Strengthening Master's in Public Health courses in India

A roadmap for
multi-disciplinarity, quality, and career pathways

FRAME India

A Framework for Restructuring and Advancing MPH Education in India

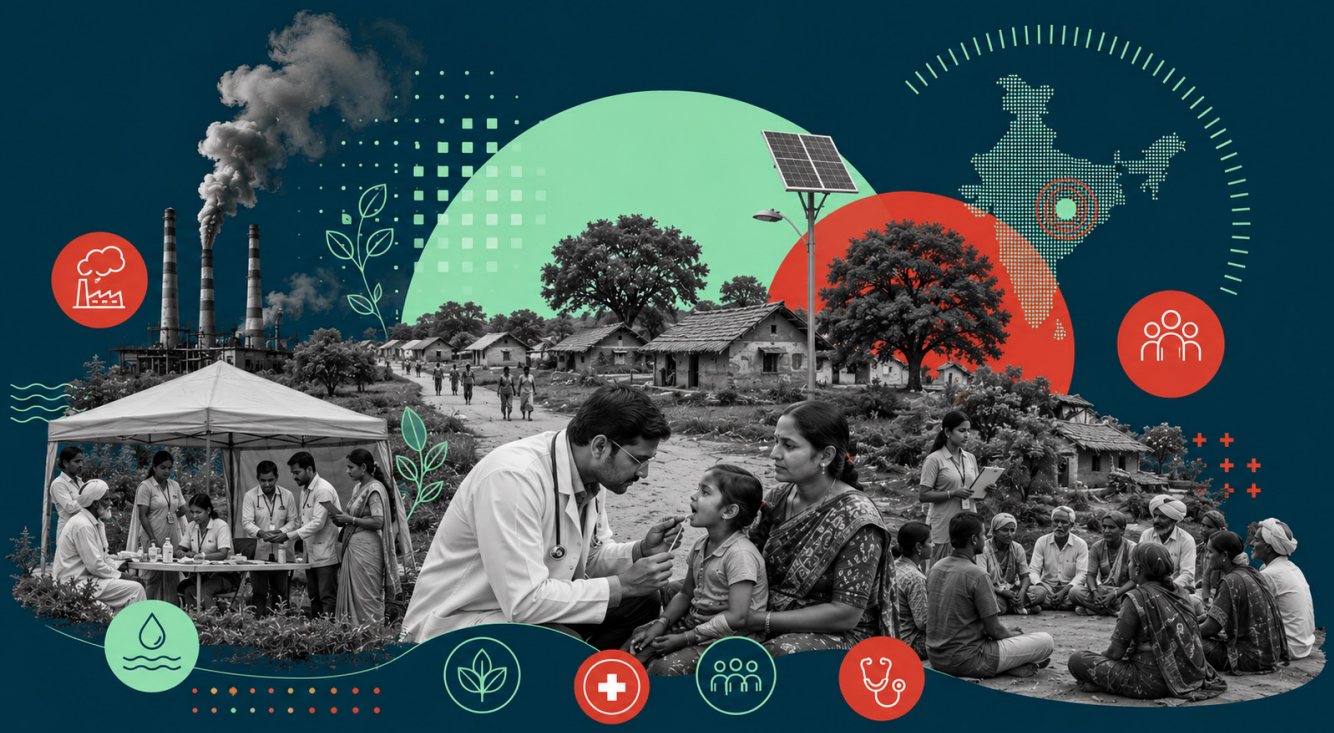


Image source: Unsplash

Index

Foreword

Professor Sanjay Zodpey

MD, PhD, DSc (honoris causa), Doctor of Medicine (honoris causa)

President, Public Health Foundation of India
Pro-Chancellor, PHFI Institute of Public Health Sciences (Deemed to be University)

India stands at a critical juncture in its public health journey. We are undergoing a transition in our country's disease burden, witnessing emerging global risks from infectious diseases alongside evolving climate and environmental risks. The noncommunicable disease burden in India is also rising. Though our health system is responding to these transitions through a variety of interventions and public health programs, an effective response to these challenges requires a competent multidisciplinary public health workforce.

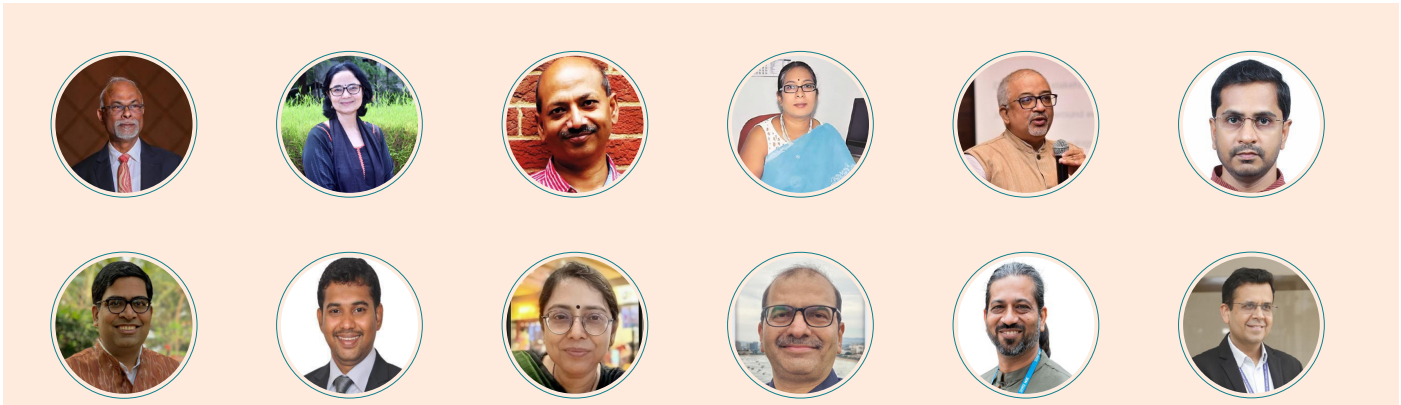
India has seen phenomenal growth in the number of institutions offering Master of Public Health (MPH) programs. These programs are an important pathway for building the public health workforce in India. While the expansion of MPH programs reflects growing recognition of public health as a distinct professional domain, it has also revealed concerns related to quality, competencies, and career alignment. Variations in curricula, eligibility criteria, pedagogy, and public health practice exposure contribute to variable competency acquisition with consequent downstream challenges in employability and impact.

Public health educators and practitioners across the country should be cognizant of the challenges while recognising that there are opportunities for strengthening pre-service education through a blend of approaches focused at the institutional and the instructional level. A prudent approach in such a situation will be towards emphasising a shared foundation of core competencies while at the same time encouraging institutions to innovate and provide specialised programs for responding to the evolving public health needs of the country.

Ultimately, the MPH education in India must be grounded in the realities of the national health system and programs and the socio-cultural context of the country. MPH programs must continue to emphasise multidisciplinary entry, competency-based learning, and experiential training with clear linkages to the health systems to advance public health practice within the educational programs.

Strengthening MPH education is ultimately a means to a larger end: building a competent, capable, and culturally sensitive public health workforce equipped to serve India's present and future public health needs. A dialogue to advance these ideas meaningfully at the individual and institutional levels is important for advancing public health action. The ideas presented in this report are a timely addition to the larger discourse around strengthening public health capacity and provide inputs to the future course of public health education in India.

Preface by the FRAME team



A panel discussion in a recent public health education meeting was the starting point for this initiative to lay a roadmap for public health courses in India. Some of us were on the panel and some in the audience. An overwhelming concern was expressed over the "unemployability" of the Master's in Public Health (MPH) graduates as they lacked the basic competencies. However, most of these graduates end up joining the health system, usually as consultants at the district level and learn on the job.

