Global Health
AN ONLINE JOURNAL FOR THE DIGITAL AGE

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A NEW MODEL FOR IMPROVING RURAL POPULATION HEALTH IN INDIA

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In 2008, India started granting PharmD degrees for pharmacy students who completed six years of college education and clinical training. This was an important step in enabling clinical pharmacists to improve patient care and monitor health outcomes, however, pharmacists continue to be underutilized members of healthcare teams, simply dispensing drugs instead of working with doctors to optimize patient therapy.

Diabetes and hypertension afflict a large segment of India's population and both can be successfully managed by drugs and lifestyle changes. Recent data from India have identified 77 million people as having diabetes (8.9% prevalence in 20-79 years), and these numbers are expected to increase to 100 million by 2030.[1] Nearly 30% of Indians have hypertension, and only one-tenth of the rural and one-fifth of the urban Indian hypertensive population have their blood pressure [BP] under control. [2]

According to the World Health Organization (WHO), Indian healthcare faces challenges of inadequate resources, insufficient funding, poor healthcare infrastructure, and rural-urban disparity.[3] The WHO's data on the distribution of doctors around the world shows that while there are 26.1 doctor per 10,000 patients in US, that number in India is only 7.3 doctors per 10,000 patients for a population of 1.3 billion. When accounted for adequate qualification the number of doctors further drops to 5.0 per 10,000 patients in India.[4] Recently, pilot studies from developing countries such as South Africa,[5] Pakistan[6] and India [7,8] have demonstrated improved patient outcome because of pharmacist involvement in patient's healthcare delivery. Therefore, by involving well-trained newly minted clinical pharmacist in delivering healthcare – India could make a positive impact on nation's health. In this article, I report a new model of healthcare delivery that I had a chance to observe that meets that requirement.

During December 2022, I visited Suits Health Center in Namburu, a village near Guntur. Suits Health Center is operated by HEG Global and the primary provider of services at this site is Dr. Naveen Valluru, who graduated with PharmD degree from Vignan College of Pharmacy in 2022. Naveen opened this health & wellness center in this village as his family lives here. Namburu is a town of about 25,000 population, that is about 7 miles from Guntur.

Like many other parts of the world, both for personal and professional reasons, medical graduates primarily choose to practice in Urban centers and not in rural India. At present there is no trained physician services available to meet the needs of the residents of Namburu. This vacuum in healthcare need for clinical pharmacists & primary care physicians is currently met by Registered Medical Practitioners [RMP]. The only requirement to be certified as RMP is that the person has worked in the Doctors' office as a Compounder (Doctor's Personal Assistant) for 5 years. According to Naveen, there are about a dozen RMP's practicing in that town.

While many of the RMP's are not even high school graduates and have little or no medical training, except what they have learnt from assisting physicians. Residents of Namburu, as well as large segment of rural population without any qualified physicians seek them [RMP] out for their healthcare needs. These RMP's practice as

physicians in those rural settings and are legally allowed to write as well as dispense and administer medications including injections to their patients. RMP's consultation fees range from 50-100 rupees [75 cents - $1.25], but they generate revenue from the meds they dispense/ administer & commissions from private & corporate hospitals in the nearest cities / towns for referring them with rural patients. This revenue generation model incentivizes RMP's to dispense higher profit meds as well as a greater number of meds. They also refer these rural patients to only those hospitals that offer them a larger commission, irrespective of the facilities & physicians that hospital possess.

Currently, in India just like in the US 30 years ago, there is a lack of awareness about how pharmacists can contribute to improving patient healthcare outcomes. The "Asheville studies" demonstrated the role of pharmacists' in improving patient outcomes, while reducing healthcare costs in the US.[9] The results were so impressive that the American Pharmacy Association (APhA) foundation launched a "ten-cities diabetes challenge," whose positive outcomes resulting from pharmacist intervention motivated Medicare to start payments for an annual prescription review by a pharmacist. These studies also expanded collaborative practice arrangements between pharmacists and physicians, such that pharmacists can draw up collaborative practice agreement with a physician or physician group, that allows pharmacists to make dosage adjustments and drug substitutions for agreed upon conditions from a list of pre-agreed list of drugs and dosages. Easy accessibility of pharmacist and lower reimbursement rate for pharmacy services enables better patient outcome at lowered cost.

Naveen, owner of Suits Health Center and an entrepreneur has used 21st century technology – 'telemedicine' to start a collaborative practice model in India that meets Indian legal requirements. He has signed a MOU with Tulsi Multispecialty Hospital in Guntur, about 7 miles away. Based on that MOU, Doctors from Tulsi hospital, in collaboration with Naveen, who has graduated with a PharmD degree from Vignan Pharmacy College, provide care for patients in the community of Namburu. Consultation fees are comparable to RMP's, but is considerably lower than for an in-person consultation with the Doctor, and considering savings incurred from travel to the city, Guntur, and time off from work – this is an excellent value proposition for the patient.

Rural population (% of total population) in India was reported at 64.61 % in 2021, according to the World Bank collection of development indicators, compiled from officially recognized sources. As per another report by the Government of India, the percentage of the Indian population that was situated Below the Poverty Line (BPL) in rural areas amounted to 21.9%. Needless to say - people affected by rural poverty contribute a large chunk of the percentage. Therefore, the development of Indian rural areas in terms of economy and viability of professional options is much needed.

I certainly hope that more of the Indian PharmD graduates would venture into such collaborative practices and share their journey and outcomes through publications. Only by utilizing proper team of well-trained healthcare professionals to contribute their expertise – Indian citizens would benefit.

From left to right – Gottipati, Valluru [owner of clinic] and Sekar

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