition in pharmacy practice took place in 1989, with the introduction of the term “Pharmaceutical Care” by Helper and Strand. Pharmaceutical care comprises of responsible provision of drug therapy for the purpose of achieving positive outcome that improves patient’s quality of life [2]. With the gradual progress in the field of pharmacy practice, the term pharmaceutical care emerged globally as a provision of patient care in the pharmacy organizations and academia. In 2000, The concept of “Seven Star Pharmacist” was initiated by International pharmaceutical federation and introduced by WHO, in its policy statement titled “Good pharmacy education practice” [3]. The clinical Pharmacist are specialized in therapeutic knowledge, experience, and skills that are helpful in ensuring desired patient outcomes by applying, the best available clinical evidence and interventions in collaboration with the health care team [4]. The scope of clinical pharmacy practice may vary across countries and settings guided by established policies and norms. Indeed, a recently published study has indicated that this variation is also reflected in pharmacy education and training offered within the European countries [25]. The recent COVID-19 pandemic illustrated such diversity of regulations and roles with reference to pharmacist involvement in COVID-19 vaccinations. UK have introduced pharmacist prescribing models which allow pharmacist to prescribe prescription medicines within the area of competence [26] and the Netherlands are other examples of step change when discussing emerging new clinical pharmacy roles.

The profession of Pharmacy is maturing as a clinical profession in South Africa and has undergone significant development and growth over the past 10 years. It is presently (2020 report) well positioned to transform itself from a product-oriented (including procurement, preparation, and evaluation of drug products), to a patient –oriented profession (Hepler and Strand, 1990). This strategic review has also covered a comprehensive narrative on the role of clinical pharmacist in UHC through NHI for South Africa [16]. The change in the pharmacy profession especially as we move from a technical paradigm based on dispensing and compounding, to a cognitive one where pharmacy roles also consist of patient counselling and provision of clinical advice to other health care colleagues. This change has resulted primarily from pressure on existing health care services, due to both demographic change in the population and to the pace of technical change [19].

NEED FOR THE PHARMACY PRACTICE RESEARCH

Today the pharmacy practice profession worldwide is undergoing major changes as we move from the technical paradigm based on dispensing and compounding, to a cognitive one where the roles of pharmacist may include patient counselling and provision of advice to other health care colleagues.

This change has resulted primarily from the pressure on existing health care services, due to both demographic changes in the population and to the pace of technical change. The former is due to increase in the count of geriatrics patients who generally require more medical services then the younger population. The latter has resulted in greater opportunities to manage symptoms medically rather than surgically and supported new ways of delivering services. So, at that

time when the workload on the doctors was incredibly unmanageable, other changes have meant that pharmacists with their expert knowledge of drugs, and accessibility to the public, have been well placed to take on increasing responsibility [21].

However, in an evidence-based health services, It is just not sufficient to propose new roles of pharmacy without evidence of benefit. Services must be proven to be clinically cost effective and acceptable to the patients and other healthcare colleagues. Practice research is the key in providing such evidence where it can inform new policy and confirm the value or feasibility of proposals derived from hypothetical solutions.

Evolving health care delivery, escalating costs, and a wish to make better use of the whole health care workforce, are international concerns. Access to the medicines is being made easier for the public by the re-regulation from North America to New Zealand and from the countries of eastern to Western Europe to Africa. Pharmaceutical care has become mantra from North America to Europe, and the medicines Use Reviews have been introduced in Australia and the UK. Examples of specific changes in healthcare services for pharmacy in the UK include supplementary prescribing and repeat dispensing, the management of chronic conditions, support for self-care and increased roles in lifestyle advice, particularly smoking cessation. All of these are supported by evidence of benefit [21].

In terms of evidence-based practice, the randomized controlled trial is still regarded as the gold standard for primary research.

As an academic journal in pharmacy practice, the International Journal of Pharmacy Practice (IJPP) has a clear role in disseminating good research. I believe it also has a role in encouraging higher standards in practice research and acting as a focus for shared learning amongst researchers.