Subsequently, a few of us met, which led to discussions on the need for concerted efforts to rectify the situation and the formation of a core group to drive these efforts. This initiative is a result of these discussions. This is an informal group, and though individuals have been drawn from reputed government institutions, they have contributed in their personal capacities and not as formal representatives of their institutions.

The overall goal of this report is to facilitate a shared understanding and provide some degree of standardisation of MPH programs in India. This report also serves as a guide for institutions planning to launch an MPH program, outlining key considerations they will need to address. Over time, this initiative intends to provide facilitation materials for various proposed activities. In the longer run, these efforts could aid in moving towards accreditation and common entrance and exit tests for MPH programs in India.
This initiative will work in three phases. In the first phase, it worked with institutions offering MPH in the major centrally funded universities/institutions and prepared this report. In the second phase, we will reach out to the private schools and state government-funded ones and obtain their inputs as well. In the third phase, we plan to reach out to the appropriate regulatory bodies governing public health education in India.

This report by the collective is a Consensus Statement on restructuring MPH Programs in India and defines an India-specific competency framework with core competencies and standardisation of training programs. Reforming the MPH curriculum does not imply discarding global standards, but rather adapting them to the Indian context.

Given the vital role MPH graduates are playing and will continue to play in implementing public health interventions, the need for a more contextualised, practice-oriented, and India-specific curriculum of global standards has become increasingly urgent. There is a need to look at competency frameworks for a health workforce that can deliver the full range of both the essential health services and the essential public health functions, including national and international emergency preparedness and response.

This is just the beginning, and we look forward to partnering with all concerned people to strengthen public health education in India.

The Frame Team

Dr. Anand Krishnan, Professor and Centre for Community Medicine, AIIMS, New Delhi. He leads efforts to establish a School of Public Health at AIIMS, New Delhi. He has more than 400 publications, an H-index of 65, and has been listed among the top 2% of global researchers since 2019. He headed the WHO Collaborating Centre for Capacity Development and Research in Community-based NCD Prevention and Control. He leads Minerva Network, which assigns cause of death using verbal autopsies done under SRS. He is an elected Fellow of NAMS, IAPSM, and IPHA and has received multiple awards for his work in Public Health. He is a Member WHO Working Group on Influenza Burden Estimation, Member WHO-UNDESA technical Advisory Group on COVID-Mortality Estimation.

Dr. Prabhdeep Kaur is a physician and public health professional, currently Chair and Professor at the Isaac Centre for Public Health, Indian Institute of Science, Bengaluru. She is developing interdisciplinary training and research programs in healthy ageing, cardiometabolic diseases, and digital interventions (including AI) for primary care. With 22 years of experience in epidemiological research, teaching, and implementation science, she previously served as Senior Scientist, Head of the Division of Noncommunicable Diseases, and FETP Course Coordinator and MPH faculty at ICMR-National Institute of Epidemiology, Chennai. From 2004–2023, she led initiatives to improve the prevention and treatment of hypertension, diabetes, and cervical cancer in India, conducted outbreak investigations, and strengthened infectious disease surveillance. She served on the Chief Minister's Expert Task Force for COVID-19 control in Tamil Nadu. She was Principal Investigator (2017–2023) of the India Hypertension Control Initiative, a multi-partner initiative implemented across 150+ districts in 24 states. She has 100+ publications in peer-reviewed national and international journals.

Dr. Rajib Dasgupta is Professor and Chairperson at the Centre of Social Medicine & Community Health, Jawaharlal Nehru University, New Delhi. He was a Fulbright Senior Research Fellow at the Global Diseases Epidemiology and Control Programme, Johns Hopkins Bloomberg School of Public Health, and Erasmus+ Fellow at the WHO Collaborating Centre for Health in All Policies, Tampere University, Finland. He is member of the National Certification Committee for Polio Eradication, National Verification Committee for Measles and Rubella Elimination and National AEFI (Adverse Events Following Immunisation) Committee. He is the former Editor of the 'Indian Journal of Public Health'.

Dr. P.V.M. Lakshmi is a Professor of Epidemiology in the Department of Community Medicine and School of Public Health at the Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh. She completed her MBBS from Osmania Medical College in 1998 and subsequently earned her MD in Community Medicine from PGIMER in 2003. Her professional expertise encompasses epidemiology and biostatistics, with substantive research interests in both communicable and non-communicable diseases, particularly epidemiological modelling. Dr. Lakshmi also mentors a diverse cohort of MPH, MD, and PhD scholars at PGIMER. Within the public health domain, Dr. Lakshmi holds several key positions. She serves as the Focal Person for the Regional Institute for HIV Sentinel Surveillance in North India, playing a pivotal role in HIV surveillance under the National AIDS Control Organization (NACO). Additionally, she is a member of the Technical Resource Group and the Technical Working Group for HIV Disease Burden Estimation in India. She contributes significantly to the capacity building of health staff in the Integrated Disease Surveillance Programme (IDSP) and Disaster Management, serving as a Resource Person and organising Training of Trainers programmes in these areas. She has been the Principal Investigator for various projects encompassing the domains of HIV/STIs, vaccine-preventable diseases, non-communicable diseases and environmental health.

Dr. B R Shamanna, in addition to his MD - Community Medicine, also holds DNB in Maternal and Child Health and Social & Preventive Medicine, MSc from the University of London and a PG Diploma in Medical Law and Ethics from NLSIU, Bengaluru. Currently, he serves as a Professor at the School of Medical Sciences, University of Hyderabad, where he conceptualised and started the MPH program in 2013 and Ph.D in Health Sciences-Public Health program in 2017. He has been a visiting guest faculty to LSHTM every year for the last 24 years and also to UNSW, Sydney, Australia. He has worked closely in developing two WHO collaborating Centres for Prevention of Blindness and a Centre for Excellence in Disability.

Dr. Biju Soman is a Professor at AMCHSS, the public health division of Sree Chitra Tirunal Institute (SCTIMST), Trivandrum, an institute of national importance, under the Department of Science and Technology, Govt. of India. SCTIMST has been running the MPH Program since 1997 and offers PhDs in public health. Dr. Soman completed his MBBS, DPH, and MD in Community Medicine from GMC, Trivandrum, and his MSc from LSHTM. His teaching, research, and publications focus on the use of technologies in public health, including data science, GIS, Telemedicine, Infectious Disease modelling, and HTA. He has 90+ scientific publications, presently heads the Regional Resource Centre for HTA-In, and the data science lab at the institute, and has served as head of AMCHSS, chairperson of the BoS(HS), member of academic and governing committees, etc.

Dr. Sitanshu Sekhar Kar is a Professor of Preventive & Social Medicine and the Officer-In-Charge of the JIPMER International School of Public Health in Puducherry, India. He played a pivotal role in establishing the JIPMER International School of Public Health with substantial funding and developing its Master of Public Health (MPH) curriculum. Dr. Kar's global recognition is evidenced by prestigious fellowships, including the Fulbright Nehru Academic Professional Excellence Fellowship (USC, USA) and the FAIMER Fellowship. He has been a core faculty member of the Department of Medical Education at JIPMER since 2012. He has authored over 280 peer-reviewed publications and received multiple awards for research excellence.

Dr. Senthil Amudhan is Professor and Head, Department of Epidemiology at the National Institute of Mental Health and Neuro Sciences (NIMHANS), Bengaluru, with over 13 years of academic and public health experience in neuropsychiatry epidemiology. He was actively involved in MPH curriculum development at NIMHANS and designed the epidemiology and social and behavioural sciences modules. He currently serves as Course Director for the MPH. He has served in several state and national steering committees and policy task forces on mental health systems strengthening and suicide prevention. He is a recipient of BMJ Awards South Asia and ICMR-Professor B.C. Srivastava Foundation Award for developing India's first structured community mental health care delivery model for ASHAs. He has authored over 60+ peer-reviewed publications and five books/book chapters.

