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The evolving nature of pharmacy practice and the consequent requirement for a revised educational framework

C. S. Parameswari, S. Afreen Jaha, Dr. G. Nagarajan

A B S T R A C T

Pharmacy The practice of pharmacy has gone from an early concentration on drugs to a more recent shift toward a greater emphasis on the needs of individual patients. Although pharmacists formerly had a larger role in the development and production of pharma ceuticals, this function has been greatly diminished during the last century. With this newfound responsibility, pharmacists must collaborate with other members of the healthcare team to improve patient care and ultimately help the world move closer to reaching the Millen nium Development Goals. To keep up, modern pharmacists need to broaden their responsibilities t o encompass pharmaceutical care, transforming them from a commodity medication vendor into a critical member of the healthcare team. As a result, it is incumb ent upon pharmacy colleges to provide a curriculum that is up to date with the evolving responsibilities of the modern pharmacist. Learning to think critically, solve problems, and make educated decisions about drug treatment are all abilities that should emerge from this training. The student should learn to work with other health professionals and improve the quality of life for people locally and globally via better health, as well as to generate, disseminate, and apply new information based on cutting-edge research in the pharmacological, social, and clinical sciences..

Keywords: Healthcare from a Pharmacist Moderate medical treatment Rational pharmacotherapy in the pharmacy curriculum

Introduction

Pharmacy profession

Pharmaceutical compounding was the primary focus of pharmacists in the previous century. The compounding functions were drastically cut down during the last decade, and the dispensing side became the primary focus. However, dispensing alone isn't enough to meet demand, thus a new function for the profession has had to emerge in recent years. 1,2 A modern pharmacist has to be more than just a drug salesperson; they need to be trained in phar- maceutical care principles that elevate them to the level of a health care professional. 3 Helping individuals and communities maximize the benefits gained from pharmaceuticals and other health care options is central to the profession of pharmacy. 4 Problems with drugs are identified, prevented, and resolved, and healthy medication and lifestyle habits are promoted.

patient-centered therapies centered on promotion and education, leading to improved therapeutic outcomes.

As stated in the previous paragraph, it is important to evaluate the standards for applicability when there is a gap between how they are used in various environments. In addition, with the introduction of new duties comes the need for pharmacists to rethink traditional workflow models and the distribution of responsibilities. 6 The drug information practice model, the self-care practice model, the clinical pharmacy practice model, the pharmaceutical care practice model, and the distributive practice model are all examples of different types of practice models. 7 Depending on the pharmaceutical demands of a given region, the available resources, and the level of respect shown to pharmacists, one or more of these models may be implemented.

1. The pharmacist's role in promoting safe and effective drug usage

When it comes to making choices about medications, the pharmacist's input is crucial for encouraging safe and effective usage. Promoting rational medication use requires pharmacists to adapt to their new roles as patient counselors and educators in outpatient settings (RUD). 8 The procedure The quality of medication usage is governed by the information provided by pharmacists and other healthcare professionals throughout the drug's acquisition, storage, distribution, and dispensing processes.

To have access to "medicines suited to their clinical needs, in dosages that satisfy their own specific requirements, for an acceptable period of time, and at the lowest cost to them and their community," as stated by the World Health Organization, constitutes a 9 RUD (WHO). 10 The pharmacist's job is to make that the correct dose of the correct drug is given to the correct patient at the correct time through the correct channel. 11 Academic training of pharmacists and related health professionals is one method of achieving this goal. Countries like Pakistan have already taken this step, with all Doctor of Pharmacy students required to study the WHO's rational drug module.

Pharmacy ethics

Ethical standards can only be derived from broad, overarching ideas that are grounded in widely held Western ideals. Unequal access to the health care system seems to be the ethical issue. The role of the pharmacist may be better defined by an examination of pharmacological treatment from an ethical perspective. To a large extent, the field of pharmacy is intertwined with the notion of non-maleficence. There has to be greater attention paid by pharmacists to the potential side effects of drug treatment. Therefore, the pharmacy profession places a premium on monitoring the patient's medication, identifying and preventing probable bad effects, conducting good communication, and providing appropriate information on the use of medicines. This may be made easier by the identification of patient subsets requiring medicinal attention. 12 The ethical standards for pharmacists should be followed.

1. Pharmaceutical care

As the idea of pharmaceutical care develops, a more systemic and complete approach is needed to ensure that patients are protected against adverse drug reactions and that existing issues with medications are addressed. 13,14 It was in the 1990s when Hepler and Strand, two American researchers, first presented the idea of pharmacological care. 15 In contrast to conventional pharmacies, where the emphasis is on the order (prescription/OTC), which is fulfilled on demand, and the pharmacist, who is oriented to the drug product, obeys the order that he or she receives, the focus of the process is on the patient, and it is continuous in its delivery with the strategy to anticipate and improve the patient outcome of the drug therapy. The care model places a premium on the pharmacist-patient connection and the patient's active participation in the treatment process, both of which improve the likelihood of a positive clinical result. Pharmacists use a standardized process called the pharmacist's workup of drug therapy (PWDT) to provide pharmaceutical care to patients. This involves gathering patient history, creating a CORE pharmacotherapy plan, identifying the patient's PRIME pharmacotherapy problems, and writing FARM (FINDING, ASSESSMENT, REGIME, and MANAGER) progress notes. Academics and training programs have responded to the birth of this notion by emphasizing the philosophy of pharmacological care in all facets of the pharmacy profession. 16 In order to provide effective pharmaceutical care, pharmacists need to acquire knowledge and practice skills in areas such as patient assessment, education, and counseling; the formulation of individualized care plans; the implementation of treatment protocols; the titration of medications; the choice of therapeutic alternatives and preventive therapies; and the formulation of dosing schedules. But many locals are unfamiliar with the idea.

