Time to Revisit Recommendations on Doctor to Population Ratio in India

Madhav G Deo

Abstract
A buzzword in Indian press and amongst the policy makers is that India is short of the WHO recommended doctor to population ratio of 1:1000. The recommendations were formulated to facilitate programs to achieve some of the health related UN-Millennium Development Goals (MDGs). Infections and malnutrition, which can be comfortably handled by a basic MBBS doctor, were the dominant health issues at the time of the formulation of the MDGs. However, all countries worldwide are going through health epidemiological transition and health impact of the non-communicable disorders (NCDs) can be no more ignored even by the low income nations. Very soon India will need large number of specialists and super-specialists to meet the challenge posed by the avalanche of NCDs, as an ordinary MBBS is not trained to handle the NCDs. One of the major flaws in the recommendations is that for the purposes of computation of the ratio, doctors of all hue, basic doctors, specialists and super-specialists are lumped together. It is time to define the requirements discipline wise and tailor medical education to produce specialists and super-specialists on a fast track. Expansion of specialization in medicine should be associated with simultaneous strengthening of primary health care, a challenged faced even by the most developed nations. To provide health services for routine minor health problems a cadre of Nurse Practitioners (NPs), a concept developed 50 years ago in the USA and now endorsed by many nations, could be adopted.

Introduction: Origin of the Notion
Reducing the under-five mortality rate by two-thirds and the maternal mortality by three-quarters, between 1990 and 2015, are the two health-related MDGs. For developing nations, inadequacy of health workers could be a major hurdle to achieve the goals. It is in this context that the concept of threshold of health workers was developed by the Joint Learning Initiative (JLI), a consortium of global health experts in 2004.

At the time of the formulation of the concept, analysis of data worldwide indicated that densities of 1.5 and 2.5 health work-force per 1000 population were associated with 80 percent coverage of measles immunization and 80% births attended by skilled health workers respectively, the two health related issues considered as the major hurdles for achieving the MDG goals. Requirements of other medical or health related services were not taken into account. A threshold of 2.5 health workers including doctors per 1000 population was therefore considered a key to achieving the goals. Further, WHO data had shown that globally the ratio of doctors to other health workers was about 1:1.5. Doctor to population ratio of 1 to 1000 is derived from these data. The WHO endorsed the recommendations. No wonder the ratio is widely cited by Indian media to emphasis shortage of health manpower. The ratio was also accepted as the ‘WHO norms’ by the High Level Expert Group of the Planning Commission of India. Currently, the doctor to population ratio in India is about 1:1700.

Flaws in the Recommendations
A critical appraisal shows that the recommendations suffer from major flaws. Both measles immunization and births conducted by skilled attendants are modest medical skills that are done worldwide by nurses, midwives, vaccinators and paramedics. Doctors are hardly involved in such programs, that too only in supervisory capacity. Further, for the purposes of computation of the ratio, doctors of all hue, basic doctors (MBBS or equivalent degree), specialists and super-specialists, are lumped together.

It would have been more scientific to define the requirements in terms of each category separately as their...
jobs and responsibilities are quite different.

**Changing Health Scenario - Challenges**

Infections and malnutrition were the major health issues at the time of the formulation of the MDGs. However, the life expectancy has gone up substantially worldwide and NCDs are emerging as major health problems even in the developing nations.¹ By 2030, NCDs are projected to account for more than three-fourth health burden in the middle-income countries such as India. Even in the low-income economies more than half of the disease burden will be due to NCDs.² This changing health scenario has implications to the type of medical and health manpower requirements.

Handling of infectious diseases and NCDs are two different ball games. Majority of infectious diseases are acute in nature. They are caused, by and large, by well-defined agents alien to the host and therefore require short term doctor consultation, as the agent can be easily targeted through simple public health preventive measures including vaccination; also a number of highly effective drugs are available. On the other hand, the NCDs are multifactorial and their etiologies are described more in terms of risk factors. The complexity can be judged by the fact that even in the case of lung cancers, which are mostly due to smoking, about 10-15% cancers are not related to smoking as they occur in people who have never smoked. In fact, lung cancer in non-smoker would be the first cause of cancer mortality in the US if it is treated as a separate entity.³ For these reasons cancers and other NCDs cannot be totally eliminated just through public health measures. Also, their control requires long term continuous interaction with specialist doctors.

