



Glimpse of Pharmaceutical Education in Nepal

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Letter to Editor

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Abstract

Pharmacy is the only profession in the world where biological, chemical and physical sciences have been merged so intricately in relation to drug substances that the graduate coming out of such studies is the only person who can confidently and authentically provide information on any aspect of a medicine. The main aim of the study was to discuss regarding various courses i.e. D. Pharm, B. Pharm, M. Pharm, Ph. D (Pharm), Pharm. D as well as pharmaceutical education scenario and brief history about pharmacy education in Nepal.

Keywords: Pharmacy, Nepal, Courses, Education, Council, Association.

Historical Background

Nepal is a Himalayan country located between India and China. With a population of 25 million (90% live in rural areas), it ranks as one of the poorest countries in the world ¹. Health care in Nepal is delivered through zonal hospitals and district hospitals in urban areas and through health posts and health centers in rural areas. The primary problem that Nepalese health care is facing is a lack

of health care providers at peripheral health care facilities and the need for safe, effective, and rational use of medicines. One strategy to tackle these problems is to develop a quality pharmacy education program and produce enough pharmacists for the country. Pharmacy education in Nepal is a recent phenomenon.

It started with the commencement of the Intermediate in Pharmacy (similar to a diploma) program at the Institute of Medicine in 1972, and subsequently the establishment of the Bachelor of pharmacy (B. Pharm) program in Kathmandu University in 1994; B. Pharm programs later were started at Tribhuvan University, Pokhara University and Purbanchal University. Pharmacy is a scientific profession requiring a high level of education and training. Pharmacy degrees including Diploma in Pharmacy (Pharmacy Assistant level) are approved by the Nepal Pharmacy Council (NPC), to ensure that students have received appropriate education for their professional registration and subsequent development and careers. The entry for degree level courses in pharmacy is after the completion of 12 years of formal schooling in science stream or its equivalent. Nepal Pharmacy Council has adopted NPC Guidelines for the Accreditation of Pharmacy Degree Programmes in 2003 and NPC Norms for Establishment of New Pharmacy Degree College for First Year (to start with) and Approval Process of the New College in 2004. In addition NPC has adopted approval



criteria and guidelines for 3 year Diploma Level (Pharmacy Assistant level) colleges in Nepal. There are some colleges under the affiliation of Council for Technical Education and Vocational Training (CTEVT). The entry for this level is after the completion of 10 years of formal schooling.

NEPAL PHARMACY COUNCIL

The Nepal Pharmacy Council (NPC) is the professional and regulatory body for pharmacists in Nepal. It also regulates pharmacy assistant. The NPC was established as per Act of Parliament in 2000 that came into effect from January 2001 in order to regulate profession of pharmacy systematically and scientifically in Nepal. The NPC is an autonomous and corporate body having right of perpetual succession.

The main objectives of the NPC are to lead, regulate, develop and represent the profession of pharmacy in Nepal. The NPC leads and support the development of the profession within the context of the public benefit. This includes the advancement of science, practice, education and knowledge in pharmacy. In addition, it promotes the profession's policies and views to a range of external stakeholders in a number of different forums. The NPC has responsibility for a wide range of functions that combine to assure competence and fitness to practice. These include controlled entry into the profession, education, registration, setting and enforcing professional standards, promoting good practice, dealing with poor performance, dealing with misconduct and removal from the register².

NEPAL PHARMACEUTICAL ASSOCIATION

The history of Nepal Pharmaceutical Association (NPA) goes back to 1972 A.D. (2028 BS) when it was initiated in a small room of Banaspati Bibhag by a group of people involved with pharmaceutical and medicinal plants. A five member ad hoc committee was formed to proceed with the formation of the association with a total of 27 members, including 14 pharmacists, under the presidency of Dr Purosattam Narayan Suwal. In its glorious 40 years, NPA has organized several programs and has been actively involved in almost all the programs held with the

objective of development of this sector. One of the significant achievements of NPA has been the formation of Nepal Pharmacy Council in 2000 A.D. (2058 BS), which gave a distinct recognition to the pharmacy profession. With its proud history, NPA has now more than 800 members from different fields of pharmaceuticals and medicinal plants. To expand the activities in different part of the country, NPA has formed two chapters (Kaski and Lumbini)³.

NEPALESE NATIONAL FORMULARY (NNF)

- First Publication : 1997
- Revised Publication : 2010

The NNF available from Department of Drug Administration, Bijulbazar, Naya Baneshwor, Kathmandu, Nepal (Email: dda@npl.healthnet.org)

PHARMACEUTICAL ASSOCIATIONS IN NEPAL

- Nepal Pharmaceutical Association (Published Journal of Nepal Pharmaceutical Association).
- Graduate Pharmacist Association, Nepal.
- Hospital Pharmacist Association of Nepal.
- Association of Pharmaceutical Producers of Nepal.
- Nepal Pharmacy Students Association (Estd.2002).

