India

# The Changing Status of Hospital Pharmacy Practice in India

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*This article is the result of an editorial merge between two articles on Indian hospital pharmacy; One article by Lakshmi and Basak, the other by Mohanta, Manna, Manavalan and Revikumar. Both articles contained valuable information that we would like our readers to know.*

## Introduction

India is a vast country inhabited by more than 1 billion people. India contains approximately one-sixth of the total population of the world. According to the year 2000 UN estimates, the average density of population in India is 305 persons per square km. There are other countries of the world with a higher density of population, nevertheless in relation to its economic resources India is considered an over-populated area. India is a democratic socialist republic comprising of 28 states and 7 union territories with a total area of 32, 87,263 square km or 2.2 percent of the total land of the world. Geographically India is a country of diverse characters. From Himalayan heights to the tea ranges, from the fertile plain of great rivers to the Deccan Plateau: from the Indo-gangetic plain to that deltaic hive of packed humanity and throbbing industries. Agriculture and mineral resources are the main source of income, though industrial production contributes significantly to the nation's wealth. India has 18 officially recognized languages with more than 280 spoken mother tongues and approximately 1,652 dialects. During 2000 the average per capita income in India was 460 US$. India spends less than 0.7 percent of GDP on health care, and in 2000 the life expectancy was 64.6 years.

Being a socialistic country, the health care of the people is subsidized by the government. People are given free medical care including medicines in government-sponsored hospitals. In total there are 503,900 doctors and 737,000 nurses in India, but the number of pharmacists is unknown[1]. Of late, many private and corporate hospitals were established but the treatment is cost prohibitive to the common man. The health care model is divided into primary, secondary, and tertiary care centers. Being a signatory to the Alma – Ata declaration, more emphasis is given to improve the primary health care system to achieve health for all. A WHO estimation on the performance of the health care system placed India at the 112th rank[2].

## The Pharmaceutical Industry and Medicines

The pharmaceutical industry is well developed. Starting with a pharmaceutical production of Rs.10 crores worth at the time of independence in 1947, today India manufactures drugs and pharmaceuticals to the tune of Rs.15, 346 crores. There are 23,790 units of pharmaceutical firms engaged in the production of drugs and pharmaceuticals.

The government genuinely wants cost control to serve its social purpose. The Indian national sector industry has always claimed that prices of drugs are lowest here. The medicines are indeed considerably cheaper compared to the developed countries[3]. But although the prices of drugs in India are low in comparison to many countries they are not the lowest. Prices are not lower than that of our neighboring countries like Bangladesh and Sri Lanka[4].

Some important policy decisions have been made like the price control of all essential drugs, the prices of all drugs to be calculated and scheduled under weighted average process, the international import price of all new drugs to be verified before fixing the selling price, and the formation of committee to save Indian patent and use generic drugs at all levels[5]. The essential drugs, which are required for treating the majority of the health care problems (diseases), are under the purview of the Drugs Price Control Order of the central government. With assistance from World Health Organization the country is progressively implementing the essential drugs policy.

The country does not allow product patent but only process patents. After 2005, the time given to poor and developing countries to comply with WTO's TRIPS agreement lapses, the prices of medicines are expected to go up. There is an all around effort at various levels to nullify the adverse effects of WTO's product patent on medicine's availability. The research and development process in drugs and pharmaceuticals both in government and the private sector is strengthened to face the global challenge and to become a global player.

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The drug control system in the country is developed but needs further improvement. There are more than 50,000 drug formulations available on the Indian market[5,6]. Many of them are irrational and counterfeit both in prescription and non-prescription drugs categories. Newspaper reports say that about 20 % of the drug formulations are counterfeit. There is no thorough system to check the quality of medicines available in hospitals and on the retail market.