Dr. Bobby Paul (MD, DCH) is Professor & Head, Department of Preventive and Social Medicine and Sub Dean at All India Institute of Hygiene and Public Health, Kolkata. She has completed the FAIMER fellowship in Medical Education with distinction. She is the course coordinator for the MD (CM) Course and mentors students of the I-FETP, MD (MPH Epidemiology) Course, and PhD programs. She is an Editorial Board Member of the Indian Journal of Community Medicine and has more than 190 publications in national and international journals and four books/ book chapters. Her areas of expertise are bioethics and research methodology, with a special interest in non-communicable disease research.

Dr. Harshad Thakur is currently Professor at the Centre for Public Health, School of Health Systems Studies (SHSS), and Dean, School of Media and Cultural Studies (SMCS) at the Tata Institute of Social Sciences (TISS), Mumbai. He previously served as the Director of the National Institute of Health and Family Welfare (NIHFW), Government of India, New Delhi, from October 2019 to September 2021. In June 2008, he initiated the Master of Public Health (MPH) programme at TISS with a specialisation in Social Epidemiology. His academic interests span teaching, research supervision, and capacity building, and he has guided research projects of PhD, MPhil, MPH, MHA, and DHA students. His research experience also includes studies on major public health and disease conditions, including tuberculosis, leishmaniasis, diabetes, and the health effects of nuclear radiation.

Dr. Tarun Bhatnagar is a Senior Scientist and Head, ICMR School of Public Health, ICMR National Institute of Epidemiology (ICMR-NIE), Chennai, with over two decades of experience in public health. He provides oversight and is a faculty member for the two-year India Field Epidemiology Training Program leading to MPH, PhD program and online courses offered by ICMR-NIE. He also serves as Scientific Director (India) of ICMR–NIAID International Centre of Excellence in Research, Chennai, and Honorary Professor, Academy of Scientific and Innovative Research (AcSIR). He has authored 105+ scientific publications and five books/ book chapters. He holds an MD in Preventive & Social Medicine from BHU, Varanasi, India, a PhD in Epidemiology from the University of California, Los Angeles, USA, and a PG Diploma in Bioethics from IGNOU, Delhi.

Dr. Pankaj Bhardwaj is the Director of the ICMR-National Institute for Implementation Research on Non-Communicable Diseases (NIIRNCD), Jodhpur. Prior to this, he served as Professor of Community Medicine and Family Medicine, and Head of the School of Public Health at AIIMS Jodhpur, where he also led the MPH Program and Executive Program on Public Health Policy, Leadership, and Management. Dr. Bhardwaj has held key positions, including Vice Dean (Research) at AIIMS Jodhpur, and serves as Editor-in-Chief of the Indian Journal of Community Medicine. He is a Fellow of the National Academy of Medical Sciences (FAMS) and FAIMER. He has also been associated with globally reputed institutions such as LMU Munich, Karolinska Institute, ECDC Stockholm, the Public Health Agency of Sweden, and Johns Hopkins University.

Image source: Provided by the team

1. Need for a public health workforce beyond doctors in India

As India faces a significant shortfall in public health professionals, the need to build a structured public health workforce is critical. This has become more acute as India continues to expand its public health infrastructure and initiatives. Historically, public health professionals in India were trained in medical colleges in departments of preventive and social medicine or community medicine, through Master's or Diploma programmes. The Diploma in Public Health (DPH) programme has been abolished by National Medical Commission (NMC) from September 2021. With the DPH not available anymore, the Master of Public Health (MPH) programs have assumed greater importance.

Many medical professionals in India believe that MPH programs are not needed in India as these are western concepts or approaches and the current system, which is medicalised, is fit for the purpose. There is also a generic view that the role of non-medical graduates in the discharge of public health functions is very limited. Medical graduates have major concerns about equivalence between MPH and MD as post-graduate degrees.

Without in any way undermining MD community medicine training, the need for MPH programs in India can be emphasised across three key dimensions – conceptual, quality, and quantity.

Public health at a fundamental and conceptual level, encompasses nearly all aspects of life – individual, communal, and societal, and therefore requires an interdisciplinary approach. It is seriously constrained by an epistemological system that is restricted to a clinical/medical approach and professionals practicing in that paradigm. Public health in its expansive and inclusive mandate requires syncretism vis-a-vis several diverse paradigms – biomedical, social, behavioral, managerial, and economic, to name a few. The newer public health challenges like conflicts and disasters, climate-related extreme events, geopolitical upheavals, and increasing health inequities further make a case for a diverse workforce.

This leads to the next issue of what competencies are required for the delivery of public health services and the essentiality of clinical competencies for the discharge of these services. Before answering that, one must address the issue of what essential public health services are and who constitutes the public health workforce.

There is no single definition of the public health workforce, and experts have pointed out the challenges in defining it. Most people confuse a public health workforce with doctors, dentists, nurses, and pharmacists working in the public sector of healthcare. Many of them deliver clinical or medical care and do not discharge public health functions.

The public health functions broadly include health surveillance, health protection, health promotion, health planning, regulation, health services organisation, delivery, and evaluation. Accordingly, the workforce would include public health clinicians, nutritionists, occupational & environmental health specialists, epidemiologists & biostatisticians, health program administrators & managers, health promoters & community mobilisers, public health educators/teachers/researchers/social scientists, health economists, planners, and policy analysts.

In such a scenario, one can ask, are community medicine professionals alone the best fit for discharging the entire spectrum of public health functions? Clearly, public health is not the responsibility of medical professionals alone. MD Community Medicine residents spend considerable time (40-50%) in discharging clinical duties, and

most medical colleges do not have modular training to ensure that all the above aspects of public health are taught adequately. There is little standardisation and quality control in Community Medicine (CM) residency programs. The quality of MD Community Medicine curriculum requires substantial strengthening in areas such as health systems management, policy analysis, global health diplomacy, and health economics.

Emerging challenges such as One Health or the climate crisis demand a wide gamut of disciplines to engage with public health that is beyond the remit of a medicalised community medicine curriculum. With the increasing role of technology and artificial intelligence, it may make more sense for technology professionals to be involved in health care delivery and management. Enhancing these components should better align MD training with evolving public health priorities. At the same time, the deficiencies in the current MPH programs should also be acknowledged.

The final justification for MPH programs lies in assessing the mismatch between the demand for and supply of India's public health workforce. There are no global norms to estimate this as it is dependent on the context of the health system. Public health professionals could be employed by governmental public health agencies, community-based service organisations, academic and research institutions, private organisations, hospitals, health plans, and medical groups. However, often we use a narrow definition of public health professionals in terms of public health cadre in the government. The National Health Policy (NHP) 2017 emphasised the need to create a dedicated Public Health Cadre. Building on this vision, the Ministry of Health and Family Welfare, released guidelines in 2022 for the implementation of a Public Health Management Cadre (PHMC) across the states. The guidelines proposed four categories – specialist cadre, public health cadre, health-management cadre, and teaching cadre –- and specified the corresponding roles, responsibilities, and educational qualifications for each.

Let us look at three states that have established a public health cadre and their numbers:

TAMIL NADU

In **Tamil Nadu**, the public health (PH) cadre consists of around 180 personnel (excluding those who work at PHCs as they are not trained in public health). This comes to 0.3 per lac population.

ODISHA

In 2014, **Odisha** announced 578 posts under PH cadre starting at block level. This comes to 1.28 per lac population.

MAHARASHTRA

In **Maharashtra**, 479 posts of public health/ PSM have been identified in specialist cadre or 0.4 per lac population with more than 50% vacancy.

It has been estimated that India would need 39,774 health management professionals in 2017 and 44,936 by the year 2030 to maintain the normative standard of 2.97 health managers per 100,000 population.

These often do not include many positions even within the government – National Centre for Disease Control, Indian Council of Medical Research, State and National Institutes of Health and Family Welfare, and Training Centres to name a few. They also do not include posts in research organisations or private corporations, international and national NGOs. In addition, we estimate the current need for medical college faculty in CM to be around 6000 and for proposed expansion to be around an additional 3500.

