



REVIEW ARTICLE

PATIENT-ORIENTED PHARMACY EDUCATION AND REDEFINING ROLE OF PHARMACIST: A CHALLENGE TO EDUCATIONISTS

Dahiya S^{1*}, Dahiya R², Lodhi NK¹, Shrivastava SK¹, Soni LK¹

¹Department of Pharmaceutics, Globus College of Pharmacy, Bhopal, Madhya Pradesh, India

²Department of Pharmaceutical Chemistry, Globus College of Pharmacy, Bhopal, Madhya Pradesh, India

*E-mail: drsunitadahiya@gmail.com

Tel.: +91 9009484272.

Received: October 15, 2012 / Revised: November 12, 2012 / Accepted: November 13, 2012

The primary focus of the profession of pharmacy, the world over, has shifted from a technical, product-oriented to patient-oriented, professional service. Unfortunately, despite India excelling in all other industries, the health care industry has been very slow on the uptake of pharmacist as an integral tool in improving health services. Hence, there is need for a drastic change to make India a healthier nation, a developed nation which could only be happened when all health care professionals work hand in hand. This mainly includes providing the medicines to the public with appropriate advice and professional counseling. To achieve due recognition of pharmacist as a health care professional, pharmacy education and course curriculum at diploma/degree level should be restructured to meet the needs of present day health care. Practical training under the supervision of an experienced clinical pharmacist can help to give good exposure to the students to the real life practical problems as well as to develop confidence and good communication skills in order to solve the medication related problems in future. Thus, it is the responsibility of pharmacy educators to supply professionally and legally qualified pharmacists. For the health care chain to complete, pharmacists need to be competent and ready to embrace new challenges to develop their professional role. Creating a responsible pharmacist through education and community service will go a long way in providing health care to humanity as they offer endless opportunities for serving mankind.

Key words: Pharmacist, Pharmacy education, Health care system, Educationists.

INTRODUCTION

The present pharmacy education needs drastic changes to make it more patient-oriented. These changes have to face many constraints such as the size of the population, the time available to the pharmacist and increasing number of drugs. In the present day and age where getting an appointment with a doctor is tedious and expensive, pharmacists have a great opportunity to upgrade their services and develop a professional image rather than grocer image it has been carrying out so far. The need of the hour is to utilize the pharmacist as an

indispensable tool providing better health care. Within the philosophy of pharmaceutical care, pharmacists accept direct responsibility for patients' drug therapy, thereby contributing to the outcomes of therapy, and improving quality of life (Hepler and Strand, 1990). In implementing pharmaceutical care, the World Health Organization (WHO) published the Good Pharmacy Practice (GPP) Guidelines which identified the four main responsibilities of pharmacists: health promotion and ill health prevention; supply and use of prescribed medicines and other health care products; self-

care; and influencing prescribing and medication use. Achieving these responsibilities may not always be easy, however, pharmacists should strive to reach these goals in the best interest of patients. (Oddis, 1984; 1988; Maddux *et al* 2000; Fassett, 2007; Basak *et al* 2009; Cordina *et al* 2010; Khar *et al* 2011).

Methodologies

Various areas wherein a pharmacist input can be improved are as under:

Now a day, number of medicines are increasing on the pharmacy shelf. Pharmacists need to improve their basic knowledge of underlying common diseases and the rational drug therapy for these diseases.

Pharmacist is a person who is usually approached first for advice about minor ailments or symptoms. This requires adequate knowledge and skill regarding judicious recommendations and sale of OTC medicines.

Appropriate patient counseling on prescription medicine aids in reducing the possible drug-drug or drug-food interactions (Sorensen, 2002; Hussain, 2011).

Role of education for developing responsible pharmacists

In the Indian scenario, the pharmaceutical education should enable the diploma pharmacist to upgrade themselves to the knowledge required. Continuing education programs help to achieve this objective.

The pharmacy education at bachelor and postgraduate level should be restructured for the fresh young pharmacists to meet the health care needs of the today.

Pharmaceutical educational institutes must continue to upgrade themselves to provide relevant, contemporary and quality programs for superior pharmaceutical health care.

Specialization in pharmacy education either from very beginning or in last two years is need of the day. It should be like Bachelor of Pharmacy in Hospital Pharmacy (Patient oriented and with patient handling), Community Pharmacy, Clinical Pharmacy, Pharmacy Practice etc. so that students will be more skilled and with clear-cut vision for their future.

