

Short Communication

Colloquium Report- Public Health in India: A Call to Action

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ABSTRACT

In light of the medical workforce shortages along with a rural-urban differential in the distribution of human resources for health in India, many Indian leaders have recognized the importance of disease prevention at a population level for improving the health status of the Indian population. The Jodhpur School of Public Health, in collaboration with Poornima University, Jaipur, hosted a colloquium to consider the role of public health in India. This report summarizes the discussion topics of the colloquium. The panel members included JVR Prasada Rao; KS Reddy; DS Roy; GV Fant, and J Harsh. Three common themes were present in the discussion and question-and-answer period: 1) The key to successful public health programming in India depends on an appreciation of the policy history and the political dynamics pertaining to public health; 2) Analytic thinking and the use of technology may be key considerations for public health action in India and the region; and 3) There are emerging opportunities for graduates of public health programs, especially those graduates who are committed to developing their analytic thinking and quantitative skills for public health action. The colloquium discussed topics and ideas that have the potential to shape the learning activities of students interested in pursuing lifelong, professional careers in public health for India and the WHO South Asia region.

Key words: Public Health in India; Public Health Policy; Analytic Thinking; Role of Technology in Public Health

INTRODUCTION

Colloquium- noun. Usually academic meeting at which specialists deliver addresses on a topic or on related topics and then answer questions relating to them.

--From the Merriam-Webster Dictionary (online)

The medical workforce shortages along with a rural-urban differential in the distribution of human resources for health in India ^(1,2) help to illustrate that there are

limits to the provision and cost of medical services for the Nation. ⁽³⁾ Like other countries, India has recognized that disease prevention and health promotion at a population level may play an important role in improving the health status of a population. ^(3,4) The study and practice of public health, with its emphases on control of disease, prevention of illness, and promotion of healthy behaviors, is gaining attention among many as illustrated in the

development of public health, academic programs in India. On the anniversary of its tenth-year as an academic institute, the Jodhpur School of Public Health (JSPH), in collaboration with Poornima University (PU), Jaipur, Rajasthan, hosted a colloquium to consider the role of public health in India and launch joint public health learning activities at PU with JSPH as its knowledge partners. This report summarizes the discussion topics of the colloquium.

Outline of Event

The colloquium was held on 31 July 2019 at the campus of PU and on the same day that JSPH held a public health wellness check-up camp for underprivileged persons living in the vicinity of PU. The colloquium panel discussion was entitled, “Public Health Today in India: A Call to Action.” The panel discussion was moderated by A Purohit (Founder and President, JSPH). The panel members included JVR Prasada Rao, former Health Secretary of India and Special Envoy to the Secretary General United Nations on HIV/AIDS for the Asia Pacific region; KS Reddy, president of the Public Health Foundation of India; DS Roy, former Director, IIMR and former CEO of WISH; GV Fant, Visiting Professor, Public Health (Epidemiology & Biostatistics), pro-bono, JSPH, and J Harsh (Co-CEO and CFO, JSPH; CEO, Mobiloite). The PU leaders provided the formal meeting space and invited PU students, faculty, staff along with other PU partners to the colloquium. Approximately 150 persons participated in this academic event.

Key Ideas Discussed

A Purohit welcomed the PU leaders, faculty, and students to the colloquium. He stated that the improvement of the health status for the Indian population would depend on many of the students who were present at the colloquium and were willing to commit their studies and later professional efforts to advancing the future of public health in India. To this end, it was

important to hear from the “Founding Fathers of Public Health in India” (i.e., Rao and Reddy) and other experts on the history of public health in India and highlight some key ideas of public health along with the identification of related public health opportunities for India and the region.

KS Reddy provided some context for his new book entitled, “Make Health in India”.⁽⁴⁾ In the monograph, he described the need for public health in India with special emphasis on health assurance for the population on the way toward Universal Health Coverage (UHC). UHC by the year 2030 is a goal proposed by the World Health Organization (WHO) and adopted by many Member States, including India. To help India achieve this UHC goal, Reddy offered a list of actions that could help create a framework for promoting and protecting the health of all Indians. Reddy felt that public health professionals have an important role to play in promoting health and protecting the health of the Indian population.