This is in contrast with the situation in the United States. The public health workforce to population ratio was around 158 per 100,000, including federal, state, and local public health authorities. A more recent estimate of the number of state and local public health department staff needed to deliver basic, everyday services was 183,500 (55 per 100,000).

Clearly, all estimation of the number of public health professional workforce needed in India take a bare minimum approach rather than optimum and almost entirely based on the government based public health cadres. The supply side argument assumes that the number of CM postgraduates being produced by medical colleges is sufficient for the national needs and excess production of public health professionals will result in under/un-employment.

At present, the cumulative number of experts in CM as reflected in the membership of Indian Association of Preventive and Social Medicine (IAPSM) is less than 10000. An estimated 1700-2000 posts for MD in CM and estimated 4000-5000 MPH seats of MPH programs are available annually. While information on how many of the MD seats are vacant could not be accessed, it was estimated that about 50% of MPH seats are not filled.

Given that most of the MD students prefer an academic career, only a few would trickle down to the public health cadre and other public health workforce careers. Medical education is highly resource intensive and expanding MD-CM seats requires additional teaching faculty, field training infrastructure, and substantial financial investment – all of which would make rapid scale-up challenging.

In contrast, the USA, with about one fourth of India's population, produces about 17,000 MPH students every year, including international students. It is also interesting to note the first-destination outcomes for public health graduates between 2015 and 2018 of whom 73% were employed and 15% were enrolled for further studies. Only 17% of graduates were employed in government, 27% engaged in health care, 24% in corporations, 19% in academia, and 12% in nonprofit. This underscores the fact that a singular focus on the government sector is entirely misplaced.

This calls for a rapid scaling up of broad-based public health service that is rooted in current public health requirements. **India's challenge is to build a 'larger cake' of public health workforce; rather than them fighting over 'crumbs'.** In the event of the Indian public health field, which encompasses government, corporate, not-for-profit, and philanthropic sectors, is unable to expand to a diverse set of functions and activities, MPH graduates may face similar challenges that dental graduates faced earlier. Just as the rapid proliferation of dental colleges led many students who could not secure admission to MBBS programs to opt for dentistry instead, there is a similar risk that MPH programs could follow the same trajectory.

The debate on public health workforce must move beyond the advantages and disadvantages of medical leadership to a far more pressing need of crafting robust interdisciplinary public health teaching and training programs for entrants from diverse disciplinary backgrounds. India needs a credible public health workforce with explicit professional standards and a robust accreditation system.

CONCLUSION

1. The involvement of medical professionals alone in delivering public health function overlooks the range of competencies that India's health system needs and the National Health Policy envisages. This includes not only medical and health professionals but also professionals coming from diverse backgrounds such as sociology, economics, anthropology, nursing, hospital management, and communications, who have undergone public health training.

2. India has one of the lowest numbers of public health workforce per population and there is a need for a better assessment of the demand for public health positions in both government and non-government sectors. The current demand generated by expansions in medical colleges and public health cadres cannot be met by the postgraduates of CM alone.

3. Given that a clinical background does not provide an edge in discharge of most public health functions, the basis of a medicalised public health professional cadre in India is questionable.

4. We believe that current teaching and training programs of community medicine or public health do not equip the graduates with the full set of competencies required for contemporary public health professionals. Standardisation and enhancement of quality of MPH and MD Community Medicine programs is therefore the need of the hour.

Image source: Shutterstock

2. Need for India-specific MPH programs

Given the high burden of multiple diseases, environmental threats, health system weaknesses, and persistent health inequities, India urgently needs a skilled and responsive public health workforce. Recognising this, a public health cadre has been proposed by the central government (some states already have it), and robust efforts are on, though much needs to be done. At the same time, public health competencies are needed outside the government/public sector, including in academia, development, and industry sector work domains.

In this context, the MPH degree has emerged as a critical qualification for professionals aspiring to contribute to public health practice, academia, research, and policymaking. The need for a multi-disciplinary public health workforce and competency for monitoring and evaluation of public health programs has been articulated. Globally, the MPH degree is recognised as a professional qualification aimed at developing competencies essential for public health using multidisciplinary and evidence-based approaches.

Evolution and mapping of MPH programs

Johns Hopkins School of Public Health was the first to offer a one-year certificate in public health (CPH) in 1920, which was transformed to Master of Public Health (MPH). At about the same time, British India had a Diploma in Public Health (DPH) in a multitude of institutions, which has gradually declined. In India, the MPH program was introduced in the late 1990s, drawing significantly from global, particularly American, models of public health education. Since then, there has been a mushrooming of both public and private institutions offering this course in India, which is a positive sign, but a lack of quality standards and uniform regulations is a cause for concern.

The Indian MPH programs, largely modelled on the US framework, adopt the same five core disciplines, including Epidemiology, Biostatistics, Health Management/Systems Strengthening, Environmental Health, and Social and Behavioural Sciences. The US model also focuses on strong career alignment, structured mentorship, and national accreditation, which we could learn from.

There have been past efforts at mapping the MPH courses and institutions, as well as defining competencies and course structure. According to one of the reports, "As of January 2024, a total of 129 MPH programs were being offered across India. Of these, 116 are general MPH programs and 13 are specialised, such as those focused on Epidemiology, Health Systems, Nutrition, and Social Epidemiology. All general MPH programs follow a uniform duration of two years, yet vary significantly in content, structure, and delivery. The programs are unevenly distributed across six zones (Central, East, North, North-East, South, and West), with the North and South zones hosting the highest number of programs — 35 and 26 respectively — raising concerns about regional disparities in access to public health education. Only 27 programs were housed within dedicated public health schools or centres, while the rest are embedded in various faculties such as allied health sciences, management, commerce, and paramedical sciences."

Most MPH programs are offered by University Grants Commission (UGC)-approved institutions, including central, state, deemed, and private universities, with few being National Assessment and Accreditation Council (NAAC) accredited. The authors recommend systematic reform, including standardised curriculum, accreditation, and improved governance.

While previous reviews have been broad and

descriptive, they have lacked analytical depth, outlining what needs to be done without specifying how it should be implemented. The Ministry of Health and Family Welfare's 2017-18 model MPH curriculum, too, falls short in several respects.

Another report by The Lancet Commission recommended moving from informative to formative to transformative learning for health professionals. While informative learning focuses on acquiring knowledge and skills to produce experts, formative learning is about values to produce professionals. Transformative learning is all about producing leaders and enlightened change agents. It also deliberates institutional and instructional design (processes), and educational outcomes.

Instructional design, which is the focus of this initiative, involves the four Cs:

- **C**riteria for admission
- **C**ompetencies as defined in the curriculum
- **C**hannels of instruction or pedagogy
- **C**areer pathways or options that graduates have on completion of their course

Image source: Unsplash

Need for India-specificity

Despite the structural resemblance to the US programs, the current Indian MPH suffers from several shortcomings. There are some very specific issues in the way these programs are structured and delivered in the Indian context which demand attention, particularly Health System Strengthening aspects. The India-specific issues are listed in **Box 1**.

In brief, Indian health system has specific needs and a regulatory ecosystem, and our MPH programs must cater to these. These cover domains of context, curriculum, channels of teaching, and career pathways as pointed out in the Lancet Commission report.

Box 1.

India-specific issues in Public Health curriculum

1. Contextual relevance of the current MPH curriculums, given that the Indian public health system functions within a very different socio-economic, cultural, health system, and governance framework from the US and other developed countries.

2. Appropriateness to the current disease burden and new-age public health challenges like mental health disorders, antimicrobial resistance, emerging infectious diseases, and climate change etc.

3. Diversity at the entry level with students from a wide variety of backgrounds, including medicine, allied health sciences, social sciences, and law join the course, making it difficult to produce graduates with similar exit-level competencies.