At least in India, shortage of basic doctors (MBBS) has been hyped as only 12% Primary Health Center, the corner stone of rural health services, are without doctors. On the other hand, the rural sector is facing acute shortage of specialists. Eighty per cent posts of specialists (surgeons, physicians, pediatrics, gynecologists, etc.) at the Community Health Centers, the first contact point of a villager with specialists, are lying vacant.⁴ There is also a huge shortage of super-specialists required for control and treatment of NCDs. For example, at any given time there are 2.4 million cancer patients, and about 1 million fresh cancer cases are diagnosed every year in India. There are only 1,500 oncologists that give a ratio of 1 oncologist per 1,600 patients as opposed to the US where the ratio is 1 per 100 cancer patients; even that is considered inadequate by the American Society of Clinical Oncologists.⁵ This should be true for other NCDs. There is an urgent need to plan health man power requirements for control of NCDs. The emphasis on prevention should continue, however, because of multifactorial etiologies prevention has to be backed up by expansion of hospital based diagnostic and treatment facilities.

This calls for innovations in Medical education to put creation of specialists and super-specialists on a fast track. One approach could be to replace the MBBS course with combine MBBS-MD/MS course so that every medical student is assured of a postgraduate degree. He/she does not have to participate in “auction bidding” for PG seats which are sold for millions of rupees especially in private medical institutions. Rural posting should be made an integral part of the postgraduate medical education so that basic specialist services can be made available to the rural folks. Simultaneously, rural health services, which are based on the 60 year old Bhore committee report, need restructuring keeping in mind the improved mobility and connectivity. Today, every village home has a mobile.

**Nurse Practitioners as Primary Health Providers**

Despite the fact that in the next few years NCDs will dominate the health scenario globally, all humans will face day to day minor problems of common cold, body aches, sporadic diarrhea etc that need consultation of a primary health provider. During the late 1950s and early 1960s, US witnessed gross shortage of primary care physicians due to expansion of specialization in medicine. Rural areas were worst affected. To meet the shortage, a cadre of Nurse Practitioners (NPs) was created.⁶ Today not only the US has some 200,000 NPs but the concept has been accepted by many developed nations (Canada, UK, Some European Nations, Australia and New Zealand). The NPs could not only serve as patients’ primary health care providers but would be an excellent link between doctors and other health workers. It is time to accept the concept globally. NPs will able to provide primary health care especially for the much starved rural health sector.

**Concluding Remarks**

To achieve the requisite doctor to population ratio of 1:1000 a huge number of medical colleges are being established in India ignoring the fact that quality of medical education will be adversely affected grossly because of severe shortage of teachers and poor infrastructure. MCI ‘Vision document 2015’ is also geared to achieve the ratio. Very soon some 48,000 MBBS doctors will be produced every year in India.⁷ But only one third will have the opportunity of doing post-graduation in clinical disciplines.⁸ Further, the Government has no resources to employ most of them, which would result in chaos in medical profession due to gross under employment of doctors. This would make medicine less
attractive, and medicine may lose the best brains. India should adopt a balanced approach in developing health and medical manpower. Role of basic doctors cannot be ignored any time and there cannot be a total moratorium on starting of a new medical college. However, it is time to think ahead and develop strategies for facing the challenge of the impending avalanche of the NCDs. Even the rural sector urgently needs services of specialists. Rural health services are in bad shape with the result that even for minor ailments, villagers rush to urban tertiary medical centers. No wonder the outpatients of the AIIMS, New Delhi and Tata Memorial Hospital (Cancer), Mumbai look like chaotic railway platforms.

It is hoped that various issues raised in this article will generate national debate facilitating development of health services module/s that could be even used worldwide.

References

8. Rural Health Statistics 2015 in India. [Data base on Internet] Doctors at Primary Health Centres and Total Specialists at the CHC. Available from https://nhhmis.nic.in/.../RHS2015.aspx?...%2FRURAL%20HEALTH%20...