## Pharmacists

In India persons registered in the state pharmacy council under the Pharmacy Act of 1948 are allowed to enter into hospital pharmacy practice. The education in pharmacy in India is imparted in three levels viz., 2 year diploma, 4 year degree and 2 years post graduate in pharmacy. The entry point for diploma and degree in pharmacy is 10+2 science. At present there are 340 approved diploma and 170 degree colleges with an intake of about 20,000 and 11,000 respectively. Besides, we have 42 postgraduate institutions with an intake of over 1000. The diploma holder registered pharmacists only enter into hospital pharmacy service [7,8]

Very few degree holders work as hospital pharmacists. The main reasons of degree holders not joining the hospital pharmacy are:

- Public perception of hospital pharmacists is very weak;
- Many university-degree curricula never expose the student to the practice-environment. Obviously degree holders feels that they are not trained for it;
- No promotional scope;
- Salary is very low and even lower than diploma engineers.

Basically, pharmacists are not recognized as health care providers by the people but as mere drug dispensers. Even the Government of India's publications of manpower development data of health care professionals maintain silence about pharmacists[1].

## Brief Historical Background

The hospital pharmacy practice concept was realized with the dawn of independence in 1947. The pharmacy act of 1948 was the first landmark, which was a result of the recommendations of drugs enquiry committee (Chopra committee) constituted in 1930, and development committee, 1943 (Bhore committee).

The Chopra committee in its report recommended, among others, setting up of courses for training in pharmacy and prescribing minimum qualifications for registration as a pharmacist. The Bhore committee emphasized the need of Government to control the practice of pharmacy and provide educational facilities for licentiate pharmacists. The education regulations framed in 1953, under the pharmacy act of 1948, laid down a 2 year course and 750 hours practical training after matriculation as a minimum qualification for the registration of pharmacists. The pharmacy act of 1948 today controls the practice of pharmacy and succeeded in upgrading the minimum qualification for registration for pharmacists to the level of 10+2+2 from no educational qualification. Prior to the enforcement of the provision of pharmacy act persons were allowed to work in hospital pharmacy if they had experience working with physicians, if they could read a prescription and could assist in compounding and dispensing. In addition, the first register for registration of pharmacists in a state, under the same pharmacy act, allowed any person who has been engaged in the dispensing of drugs, for not less than 5 years, to register his name as pharmacist and practice as a hospital pharmacist. The first licentiate in pharmacy (equivalent to D. Pharm.) was started in the year 1950. Until 1975 the growth of pharmacy education was not phenomenal. The last decade has seen tremendous growth resulting from the mushrooming of self -financing institutions[9].

## Hospital Pharmacy Today

It is estimated today that we have 14,000 full-fledged hospitals, 810,538 hospital beds, 22,243 primary health centers and 131,471 sub- primary health centers, of which all are government owned[10]. In most hospitals, the hospital pharmacy section is relegated to an unimpressive location. Facilities are often outdated, antiquated and nonfunctional. At the dispensing counter of the pharmacy health center, the presence of a hospital pharmacist satisfies the legal requirements. Integration of the hospital pharmacist in dispensing and counseling has not yet been achieved. Drug counseling, drug information, labeling systems, ward pharmacy, pharmacy therapeutic committees do not exist even in large hospitals. Persons other than pharmacists carry out the purchase and inventory of drugs. Above all pharmacies and stores are under the charge of the medical officers of a hospital.

The lack of motivation of pharmacists, inadequate training and large number of patients are the major contributing factors for poor dispensing practices. An estimate of one of the advanced state's hospitals showed average dispensing time of 34.9 seconds and patient knowledge of the dose is just 68.2 %[11]. Another study showed that intervention at the pharmacy significantly increased the dispensing time from 25.4 seconds to 114.4 seconds and this in turn significantly enhanced patients knowledge about correct use of drugs from 56.66 % to 90 %[12].

Situations in privately owned hospitals like CMC, Vellore; Ramakrishna mission hospital, Kolkata; St. Stephen hospital, New Delhi; Manipal Medical College hospital and Government district hospitals of Karnataka state are better and have well established hospital pharmacy divisions comparable to developed countries. The hospital and clinical pharmacy services unit of the medical college hospital at Trivandrum is the first full-fledged pharmacy prac-