The undergraduate pharmacy curricula should try to keep pace with changes in terms of regular reviews of syllabi and curricula activities.

Educationist should come forward in providing a framework and setting standards for

pharmaceutical care in India.

The topic of industry-academia interactions is much debated and also implemented up to limited extent in our country. Likewise, the educational institutions should collaborate with medical colleges, dental colleges, clinics and hospitals in order to give strong practical exposures to generate competent future pharmacists with sound knowledge (Vagelos, 2007).

Major pharmaceutical services rendered by pharmacists

Implementation of all the above mentioned recommendations can cause a visible response to such difference.

Pharmacists can project a professional image and care giver attitude by providing additional services to the community.

The concept of separate individualized counseling areas is although new in India, but hopefully may be implemented in upcoming years.

Services to be rendered by the pharmacists

(ASHP Guidelines, 1976; 1997)

Reducing cardiovascular disease risks

Medical tests like blood sugar, blood pressure can be carried out in a pharmacy for early detection of diseases. This is the best way of demonstrating commitment for improving health care and helping in chronic disease management.

Life style and nutrition counseling

Promoting physical activities, walking, yoga etc. can make healthier public because many of the diseases now a day arise due to bad life style habits and unhealthy diets. Pharmacists can educate the patients on good eating habits and ensure better health.

Women's health

Women require special attention during different stages such as pregnancy, child birth, breast feeding. Pharmacists can counsel about the safe use of medicine and promote breast feeding in expectant mothers.

Immunization

Pharmacist is in ideal position in promoting effective immunization thereby aiding national health objectives.

Awareness about early screening

Creating awareness about early screening of breast cancer, osteoporosis, tuberculosis etc.

Polypharmacy

Reduction of polypharmacy and drug related problems in elderly.

Smoking cessation and alcohol abuse

Pharmacist can provide health and guidance on quitting and rehabilitation by proper motivation and support.

Developing awareness for HIV/AIDS

Pharmacists can contribute to this national challenge and aid in developing awareness by distributing written information, by putting posters on individual pharmacies thereby educating the public.

Awareness on local disease

Diseases like malaria and measures to maintain hygiene and manage the conditions.

Drug abuse/misuse

Prevention of drug abuse/misuse of drug by patients.

Rational use of antibiotics

By increasing awareness on antibiotic resistance and problems associated with it.

Adverse drug reaction reporting

The system for ADR reporting needs to be taken to all pharmacists. The implementation of this system will create awareness and alertness leading to safety and quality of public health especially in current situation when numbers of medicines are available with no proper regulatory and testing requirements.

Changes needed

The curriculum of the graduate courses should be upgraded to generate professionally sound pharmacists (with special consideration on practical training). It is also essential to introduce subjects like pharmacy practice and clinical pharmacy in the present curriculum.

Continuing education programs in order to improve and continue professional development of the pharmacists is highly required.

Establishment of drug information center and a database of information in context of the emerging new drugs are useful areas for providing accurate, timely and unbiased information in response to patient oriented

problems raised by pharmacists as well as in building clinical knowledge of the pharmacists.

Maintenance of the stock of the standard books for reference, CD-ROM database reference sources, access to the drug information websites *via* computers, circulation of the monthly journal among the pharmacists including all the updates can work as kind gestures to uplift the pharmacy profession.

Above all, the changes in course curricula must be supported by the occupancy when the student completes the course and enters the pharmacy field. Good job opportunities will promote the competent professionals to enter the health care which in turn will uplift the status of not only an individual but also of the pharmacy profession along with serving the society and mankind.

Redefining the role and status of pharmacists in India: Awareness, knowledge and norms

Pharmacists play a crucial role in any health system as they are responsible for providing solution related to medication. The rapid growth and diversification of the pharma industry, coupled with the growth of the health sector has thrown open a sea of opportunities for pharmacists. These emerging opportunities have prompted a deeper look into the human resources for the pharmacy sector. The spectrum of pharmacy profession in India is very wide, as it covers a lot of opportunities in the pharma industry-R&D, manufacturing and retail, healthcare sector, pharmacy education and regulatory bodies. The current availability of pharmacists in terms of pharmacist to population ratio compares favorably with that in a developed country. However, the number of registered pharmacists does not reflect the actual number of pharmacists currently involved in pharmacy practice. The actual number is likely to be much lower due to migration, death, retirement, those getting into other areas of pharmacy profession such as industrial, regulatory, marketing etc.