4. Highly theoretical classroom-based approach of teaching with limited field-based experiential learning, resulting in a mismatch between training and ground-level requirements.

5. A wide variety of institutions offer this course, from medical colleges to social sciences universities, as well as agriculture universities. The students have a very varied exposure to the health system.

6. High degree of medicalisation of public health in India, resulting in a neglect of social and behavioural sciences, both in teaching and practice.

7. Lack of adequate and more sustainable funding for public health departments in public university settings that usually offer MPH courses

8. Poor regulatory or quality oversight on these courses due to a lack of a centralised accreditation or uniform competency framework.

9. Aligning MPH programs with the National Education Policy (NEP) 2020 and University Grants Commission (UGC) framework, which advocates academic flexibility, credit transfer, and multiple entry-exit options.

10. Ill-defined job opportunities for this cadre within the government sector and an expectation from MPH graduates to be competent in diverse settings, from community to policy making, as epidemiologist to manager to researcher.

3. Defining eligibility criteria for MPH programs

The broad aims of an MPH program are to prepare professionals to serve diverse populations. It should prepare the students for program implementation and management of health services. They should develop leadership and advocacy skills. The program should also train educators for public health institutions and researchers.

However, promoting public health is inherently complex, requiring coordinated efforts across multiple sectors. Addressing health challenges and promoting healthy choices demands an interdisciplinary and holistic approach. Public health roles require diverse backgrounds and knowledge of various disciplines. Hence, it is important to include people from diverse backgrounds in the MPH programs.

Currently, numerous institutions, both public and private, offer MPH programs with varied specialisations and inconsistent eligibility criteria. There is a clear and urgent need to establish eligibility criteria nationwide to ensure multi-disciplinarity and inclusivity of the program. Given the breadth of public health, entry criteria must reflect the field's interdisciplinary nature.

While ensuring diversity in the public health workforce is essential, it is also a challenge to reconcile diverse academic backgrounds and develop them into a reasonably homogenous product that can perform core public health functions.

Overall, we recommend categorising applicants into two groups: health-related and non-health-related graduates, irrespective of whether they are already working in the health system.

Suggested eligibility criteria:

The issue of heavy medicalisation of public health in India has already been highlighted. In order to ensure diversity, it is critical to get non-medical graduates also into the system. At the same time, the differences in backgrounds cannot altogether be ignored. We propose separate eligibility criteria for them.

While restrictive criteria benefit in-service professionals and specialised fields like field epidemiology, a broader approach is essential to encourage interdisciplinary learning, address social determinants of health, and foster cross-sector collaboration and contextual capability development.

For students with health-related degrees:

It is proposed that candidates holding bachelor's degrees recognised by the following professional and regulatory councils in India may be considered eligible without requiring any experience:

- National Medical Commission (NMC)
- Indian Nursing Council (INC)
- Dental Council of India (DCI)
- Pharmacy Council of India (PCI)
- National Commission for Allied and Healthcare Professions (NCAHP)
- Central Council for Indian Medicine (CCIM)
- National Commission for Homoeopathy (NCH)
- All-India Yoga & Nature Cure Council (AIYNCC)
- Veterinary Council of India (VCI)
- Rehabilitation Council of India (RCI)

State-recognised BSc in Community Health Science & Bachelor of Public Health (BPH) also qualify as an eligible degree for MPH. Anyone who is a regular employee in the

health system, irrespective of background, should be considered eligible.

For students with non-health-related degrees:

In addition, candidates with the following non-health bachelor's degrees should also be considered eligible for admission into MPH programs:

- Social Sciences
- Humanities
- Management Sciences
- Law
- Natural Sciences
- Life Sciences
- Engineering Sciences

We recognise the challenges that these broad and diverse eligibility criteria will impose on the MPH programs, which is poor exposure to social sciences for medical graduates and poor exposure to bio-medical issues to non-medical graduates. We feel that it is necessary that efforts are made to bring them, to some extent, at par so that they start the course at a similar level. To support this, we have two suggestions

1. Non-health graduates must demonstrate one year of health sector experience. This requirement is not discriminatory but ensures baseline competency.
2. A foundation course (via platforms like SWAYAM, NPTEL) is recommended for both health (introduction to social sciences) and non-health graduates (introduction to health sciences) and a module on introduction to health system for all applicants.

These courses should be completed before admission and completion certificates should be mandatory for admission. All applicants must have a minimum of 50% marks in their qualifying degree with relaxation as per Government of India policy and regulations.

Admission process

The admission process for MPH programs needs to be streamlined through a common nation-wide entrance examination. These could be generic platforms like the Common University Entrance Test (CUET) which are customised for this course, or a common All India Public Health entrance exam held through a professional regulatory council.

A written/MCQ based test with three components of roughly equal share of marks – general aptitude, biological and health sciences, and social sciences. This can be used for shortlisting based on the marks scored followed by an interview or counselling process subject to institutional norms and minimum cut-off criteria. Affirmative action and policy on reservations should be as per Government of India policy for higher education.

We strongly recommend the inclusion of non-health graduates to be eligible for MPH courses to ensure multi-disciplinarity. If this entails creating systems or mechanisms to ensure adequate exposure to bio-medical sciences, social sciences, and health system exposure, then these should be incorporated.

Image source: Unsplash

4. Competency framework and MPH course structuring

India's public health landscape has evolved rapidly becoming increasingly complex. The growing burden of non-communicable diseases, re-emerging infectious diseases, the need for digital solutions, and the growing importance of planetary health approach have highlighted the need for more focused and responsive training. This has intensified the call for harmonising competencies across institutions to ensure employability, maintain the credibility of the MPH degree, and ensure standardised competencies while allowing space for specialisation that reflects institutional capacities and emerging health priorities.

Traditionally, MPH programs in India have been designed with a generalist orientation, providing broad-based training across key domains such as epidemiology, biostatistics, health policy, health systems, environmental health, and the social determinants of health. This structure has helped build a public health workforce capable of addressing diverse health issues. However, there are significant variations in curriculum design, competency frameworks, and levels of specialisation [1]. This diversity has raised valid concerns about maintaining consistency in core competencies and ensuring comparability of graduates across institutions.