SCOPE GUIDELINES

The European society of Clinical Pharmacy (ESCP) published a position paper in 2022 defining the scope of clinical pharmacy [22]. The paper describes clinical pharmacy as the “activities and services focused on optimization of medicines use through practice and research to achieve person-centered and public health goals [22]. These activities include clinical pharmacy services such as medication counselling, communication, medication review, reconciliation, and optimization of pharmacotherapy, as well as advanced services, such as pharmacist prescribing [23,24].

The scope of clinical pharmacy practice may vary across countries and settings guided by established policies and norms. Indeed, a recently published study has indicated that this variation is also reflected in pharmacy education and training offered within the European countries [25]. The recent COVID-19 pandemic illustrated such diversity of regulations and roles with reference to pharmacist involvement in COVID-19 vaccinations. UK have introduced pharmacist prescribing models which allow pharmacist to prescribe prescription medicines within the area of competence [26] and the Netherlands are other examples of step change when discussing emerging new clinical pharmacy roles.

Medicines optimization emphasizes on pharmacist working as a part of the multidisciplinary team to engage with the patient review, prescribe and deprescribe medications, provide lifestyle and non-medical interventions, improve adherence to and cost-effectiveness of pharmacotherapy and non-pharmacological strategies, and reduce medicine wastage [9]. Such roles have also been described within other countries in Europe and beyond, such as in the USA, Canada, and Australia [27-31].

The published guidelines [32-52] between 2010 and 2022 included in this review represented a limited number of countries, settings, and services. There is a scope to co-develop and disseminate internationally applicable guidelines in promoting person-centered care and clinically communication given their relevance to a range of clinical pharmacy services, settings, and countries. International best practice guidelines for various clinical pharmacy activities may provide a basis for the development of country-specific guidelines and clinical pharmacy services in different countries and healthcare systems including low- and middle-income countries. The quality of most guidelines as assessed by the AGREE II [53] instrument was found to be low to moderate. Developers of future clinical pharmacy guidelines need to focus more on all quality domains and should adopt a systemic guideline for development to generate evidence supporting establishment of modern clinical pharmacy services in different countries, helping to improve healthcare qualities.

CLINICAL PHARMACY IN DEVELOPING COUNTRIES

In developing countries, the pharmacy practice models significantly vary based on the implementation of clinical pharmacy and practice. In India and Pakistan, there are a greater number of registered pharmacists. The profession is more industry oriented rather than patient-oriented and the role of clinical pharmacist is still unclear among the healthcare professionals and community [7,8].

Looking from the perspective of African countries like Ethiopia, there seems to an acute shortage of pharmacists. Only 1088 pharmacists are serving 80 million people which is equal to 0.14/10,000 people. In 2007, the number of licensed pharmacists was 463, consisting of 143 hospital pharmacies, and 320 community pharmacies [7].

In Saudi Arabia, the Saudi Council for health specialties advanced the clinical pharmacy program by adopting a residence program, which comprises of 2 years accredited training with board certification for clinical pharmacy to the graduates passing the final exam [11].

I. CLINICAL PHARMACY PROGRAM IN INDIA AND PAKISTAN

With advances in clinical pharmacy, many pharmacy schools have expanded their pharmacy curriculum to a 5- or 6-years program that issues a Doctor of Pharmacy degree (Pharm. D). In 2005, Pakistan Pharmacy Council (PPC) upgraded the B pharm program to 5 years Pharm. D program [5]. In India JSS College of Pharmacy started a postgraduate program in clinical pharmacy in 1996 which brought momentum to clinical pharmacy education [6]. The goal of the program was ultimately to provide direct pharmaceutical care. Admission criteria include successful completion of secondary examination with physics, chemistry, biology and mathematics or Diploma of Pharmacy (D. Pharm) program. Further to focus on clinical care, the practical training must be done for 50hr in hospital and 200 working days in each academic year starting from 2nd year onwards. In 5th year, students spend half day attending ward rounds daily as a part of clerkship, coupled with 6 months of project work related to pharmacy practice (community, hospital, and clinical oriented covering drug utilization review, pharmacoepidemiology, pharmacovigilance or pharmacoeconomics). During 6th year, students independently complete clinical pharmacy internship or residency (6 months in general medicine and 2 months each in three other specialty departments such as surgery, pediatrics, gynecology and obstetrics, psychiatry, skin, VD, and orthopedics). The institutions running Pharm. D program must possess a hospital recognized by the Medical Council of India with maximum of 300 beds [12]. The core subjects that must be thought include pharmacotherapy, pharmacoepidemiology, clinical pharmacy, clinical toxicology, pharmacoeconomics, clinical research, clinical pharmacokinetics, therapeutic drug monitoring, etc. [15]