The redefining role and status of pharmacy professionals is need of the hour in our country. For this, the combined efforts of pharmacy professionals themselves by respecting their profession is of utmost importance. Moreover, the pharmacists must meet the updated knowledge about pharmacology and clinical pharmacokinetics so that their knowledge can be practised and utilized. It must meet to the highest standards as far as the drugs' use, abuse

and their clinical uses are involved along with a very good knowledge of drug interactions also. Moreover, the government authorities should make necessary changes in respective norms for the recruitment, salary and job structures of the pharmacists.

Modern role of pharmacist in the society

In the present time, the pharmacy does not lie merely in dispensing of medication, but in the provision of relevant drug information and drug therapy recommendation to the people in the society.

Over a period of time, the pharmacy profession has greatly changed from being focused on managing the production and dispensing of drugs, to being primarily concerned with the safe, effective and appropriate use of medication and enhanced pharmacy services to patients. High technological advancement and information explosion have significantly raised the knowledge and quality level, due to which the pharmacists are now ready to shoulder bigger responsibilities with appreciable sense of sincerity and dedication. The role of pharmacists is now no longer a fixed and rigid one, but has been continuously changing and redefining its meaning and significance in the changing scenario, which is why the bond between a pharmacist and society is becoming stronger day-by-day and acquiring new dimensions.

Indian healthcare is witnessing a rapid growth and managing the human resources to support this growth will be very critical. The pharmacist is a key component of healthcare and touches patients at every level, from high ended hospitals to the doorstep, where they provide medications in the community. Further, many of them work behind the scenes in areas such as drug research, drug distribution, in regulatory, and teaching and training roles. In order to cater to the growing demand for quality healthcare services in the country, there is a need for concrete efforts from all stakeholder to promote community practice and change people perception of a pharmacist from being a trader or shopkeeper to that that of a true health professional as in many developed countries. The pharmacy profession is proving itself as the backbone of the society as far as health aspects are concerned. Pharmacists are establishing new standards of pharma care and redefining their role toward the society. The impact and influence of pharmacy profession has never been recognized and identified so significantly as it is

today. The entire credit goes to pharmacists who are now more aware and concerned for the welfare of the society, adopting modern concepts and professional attitude, but not at the cost of pharma ethics, and thus, have been able to penetrate the society, maintaining the traditional sanctity of pharmacy profession.

Pharmacy, as a profession, has been able to make a room for it in the present day society. There are numerous reasons, which are responsible for greater impact and penetration of pharmacists into the societal network irrespective of geographical boundaries. Whether it is a metro city or a remotely located rural area, pharmacists are everywhere, discharging their duties to serve the humanity (Nasa, 2012). The factors responsible for the influential role of pharmacists in the society include:

Pharmacists have begun to concentrate on patient care specifically after pharma care had been mandated as a patient centered practice model for pharmacy. Many pharmacists have found themselves challenged by a paradigm shift in their daily practices from product to the patient. Pharma care addresses the patient's drug-related needs comprehensively through a scheduled outline of tasks, in which the practitioner makes sure that a drug therapy is appropriately indicated, effective, safe, and convenient. Shifting from a dispensing focus to a patient focus has been particularly challenging, which has included offering expanded patient counseling, immunizations, and medication-dependent disease management for persons with certain chronic conditions. Pharmacists are now covering a wide range of clinical and management functions like tracking adverse drug effects, participating in programmes to reduce medication errors, monitoring patients' compliance with medication use, and conducting medication management programmes.

Pharmacists have taken into consideration the need to 're-engineer the medication use system' to reduce preventable drug therapy-related adverse outcomes; to identify well-functioning models and to develop strategies to evaluate and implement additional models; and to encourage inter-professional collaboration. The task is not so easy and they may come across certain kind of problems like lack of patient medical information, patient confidentiality concerns, limited professional communication, multiple approved formularies.

Today's pharmacist believes that professional attitude is an indispensable tool to make the

profession just significant for the society. A pharmacist must maintain his/her competence and effectiveness by keeping up-to-date with changes in pharmacy practice and with relevant knowledge and technology.