JVR Rao offered a unique perspective on the advances and challenges that India faced from the 1950s to the present. In the early days of Indian independence, many public health successes were identified including the control of malaria and elimination of small pox. Subsequently public health took a back seat giving primacy to hospital-based curative health care. Many of the communicable diseases which were effectively controlled like Malaria while TB surged back in a more virulent form. Then, other advances and challenges were discussed. Rao reminded those in attendance that the initiation of the public health movement in the early 2000s was largely due to the launching of the Public Health Foundation of India and related public health schools in India, of which JSPH was an important institution that has made a mark in the last decade.

Rao regretted that the National Government of India has spent less than 1% of the national budget on health for the India

population; state governments, by contrast, spend 60% on health for the population living within their geographic areas. He felt this must increase with more investments on public health activities, public health personnel and a better understanding of the Social Determinants of Health as it pertains to the Indian population. Prof. Rao felt that more public health professionals needed to be involved in policy strategy and decision-making rather than physicians whose training and experience could be better utilized in providing medical services to Indians, especially those living in rural areas. He also stressed that the targets detailed in India's National Health Policy, 2017, should not remain "mere numbers" but that public health professionals should make concerted efforts to implement these targets in order to make them a reality.

GV Fant offered a quick overview on the study and practice of public health beginning with the WHO's definition of public health- the art and science of preventing disease, prolonging life, and promoting health through the organized efforts of society. He compared the study and practice of public health with clinical medicine using material from the public health school at Harvard University (USA): The focus of public health is on the population compared to the focus of clinical medicine which is on the individual; public health is marked by a public service ethic compared to the provision of personal services for clinical medicine; population sciences and quantitative disciplines are essential to training and analysis in public health while in clinical medicine the numerical sciences continue to gain prominence but still represented a minor part in training. ⁽⁵⁾ Fant described global public health diplomacy and acknowledged that the concept combines several different disciplines (i.e., public health, international affairs, management, law, economics, and trade policies) to improve global public health policy and global public health status. Finally, he thought that an emerging area of opportunity for public health students in

India and the region included refining analytic thinking and quantitative skills, such as, epidemiological thinking and applied statistics, public health surveillance, public health information systems, decision analysis/machine learning, and relational databases for use in public health.

DS Roy presented his thoughts of the role of Machine Learning (ML) and Artificial Intelligence (AI) in public health activities for India. He acknowledged that technology should not be considered as a competitor but enabler in healthcare ecosystem, helping the clinicians make better decisions for the patients and that this could be very useful in a preventative and societal medicine context. Technology can be used to help clinicians make appropriate clinical decisions and for data capture and data analysis related to disease burden and the social determinants of health within the population. The application of ML/AI in public health activities in India should be considered for its "added value" in clinical decision making, as a planning and prioritization tool, and for influencing health policy decisions. Roy described, briefly, how AI has been used, already, in areas of clinical decision making, predictive analysis in epidemiology, medical imaging, and primary health – decision-making, prioritizing treatment, and health planning. From his perspective, physicians, public health experts, analysts, and engineers in India have a need to work closely together for addressing the disparities of disease burden and the social determinants of health in the population.

J Harsh reflected on both what he heard from the panel presenters and, also, from his perspective as a leader of an IT company with emphasis on the application of health IT in India. He reminded the students, in particular, that public health and IT were already working together to make a positive-difference in the lives of the Indian people. Harsh felt that this was evident in the increasing use of blockchain technology, clinical decision analysis, machine learning, and AI in medical treatment and public

health applications. In India, an increasing number of IT companies that currently work or intend to work in the medical/public health arena recognize that there continue to be roles for both IT graduates and non-IT graduates (e.g., public health, business, communications, sociology) in their workforce because the technology must support decision-making to help improve the lives and health status of Indians and region.

CONCLUSIONS

The study and practice of public health in India continues to be recognized within the country. Analytic thinking and the use of technology have great potential to help decision-makers find innovative solutions and interventions for public health challenges facing the population of India and, possibly, the region. Three common themes were present in the discussion and question-and-answer period:

1. The key to successful public health programming in India depends on an appreciation of the policy history and the political dynamics pertaining to public health.
2. Analytic thinking and the use of technology may be key considerations for public health action in India and the region.
3. There are emerging opportunities for graduates of public health programs, especially those graduates who are

committed to developing their analytic thinking and quantitative skills for public health action.

The colloquium discussed topics and ideas that have the potential to shape the learning activities of students interested in pursuing lifelong, professional careers in public health for India and the WHO South Asia region.

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