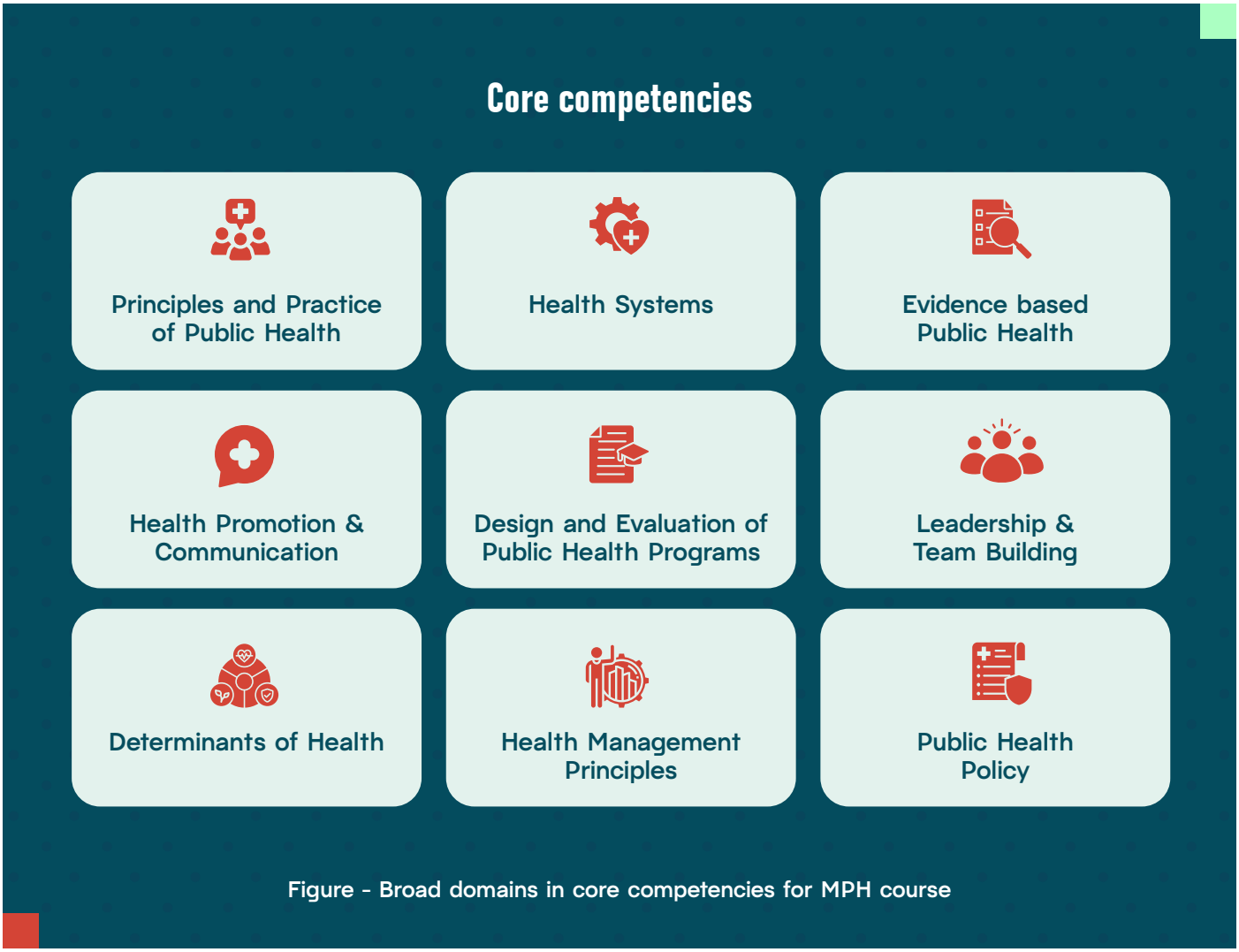


Figure - Broad domains in core competencies for MPH course

1. Principles and practice of public health

This is a broad domain encompassing foundational concepts in public health and an introduction to the breadth of various disciplines which form the foundation of public health. The course will introduce the students to these concepts at the introductory level. They should be able to analyse a public health issue considering diverse perspectives and develop an insight into the need to have collaborative multidisciplinary approaches as a practitioner of public health.

The competencies will involve concepts not only from the health/medical sciences but will also introduce students to the foundational concepts from various sciences, ranging from biological, environmental, and social sciences.

The competencies are given below:

PRINCIPLES AND PRACTICE OF PUBLIC HEALTH

- Foundation principles of public health
- Determinants of public health
- Burden of diseases globally and in India
- Infectious diseases globally and in India
- NCDs of public health importance
- Inequity - measures & approaches to address
- Principles of public health ethics
- History of public health in global & Indian context
- Analysis of a public health problem
- Infectious disease dynamics
- Burden & surveillance of NCD risk factors
- Reproductive, maternal, child & adolescent health
- Public health nutrition
- Research ethics in public health

2. Health systems

The health systems domain includes competencies related to the structure and functioning of health systems in India and globally. The competencies include an introduction to the health systems concepts and the ability to analyse health systems using various frameworks. The domain also includes an overview of national programs and quality improvement approaches to strengthen ongoing activities/ programs.

HEALTH SYSTEMS

- Health systems frameworks
- Health system analysis
- Healthcare financing - concept & Indian context
- Quality concepts & Quality improvement
- Historical evolution & India's health system
- National programs of public health importance
- Health systems - Structure, functions, & regulations
- Mainstreaming AYUSH in India's healthcare system

Image source: Generated using ChatGPT

3. Evidence-based approaches to public health

This domain includes competencies in public health disciplines related to epidemiology and biostatistics, which form the basis of generating and evaluating evidence in public health. The students should not only understand but also apply and practice the competencies related to epidemiology and biostatistics as required for public health research and practice. In addition, an understanding of health economics and demography principles as applicable to public health-related evidence is also included at the foundational level.

EVIDENCE-BASED APPROACHES TO PUBLIC HEALTH

- Design studies using epidemiological method
- Understand & apply quantitative methods
- Analyse large secondary datasets
- Interpret data for research, policy, and practice
- Implement/conduct studies & analyse the data
- Understand & apply qualitative methods
- Health systems - Structure, functions, & regulations
- Health Economics & Health Technology Assessment
- Principles of demography, definitions of key indicators, and demographic transitions

Image source: Unsplash

4. Health management: Management principles and practices

The competencies in the health management domain reflect the core functions of public health managers across government and non-government organisations. The public health professionals should be able to apply the management principles and effectively manage the financial resources, materials, human resources, supply chains, and information systems. Although managing hospitals is not a core requirement, understanding the fundamentals of hospital management is required for managing primary and secondary care health facilities, which have public health functions.

HEALTH MANAGEMENT: MANAGEMENT PRINCIPLES AND PRACTICES

- Distinguish project and a public health program
- Principles and stakeholder consultation
- Health management information systems
- Human resource & financial management
- Management tools for healthcare organisations
- Management of hospitals & public health facilities
- Public health standards of the Indian health system
- Operations and supply chain management
- Principles of management of public health emergencies and disasters

Image source: Generated using ChatGPT

5. Design and evaluation of a public health program

The MPH graduates should develop competency to map needs, understand health systems, and community perspectives to design public health programs and evaluate using appropriate methods.

DESIGN AND EVALUATION OF A PUBLIC HEALTH PROGRAM

- **Assess population needs, assets, & capacities**
- **Apply awareness of cultural values and practices to the design or implementation of public health policies or programs**
- **Design a population-based public health intervention**
- **Appropriate methods and frameworks to evaluate public health programs**

6. Leadership and team building

The competencies related to leadership include the ability to understand the difference between a manager and a leader, a basic understanding of best practices in strategic management, team management, and conflict resolution.

LEADERSHIP AND TEAM BUILDING

- **Roles of leader and manager**
- **Principles & frameworks for strategic management**
- **Functions of a leader and various leadership styles**
- **Best practices in managing teams & resolving conflicts**

7. Determinants of health

Public health is influenced by various determinants beyond the health domain. MPH students should acquire an understanding of diverse determinants across social, behavioural, and environmental sciences.

DETERMINANTS OF HEALTH

- Social, cultural, structural, & behavioural determinants
- Linkages between climate change and health
- Understand and apply behavioural science theories for public health problems
- Environmental determinants
- Commercial determinants

Image source: Unsplash

8. Public health policy

The domain includes competencies related to approaches to the policy-making process, stakeholder engagement, and public health legislation. The students should develop the advocacy skills and ability to communicate the policy options for public health issues.

PUBLIC HEALTH POLICY

- Dimensions of the policy-making process
- Regulatory approach to public health
- Describe existing public health legislation, the status of implementation and the challenges in implementation
- Advocate for political, social or economic policies and programs that will improve health in diverse populations
- Evaluate specific health policies
- Write a policy brief about a public health issue

Image source: Provided by the team

9. Health promotion and public health communication

Effective communication is the cornerstone of public health. The competencies include the identification of communication strategies for diverse audiences and risk communication. The prevention and health promotion competencies include understanding and designing prevention and health promotion programs for various public health issues.