pharmacists working in many of the developing countries.[17] Moreover, there are many barriers to adoption/adaptation of pharmaceutical care idea in reality, including as experts' inadequate knowledge of the topic, a dearth of available training opportunities, limited financial resources, and, most importantly, a lack of political will to see the plan through. The curriculum is sometimes insensitive to changes in the pharmacy practice industry. In order for pharmacists to aid their countries in achieving their Millennium Development Goals and commitments, each region and country will need to develop its own model of practice by taking into account its unique context and outlining the specific steps and actions necessary for getting started.

2 Drug treatment based on solid scientific evidence

If pharmacists want to provide the highest standard of pharmaceutical treatment, they must shift their focus from opinion to evidence. 4,18 The adoption and application of clinical guidelines in everyday practice is a significant difficulty in most of the contexts, including the pharmacy, and has only recently gained notice despite having been there since the early 1990s. 19 There is evidence to show that patients often get treatment that is both ineffective and perhaps hazardous, yet is outside of the doctors' purview. 2,20e22 With the constant emergence of new medical sub-disciplines, it may be difficult to stay up with the state of the art. Evidence-based practice is predicated on the idea that all choices on actual practice should be founded on research papers chosen in accordance with strict criteria for the quality of quantitative, qualitative, and theoretical research. 23 Some argue that it is challenging to put evidence-based medicine into practice; one approach to do so is to improve information systems in order to give decision support; this will aid in reducing the likelihood of mistakes being made while making treatment recommendations. 24 A curriculum mindful of the maturation of expertise in evidence-based pharmacy is urgently required.

Teaching in the Pharmaceutical Sciences

For the purposes of the Taskforce, "pharmacy education" shall mean the educational structure and capacity to train personnel for a wide range of service provision and competence (e.g., technical support staff, pharmacists, and pharmaceutical scientists) in a variety of settings (e.g., community, hospital, research and development, academia) (e.g., under- graduate, postgraduate, lifelong learning).

Education for pharmacists varies in both time and scope from one nation to the next.

27,28 The fundamentals of pharmacy education are universal, although the pharmaceutical care philosophy varies by area and nation. 29e35 It has recently been shown that simulation centers for health professional schools may provide a fresh approach to teaching and assessing health

care procedures at the individual level.

Pharmacy faculty pedagogical interventions

Improving pharmacotherapy education is necessary because of the growing need for competent pharmacy services. Pharmacologists usually speak during pharmacotherapy classes at universities that provide both medical and pharmacy degrees. However, putting their theoretical pharmacotherapy knowledge into reality is typically a challenge for pharmacy students. As a result, new approaches (like the Groningen model) are being developed for pharmacotherapy education at medical schools. Recently, the 'Turkish Pharmacological Society'37 established a unique model based on dispensing ratings, and Turkish and Northern Cyprus universities provide courses in "problem-solving methods"–based rational pharmacotherapy.

Four Point Strategy for Pharmacy Education

Pharmacists are well positioned for job shifting in health care due to their familiarity with both medications and clinical therapeutics; they may also be taught to do other activities, such as clinical management and laboratory diagnostics. Although research shows that pharmacists are excellent resources for patient care and public health initiatives, they are underutilized globally. To ensure that there is a sufficient supply of competent pharmacists available for such positions, there must be a concerted and comprehensive push to improve workforce planning, training, and education.

However, health care requirements and practice standards, as well as educational opportunities, differ significantly among nations. Consequently, the World Health Organization; the United Nations Educational, Scientific, and Cultural Organization; and the International Pharmaceutical Federation formulated the Global Pharmacy and the Education Action Plan 2008–2010. To achieve/ensure the competence, it is necessary to define a vision, frameworks, guidelines, and case studies; gather evidence and advocate for change; speed up action in individual countries; and provide a worldwide forum for dialogue. Quality assurance, academic and institutional capacity, competency, and vision for pharmacy education are the four pillars around which the Action Plan is built. The framework was created and refined in the course of two FIP-sponsored international workshops on pharmacy education (Inter- national Pharmaceutical Federation). The Taskforce will keep an eye on it to see how far along it is in its larger mission of "disseminating evidence-based guidance and frameworks that facilitate the development of pharmacy education (and higher education capacity) to enable sustainability of a pharmacy workforce appropriately skilled to provide pharma- ceutical services."

2. Conclusion

Pharmacy colleges need to adapt their curricula to reflect the new realities of pharmacy practice and prepare their graduates for the expanding responsibilities of the pharmacy profession. Ability to think critically, solve problems, and make decisions during medication are all qualities that should be fostered by this training. The student should be prepared to collaborate with other health professionals, improve the quality of life for people in our society and the global community through better health, and create, transmit, and apply new knowledge based on cutting-edge research in the pharmaceutical, social, and clinical sciences.Conflicts of interest

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