In Pakistan, the 5 years of pharm. D program includes academic study and clerkships with an annual intake of 100 seats. Admission criteria includes intermediate science (F. Sc), or equivalent education obtained from any Pakistan University with biological sciences [13]. In 4th and 5th year, students undergo clerkship with 75 credit hours spreading over 17 weeks in each semester and a total of 300 credit hours by the end of the final year [14]. Further in 5th year students get involved in academic research projects in community pharmacy. The clinical pharmacy training is conducted in teaching/ district head quarter hospitals. The core subjects include pharmacology, therapeutics, pharmaceutics, and clinical pharmacy, etc. [15]

It can be concluded that clinical pharmacy is in its nascent stage in developing countries, especially in highly populous countries like India and Pakistan with the number of hospitals, drugs and chronic diseases increasing gradually. Given the current situation, clinical pharmacy services can provide a significant benefit to millions of patients. Professional authorities/associations in developing countries should move together resolving the issues that prevent the standardization of clinical pharmacy practice.

II. CLINICAL PHARMACY PRACTICE IN SOUTH AFRICA

The trained pharmacists in South Africa under the area of clinical pharmacy practice direct patient care environment (American college of Clinical Pharmacy (ACCP), 2014). These pharmacists shall be registered under statutory body as a specialist pharmacist after taking a special board certification exam and should take responsibility for continued learning. The Clinical Pharmacist participates in individualized patient care, taking responsibility for medicine related health care needs of the patient. The patients are ensured to be delivered in line with National Health Insurance of South Africa and Standard Treatment Guidelines. The Clinical Pharmacist there also gets involved in comprehensive medicine management. [16]

Comprehensive medication management is defined as "the standard of care that ensures every patient's medication (including prescription, nonprescription, alternative, traditional, vitamins, or nutritional supplements) are individually assessed to determine whether each medication is appropriate for the patient, effective and indicated for the medical condition, safe given the comorbidities and other medications taken simultaneously, and able to be taken by the patient as intended" (American College of Clinical Pharmacy (ACCP), 2017).[20]

Clinical pharmacists in South Africa, adopts the following set of pharmaceutical care medication-evaluation interventions, as developed by the American society of Hospital Pharmacists (American Society of Hospital Pharmacists, 1992) to evaluate Drug therapy.[19]

Since clinical pharmacy practice as a specialization cannot be registered at the pharmacist regulatory body in South Africa yet, official clinical pharmacists have not been appointed in the allocated posts. The goal of practice guidelines is to ensure that clinical pharmacists possess the core competencies necessary to contribute to a quality standard of clinical pharmacy and therefore optimize medication use in South Africa. [16]

CONCLUSION

It can be concluded that clinical pharmacy is in its nascent stage in developing countries, especially in highly populous countries like India and Pakistan with the number of hospitals, drugs and chronic diseases increasing gradually. Given the current situation, clinical pharmacy services can provide a significant benefit to millions of patients. Professional authorities/associations in developing countries should move together resolving the issues that prevent the standardization of clinical pharmacy practice. The scope of clinical pharmacy practice may vary across countries and settings guided by established policies and norms. Indeed, a recently published study has indicated that this variation is also reflected in pharmacy education and training offered within the European countries.

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