Sticking to ethical rules has helped a lot to establish the pharmacy profession as a noble one among the society, and pharmacists are advocating the adherence to the pharma code of ethics more strongly and loudly in the present scenario.

The information pharmacists give plays a vital role in providing relevant and up-to-date drug information to people as and when required.

The changing global scenario has prompted pharmacists to adopt new concepts for the welfare of society. Such concepts include retail pharmacist, pharmaceutical journalist, academic pharmacist, clinical pharmacist, hospital pharmacist etc.

CONCLUSION

The pharmacists can target certain groups of patients and conduct health awareness campaigns on certain common diseases prevailing in the particular region. Pharmacy students and educators should participate in these types of pharmaceutical services. Such activities during the course curriculum help much when they complete their education and

make them sound to face the practical problems when they actually enter the profession. Therefore the changes at grass root level are required to renovate the course content and to make it more patient oriented. This can not be achieved without the positive attitude of the pharmacy educators. Thus, a little extra effort from every pharmacy educator can make a great change in the pharmacy profession. So, it is a challenge for the educationist to provide quality education which is current and appropriate to the requirements of all who involve in the health program of people. There are a lot of gaping holes on the development of pharmacy profession in India and the need for change can no longer be ignored. In view of the enormous changes to be initiated, professional bodies including government and private associations need to take bold initiatives to influence practicing pharmacists to upgrade their services. Pharmacists need to work closely with these associations, collaborate with physicians, stress to the government about generic substitution policies, and collaborate with international universities wherever required. In brief, undergoing continuing education, earning fair wages and changing attitude about pharmacy profession are the primary factors which are much required to attain appropriate recognition and status of pharmacists as health care professionals.

REFERENCES

- ASHP guidelines on pharmacist- conducted patient counseling. *Am. J. Hosp. Pharm.* 1976; 33: 644-5.
- ASHP guidelines on pharmacist-conducted patient education and counseling. *Am. J. Health-Sys. Pharm.* 1997; 54:431-4.
- Basak SC, van Mil JW, Sathyanarayana D. The changing roles of pharmacists in community pharmacies: perception of reality in India. *Pharm. World Sci.* 2009;31(6):612-8. [DOI: 10.1007/s11096-009-9307-y]
- Cordina M, Lauri M-A, Lauri J. Patient-oriented personality traits of first-year pharmacy students. *Am. J. Pharm. Educ.* 2010;74(5):84.
- Fassett WE. Ethics, law, and the emergence of pharmacists' responsibility for patient care. *The Annals of Pharmacotherapy* 2007;41(7):1264-7.
- Hepler CD, Strand LM. Opportunities and responsibilities in pharmaceutical care. *Am. J. Hosp. Pharm.* 1990;47(3):533-43.
- Hussain MS. Patient counseling about herbal-drug interactions. *Afr. J. Tradit. Complement. Altern. Med.* 2011; 8(5S):152-63. [DOI: 10.4314/ajtcam.v8i5S.8]
- Khar RK, Ahmad FJ, Jain GK. pharmacy education: gearing up, to meet industrial needs. *Pharma Times* 2011; 43(3):20-4.
- Maddux MS, Dong BJ, Miller WA, Nelson KM, Raebel MA, Raehl CL, Smith WE. A vision of pharmacy's future roles, responsibilities, and manpower needs in the united states. *Pharmacotherapy* 2000;20(8):991-1022.
- Nasa AK. Changing role of pharmacists: Indian scenario. *Express Pharma* Jan 2012.
- Oddis JA. Current and future pharmacy initiatives in institutional and corporate practice. *Am. J. Hosp. Pharm.* 1984;41(2):279-84.
- Oddis JA. Future practice roles in pharmacy. *Am. J. Hosp. Pharm.* 1988;45(6):1306-10.
- Sorensen JM. Herb-drug, food-drug, nutrient-drug, and drug-drug interactions: mechanisms involved and their medical implications. *J. Altern. Complement. Med.* 2002; 8(3):293-308.
- Vagelos PR. Innovation and industry-academia interactions: where conflicts arise and measures to avoid them. *Cleve Clin. J. Med.* 2007;74(Suppl 2):S12-3; discussion 16-22.

4pr061