HEALTH PROMOTION AND PUBLIC HEALTH COMMUNICATION

- **Communication strategies for various audiences**
- **Principles of risk communication**
- **Principles of health promotion and theories**
- **Design strategies for health promotion**
- **Oral and written communication skills for communicating public health content to various audiences**
- **Principles of primary, secondary, and tertiary prevention and design prevention programs**
- **Audience-tailored health promotion content**

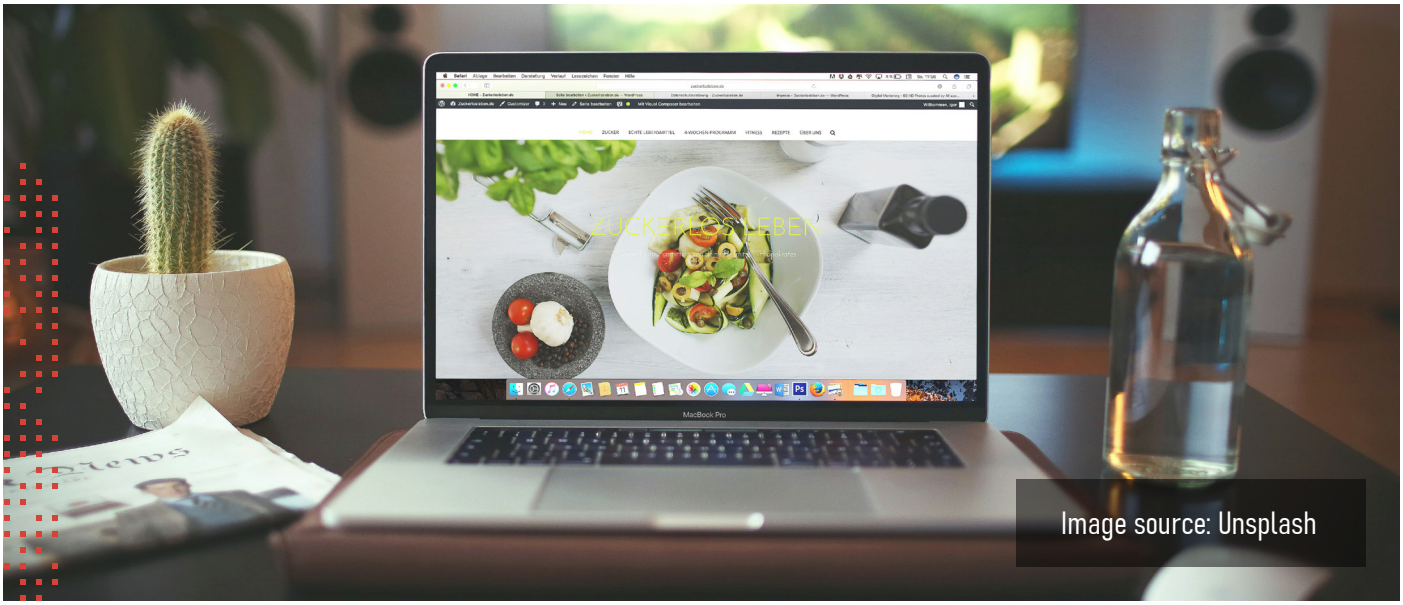


Image source: Unsplash

Concentrations/electives for Master's in Public Health

In addition to core courses, concentrations/ electives should be offered in the second year of the course. The concentrations can be chosen considering the strengths of the institution. The MPH can also be offered without any specific concentration in which some of the core competencies are taught in greater detail. A few electives to be considered are given below. These are only illustrative examples, and more options can be added based on institutional strengths.

- **Field epidemiology**
- **Mental health**
- **Non-communicable diseases**
- **Infectious diseases**
- **Data science**
- **Digital health**
- **Public health informatics**
- **Public health nutrition**
- **Health economics**
- **Environmental health**
- **One health**
- **Implementation science**

Practicum

The practicum should provide an opportunity to apply the skills acquired through core and elective courses. The practicum should be facilitated by the institution through mechanisms for collaboration with other public health organisations.

The skills acquired though practicum may include the following (not limited to these skills):

- Understanding the structure and functions of the organisation
- Mapping the stakeholders inside and outside the organisation and engaging with stakeholders
- Understanding the public health activities carried out the by the organisation
- Participation in various public health activities such as planning, organising, delivery of various services, and monitoring
- Analysing the services related data and preparation of reports

The practicum should preferably be done in an organisation, aligned to potential career pathways. At the end of practicum, the student should submit a report duly certified by the supervisor. In addition, students should make a brief presentation of the work to the faculty and supervisors from the host organisation.

Thesis

Thesis will provide an opportunity to apply the research methods to study a research question of public health relevance. The protocol should be internally peer reviewed and final presentation should be made after completion of thesis to the department faculty.

The potential skills acquired through thesis include:

- Identifying a public health problem/ question
- Choosing appropriate research methods to answer the question
- Designing a research protocol
- Collecting primary data or curating secondary data
- Analysing the data using epidemiological and statistical methods
- Preparing a scientific report
- Disseminating the study to various stakeholders through an oral presentation or written report adapted to various audiences

The thesis should be evaluated by two experts, at least one of whom should be an external one.

The suggested distribution of time across four categories is as follows:

% time allocation	
1. Core competencies	45-55%
2. Concentrations or Elective	20-30%
3. Practicum	10-15%
4. Thesis	10-15%

Need for specialist MPH courses

The FRAME team debated the pros and cons of generalist versus specialised MPH in the Indian context. There was consensus that core competencies should be common across the MPH programs to enable wider employment opportunities for the graduates. The specialised training can be provided as part of the concentrations or electives.

The table below summarises the pros and cons of a general versus specialised MPH courses.

The deliberations among experts highlighted three potential pathways for structuring the MPH curriculum in India.

The first option was to retain a purely generalist MPH degree that focuses entirely on core competencies across all essential public health domains. This approach ensures a uniform and broad-based foundation, but it risks underutilising institutional expertise and may not sufficiently prepare students for specialised roles in emerging domains, such as implementation science or health economics.

The second option was to introduce distinct specialisation programs with variable coverage of core subjects, wherein students would enroll directly into domain-specific degrees such as MPH in Epidemiology, MPH in Maternal and Child Health, or MPH in Global Health.

While this model enables intensive skill development, it also presents significant drawbacks. It could fragment the MPH landscape, complicate standardisation of competencies, and potentially disadvantage graduates whose narrow specialisation may not align with the diverse demands of the current job market. There will also be difficulty maintaining standardised competencies across institutions.

The third and most balanced option was to adopt a hybrid model — a general MPH degree with concentration tracks. In this approach, all students would undergo a common first year dedicated to developing the core competencies in public health, followed by the opportunity to choose concentration tracks in the second year aligned with institutional expertise and emerging public health needs. This structure preserves the generalist foundation while offering flexibility for focused learning in thematic domains that align with institutional capacity and student interest.

Image source: Unsplash

General MPH	Specialisation MPH
Currently the predominant model in India	Exists only in select institutions in India
Lacks specialisation clarity and alignment with job market needs	Competency frameworks are not readily available
Broad skill coverage	In-depth, targeted expertise
Suitable for undecided learners	Ideal for focused career paths
Relatively simple	Requires curriculum redesign and faculty expertise
Easier to standardise across institutions	Difficult to implement and align across institutions
Fieldwork/Practicum easier to arrange	Needs specialised placements
Graduates can shift across sectors, but may need further training to specialise	Harder to shift fields later

Proposed model and rationale

The FRAME team reached a consensus to adopt a hybrid model for the MPH degree with common core competencies and concentration tracks. The first year will focus exclusively on building the core competencies that form the backbone of public health practice, including epidemiology, biostatistics, health systems management, health policy and planning, and determinants of health. The model also aligns with global practices where MPH programs are structured to provide a common foundation in public health, followed by elective or concentration opportunities.

MPH students must acquire core competencies during the first year of the MPH program. The core competencies are classified under nine domains. The extent to which each competency will be acquired will vary depending on the domain. The MPH course curriculum must allocate sufficient time to acquire these competencies using a combination of lectures, case studies, hands-on exercises, field visits and field projects.