PRACTICE AND PROSPECTS OF PHARM. D IN NEPAL

Following this global trend in pharmacy education, Kathmandu University started a post-baccalaureate PharmD program in Nepal in the year 2010. The objective of the program is to train the graduate pharmacist in the area of patient care and to orient them with the clinical pharmacist thought process. The PharmD program covers 2 years of basic modules on



pharmacotherapeutics of various systems, clinical pharmacy practice, critical literature evaluation and research methodology, clinical pharmacokinetics, and clinical rotation in different hospital departments, followed by a specialization internship in the final year. The concept of the PharmD is quite new to Nepal, where pharmacists are still struggling to get into the patient care areas.

REPUTED PHARMACEUTICAL INSTITUTIONS (COURSES) IN NEPAL^{4,5}

| Name of the University/Institute | Courses |
|---|---|
| Department of Pharmacy, Kathmandu University, Nepal. Email: pharmacy@ku.edu.np ; pannathapa@ku.edu.np | a) 4 years (8 semester) B. Pharm[After 10+2] b) 3years Pharm.D (PostBaccalaureate) [After B. Pharm] c) 2 years(4 semester) M. Pharm[After B. Pharm] with specialization: <ul style="list-style-type: none"> • Pharmaceutical Care • Industrial Pharmacy • Pharmacology • Medicinal Chemistry • Pharmacognosy • Pharmaceutical Analysis & Quality Assurance d) 3 years Ph. D in Pharmacy [After M. Pharm] |
| School of Health and Allied Science(Formerly known as School of Pharmaceutical and Biomedical Sciences), Pokhara University, Nepal.(Email: deanst@pu.edu.in) | a) 4 years (8 semester) B. Pharm[After 10+2] b) 2 years(4 semester) M. Pharm[After B. Pharm] |
| Institute of Medicine, Tribhuvan University, Nepal (Email: iomdean@ion.edu.np) | a) Certificate course in Pharmacy. b) 4 years (8 semester) B. Pharm[After 10+2] |

Bhandari and colleagues has stated that ward rounds with clinicians, providing drug information, and research and publication can be some of the activities for pharmacist in Nepalese hospitals, besides their regular responsibilities of dispensing and counseling⁶. Because it is a patient care approach, where pharmacists perform the role of pharmaceutical care provider, there are numerous challenges for the PharmD program ahead. When it comes to the aspect of pharmacy education,

curriculum content, manpower, and infrastructure are crucial issues. Pharmacy colleges are rushing for changes and glamour, without seriously thinking about the quality of graduates that will be distributed in the healthcare market and negatively impacting the healthcare system as well as the image of the pharmacy profession. Getting a well-trained faculty member with clinical pharmacy exposure is very difficult in a country like Nepal. In addition, creating a well-structured curriculum emphasizing the clinical and patient care approach and getting proper facilities for student to train in this area is a big challenge. For a country like Nepal with limited resources, getting a super-specialty hospital with ward-based pharmaceutical care provision, well-structured curriculum, an evidence-based critical literature database, and conducting clinical research projects is a daunting task. The PharmD program must be structured such that the graduate can work in their local settings and provide pharmaceutical care in their own health care structure. The medical college and tertiary health care institution in Nepal offers an ideal practice setting for the PharmD graduate. In Nepalese hospitals, there is adequate patient flow, a variety of patient cases, and the patient are willing to participate in pharmacy care. Therefore, Nepal can provide a great setting for the PharmD student to be trained in patient care. If the PharmD program can create the necessary pharmacy practice structure in hospitals and develop a practice-based academic unit bridging the pharmacy practice with academia, there is great hope for the PharmD program in Nepal.

Conclusion

Gradually with time with scientific and technological advances took place and newer concept emerged which were desired to be covered in pharmacy; the



informatics and biotechnology having the biggest impact. The curriculum change in academic institution imparting pharmacy education was imperative. The curricula were revised both qualitatively and quantitatively. In the exercise, the objectivity was lost, personal preferences, egoistic attitudes, retaining the subject areas of expertise of those at the helm of affairs dominated. A conglomerate emerged. An expression “jack of all trades master of none” was often aired in context of a pharmacy graduate. The lack of objectivity in the training and didactics of a pharmacist resulted in a situation where the product found itself at crossroads⁷. The education of pharmacy in Nepal is at the crossroads once again. “Change” “yes we can” was the slogan with which Barack Obama won the US Presidential election -2008 but the issue before the pharmaceutical education in Nepal is not just the “change from D. Pharm to Pharm. D” but change in quality pharmaceutical education to meet the challenges and the needs of the nation in the 21st century⁸.

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AUTHORS' CONTRIBUTIONS

Authors contributed equally to all aspects of the study.

PEER REVIEW

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CONFLICTS OF INTEREST

The authors declare that they have no competing interests.