



Pharmacists in the Wider Public Health Workforce – A Review

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Abstract

The World Health Organization (WHO) estimates a critical shortage of more than 4 million health care workers. Though pharmacists represent the third largest healthcare professional group in the world, they are underestimated and underutilized in many developing nations including India and China. As they are trained at a critically insufficient scale, their large potential is being wasted and remain untapped. Since the number of medicines available to consumers and their complexity is increasing day by day, the pharmacists should look for steps beyond just compounding and dispensing. Though the community pharmacist's role in public health (PH) has not well defined, they are certainly not new to PH. Albeit there is an increasing recognition of the contribution that community pharmacy can make to improve the PH, still there is a need to integrate pharmacy into the wider PH workforce.

Key words

Advisory role, community pharmacy, public health, public health activities, seven star pharmacist.

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Introduction

WHO estimates a shortage of more than 4 million health care workers. About 57 countries fall below the WHO threshold of 2.5 healthcare professionals per 100 population [1], which has a negative effect on the health outcomes and forms a barrier to achieving the health related targets of United Nations' Millennium Development Goals. Pharmacists in the

community settings provide an invaluable service by promoting, maintaining and improving the health of the community. They are at times patients' first point of contact and for some, their only contact with a healthcare professional. Many publications provided evidence on the existence of 'PH Pharmacy' in many developed nations. Historically, pharmacists are more interested in PH activities related to medicines and identified PH as the key area for future development. Few studies have explored pharmacists' perceptions of their potential role in PH [2-5]. The community pharmacy is still struggling to take shape in many developing countries, and the role of pharmacists is under utilized [6]. The key hurdles to this include lack of sufficient education and training, poor law implementations, and non-recognition of the profession by fellow healthcare professionals [7, 8].

Pharmacy in the Developing World

From bench to bed side, there are wide varieties of functional areas where pharmacists actually work. In the developed countries, the role and responsibilities of pharmacists at these different arenas are well determined and structured. But, the situation in the developing countries is not the same. In countries like India, the profession of pharmacy is more industry oriented, whereas the profession is more patient-focused in the West. The trend for pharmacy practice moved from the traditional pharmaceutical supply to the quality patient care, for the last 40 years [9]. But, the community pharmacists' involvement in promotion and education of health is principally centered on the issues with the pharmaceutical space rather than the modification in the health behavior [10]. In India, one of the largest democracies of the world, the community pharmacy struggles for growth, and the clinical pharmacy strives for its existence. The patients often do not differentiate the grocer and the pharmacist. Though there are plenty of reasons from poor curriculum to unemployment for this, failure of pharmacists itself to move their focus from product to patient is the key factor. Albeit the Pharmacy Council of India has recently introduced the PharmD programme with more insight to clinical and community pharmacy, it is still under debate how this will cater the development of good practices in the country [11].

Beyond Compounding and Dispensing

In 2000, International Pharmaceutical Federation (FIP) has taken up the concept of the "Seven Star Pharmacist", introduced by WHO, in its policy statement on Good Pharmacy Education Practice [12, 13]. Pharmacy is not just about manufacturing and selling drugs. The role of the pharmacist has evolved from that of a compounder and dispenser of medicines towards that of a patient care provider [9]. **Table-1** showcases the different roles of pharmacists under the "Seven Star Pharmacist" concept. The lack of clinical and community expertise made the pharmacists in the developing world to lose their stronghold. A recent study observed that the restrictions on physician dispensing, legalization of patient counselling, and continuing educational interventions were found to motivate the pharmacists' role in effective patient counselling in India [14]. On the other hand, pharmacists in the developed nations, most frequently participate in activities like patient counselling for risk management and interventions to improve patient compliance. The importance of expanding the role of community pharmacists is significantly increasing to include more health education, health promotion, and disease prevention activities [15, 16].

Public Health Connection

Any activity performed to protect, promote and restore the people's health is nothing but PH. It includes all the efforts towards the health needs of the population as a whole [17]. Though the concept of PH is very wide, the pharmacists are not certainly new to that. Many pharmacists perform PH activities at the micro level. The education system of pharmacy has avoided the macro level sort of PH activities [18]. Pharmacy professionals have a noble role in a country's PH, as one of the most accessible healthcare providers. Though there are already some significant contributions by the pharmacists, there is still a huge need to understand the broader concept of PH which aims at improving health at the population level.

Being the first professional organization to represent pharmacists / pharmacy students to be supported to the WHO Stop TB Partnership [19], the International Pharmaceutical Students' Federation (IPSF) has been actively engaging its members in health related activities within their communities, for over 50 years. Within IPSF, there is a dedicated sub-committee for PH which focuses on key health issues like *HIV/AIDS awareness campaign, Tobacco alert campaign, Tuberculosis (TB) awareness campaign, Healthy Living & Diabetes campaign, and World Health Day campaign* etc.

Having joined hands with the Indian Pharmaceutical Association and the Commonwealth Pharmaceutical Association, IPSF encouraged pharmacists to counsel TB patients to adhere to strict and demanding medication regimens through its one of the most successful and quite popular "TB Fact card project" in and around Mumbai, India during 2005 – 2006 [20]. On the other hand, FIP has involved in activities relating counterfeit medicines and patient safety

etc to promote public health [21]. These include raising PH awareness about counterfeit drugs and the dangers of purchasing medicines over the internet.

Table 1: Seven Star Pharmacist

S. No.	Different Roles of Pharmacists
1.	Care giver
2.	Decision Maker
3.	Communicator
4.	Leader
5.	Manager
6.	Life-long learner
7.	Teacher

Re-establishing the Advisory Role

Appropriate dispensing of the prescribed drugs and providing right advices are the vital services provided by pharmacists. Over the time, the pharmacists are engaged with some activities outside their regular work like emergency-contraception, disease prevention, and tobacco / smoking cessation etc [13]. They are an integrated part of the community and strive for the overall character and well-being of it. When it comes to ambulatory care, they remain a vital aspect of the medication use process. On a wide range of areas, the community pharmacist can actively take part in healthcare and health promotion campaigns. By incorporating PH service in their practice, pharmacists work for their own civic duty and for the advancement of the profession. **Table-2** provides a comprehensive list of activities that a pharmacist can actively engage PH activities which are more relevant to their role and responsibility at the community level.

There are also a number of opportunities for community pharmacists to support the aims of sustainable development like the disposal of potentially harmful waste such as unused medicines and promoting energy conservation by installing energy efficient light bulbs in the pharmacy etc. Their involvement can be very effective in issues like oral health, nutrition, head lice management, accidental injury prevention, and chronic diseases [22]. In order to train pharmacists to render pharmaceutical care in practice, a new learning approach in pharmacy education is needed. Many pharmacy schools in the developed nations have started incorporating PH in their education system [9, 23-26]. Such curriculum is also needed in countries where the basic role of pharmacist itself is not protected. The importance and the need for pharmacists who have sufficient knowledge in both

pharmacy and population based healthcare is on the rise [27, 28]. The pharmacist can act as a better community player when there is right motivation, focused activities, and sufficient training.

Table 2: Public Health Activities Related to Pharmacists

S. No.	Possible Activities for Pharmacists at the Public Health Level
1.	Advising on OTC drugs and self medication
2.	Awareness on blood donation
3.	Awareness on clinical research and ethics
4.	Counseling on smoking / alcohol / drug abuse
5.	Counseling on suicide / mental health
6.	Distributing drug / health related literatures / information pamphlets
7.	Activities related to drug surveillance / drug utilization review / drug information centre
8.	Awareness on epidemics and pandemics
9.	Activities related to family planning, pregnancy, motherhood, and emergency contraception
10.	Awareness on adverse drug reactions and reporting procedures
11.	Activities on proper medicine disposal and ecopharmacovigilance aspects
12.	Monitoring and educating proper treatment compliance
13.	Awareness on immunization
14.	Activities against counterfeit drugs
15.	Awareness on sex health

Conclusion

In simple words, the role of a PH pharmacist is nothing but an extrapolation of the role of the community pharmacist. The PH pharmacy provides the highest level of pharmaceutical care consistent with community standards. This is the high time for the evolution of PH Pharmacy in all the regions of the world, as pharmacists in many countries have forgotten their community duty. It is no wonder that the profession can re-establish its advisory role and revitalize the status of community pharmacy by imparting PH concepts in the pharmacy curriculum, encouraging the involvement of pharmacists/ students in PH activities, and understanding the need for an effective role in the community.

Declarations

Authors work for different commercial organizations. The contents provided in this manuscript are personal opinions of the authors and do not necessarily reflect the opinions of the respective organizations. The authors declare that they have no competing interests.

Contributions

All authors contributed equally to this manuscript.

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