MPH is a professional training, and hence adequate time should be allocated to the practical skills required to make the students employable in various public roles. Each competency should be assessed by at least one method of evaluation. The competencies can be acquired through core courses, elective courses, practicum, and thesis. The core competencies must constitute 45-55% of the overall course duration. The elective courses should constitute 20-30% of the time.

An institution can choose to offer a generalist MPH or MPH with a concentration. If the MPH is offered with a concentration, the concentrations should be driven by the institution's strengths or areas of specialisation. If an institution chooses to offer a generalist MPH, it can offer electives within the department or through collaborative arrangements (within the institution or other institutions).

We present below two case studies that are pertinent to the discussions on the need for specialised MPH courses. Two institutional experiences illustrate the integration of specialisation within a general MPH, each adopting a distinct curricular framework.

Image source: Unsplash

Case Study 1

MPH program at National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru

Established in 2013, the Master of Public Health (MPH) at the National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru, is a two-year, full-time postgraduate degree. While the degree awarded is a general MPH, the program draws substantially on NIMHANS' thrust areas in Mental, Neurological, Substance use disorders, and Injuries (MNSUDIs).

Admissions to the program are conducted through a national-level competitive process by a structured annual cycle that includes a written entrance examination. Eligibility extends to candidates holding a recognised MBBS or BDS degree, or a postgraduate degree in disciplines, including Sociology, Statistics, Environmental Sciences, Physiotherapy, Occupational Therapy, Health Management, Social Work, Economics, Speech Pathology and Audiology, or Nursing. The program admits 10 students annually.

A defining feature of the MPH at NIMHANS is its structured concentration in Mental, Neurological, and Substance Use Disorders (MNSUDIs), embedded within a comprehensive public health framework. This concentration reflects the institutional mandate and expertise of NIMHANS and places explicit emphasis on the public health dimensions of MNSUDIs.

Following completion of core public health modules in the first year, students undertake a dedicated three-to-four-month MNSUDIs module that integrates classroom instruction with applied field-based learning. This module includes engagement with national public health initiatives such as the National Mental Health Programme, enabling students to develop an understanding of the distribution and determinants of MNSUDIs and to gain practical exposure to the design, implementation, and evaluation of prevention and control strategies within health systems and community settings.

Dissertation work within the program is closely mentored and aligned with MNSUDIs priorities. Students address applied research questions relevant to service delivery, programme performance, and policy development in the areas of MNSUDIs. Across the curriculum, core public health competencies, including epidemiological analysis, programme design, health systems strengthening, and policy-oriented thinking are taught using case studies, field examples, and problem-based learning drawn from MNSUDIs contexts.

This approach reinforces the integration of mental health and related conditions across all stages of public health training rather than confining them to a standalone speciality.

Overall, the MPH program at NIMHANS equips graduates with the skills required to address treatment gaps, stigma, and service delivery challenges associated with MNSUDIs. At the same time, the general MPH credential ensures breadth of training and flexibility in career pathways. The combination of strong institutional expertise, applied field-oriented training, and general MPH credential positions the NIMHANS MPH as a distinctive and scalable model for developing versatile public health professionals capable of addressing complex public health challenges, including specialised areas such as mental health and related domains.

Case Study **2**

MPH (EHS) Program at ICMR National Institute of Epidemiology, Chennai

The Master of Public Health (Epidemiology & Health Systems) [MPH (EHS)] program of ICMR School of Public Health at the ICMR–National Institute of Epidemiology (ICMR–NIE) is a National Medical Commission–recognised, field-based professional program aligned with global Field Epidemiology Training Program (FETP) standards and the 'learning-by-doing' FETP framework.

Only MBBS doctors with three or more years public health experience, working in public health roles — primarily regular or permanent employees of state or central government health departments or medical institutions are eligible for this program. National-level admissions follow a structured annual cycle with written examination, screening, personal discussions, and reservation as per Government of India norms.

It is a two-year, full-time MPH degree with 70% field posting at the district/state public health department, 30% in-class contact sessions, webinars, and online courses. The training focuses on concepts and methods in epidemiology and public health surveillance, including investigating outbreaks. In addition, it also covers public health research, research communication, biological, social, behavioural, and environmental determinants affecting health. As well as design, develop, implement, and evaluate public health interventions.

Over 25 years, ICMR–NIE's MPH (EHS) program graduates have served across national and state public health institutions, contributing to outbreak investigations, disease surveillance, program evaluation, and research. The program's strong emphasis on field immersion ensures that scholars generate actionable evidence for policymaking and public health action.

The combination of NMC recognition, government-supported deputation, competency-based curriculum, and structured mentorship framework makes the MPH (EHS) program one of India's most robust pathways for developing skilled field epidemiologists.

Expected outcomes

The proposed structure carries several academic, professional, and systemic implications. Academically, it will ensure that all MPH programs across institutions adhere to a standard set of core competencies, thereby improving comparability, accreditation potential, and overall quality assurance. Institutions will simultaneously gain flexibility to innovate through concentration tracks, drawing upon their unique disciplinary strengths and research portfolios.

From a student perspective, the model balances the need for foundational competence with the opportunity for focused learning. Ultimately, maintaining the MPH as a general degree with concentration tracks represents a pragmatic and forward-looking solution. It preserves the integrity of the public health foundation while allowing flexibility for innovation, ensuring that MPH graduates are both adaptable generalists and competent emerging specialists prepared for the evolving health needs of India and beyond.

A key consideration in the recommended structure has been employability. The current job market for public health professionals in India largely favours generalist competencies that enable graduates to adapt to diverse roles in government, academia, non-governmental organisations, and global health agencies.

While institutions with established expertise in areas such as mental health, epidemiology, or health systems are well-positioned to develop focused concentration tracks, stakeholders have expressed caution that premature or narrow specialisation could restrict graduates' employment opportunities. This balanced approach aims to ensure that MPH graduates remain adaptable generalists with the option to develop focused expertise in emerging areas of public health practice.

Image source: Unsplash

5. MPH programs in medical schools

Many medical schools are embarking on starting Schools of Public Health. These medical schools already have a department of community medicine/Preventive and Social Medicine as needed under the National Medical Commission (NMC) regulations.

This issue assumes significance in the context of our previously expressed concerns for the medicalisation of public health in India. Currently, non-medical faculty members in statistics and social sciences or anthropology are present in the Department of Community Medicine (DCM) of many medical colleges. However, they are not allowed to be independent guides for MD students, nor are they allowed to head the department. In short, people who advocate for a broader discipline of public health believe that community medicine has medicalised public health, focusing narrowly on health services and overlooking the multidisciplinary nature of the subject.

As per NMC, a community medicine postgraduate should be equipped with "the knowledge, skills, competencies in primary, secondary, and tertiary care, control and prevention of outbreaks/epidemics, community diagnosis, health needs assessment, epidemiological assessment, research and planning, evidence-based health policies and programmes." As discussed in an earlier section, the core competencies for MPH revolve around Data Analytics and Assessment, Policy Development and Program Planning, Communication, Health Equity, Community Partnership, Public Health Sciences, Management and Finance, Leadership and Systems Thinking.

While recognising the overlaps, the authors believe that the subjects of Public Health and Community Medicine are different and hence, they should be treated differently, not only in India but globally as well. In India, it becomes all the more difficult to disentangle it as it is included as a subject in the undergraduate medical curriculum based on the recommendation of the Bhore Committee to produce "community-physicians". Community Medicine as a discipline has come from within the medical system as a move away from an individual-practitioner-based system to organised health care system, including setting priorities. However, public health has its roots in demography and vital statistics, environmental sanitation, and industrial health.

The experience shared by the members of the group from AIIMS, New Delhi, PGIMER Chandigarh, AIIMS Jodhpur, and JIPMER Puducherry, highlighted the ongoing tensions in co-locating these in the same institution. In some, it started as a separate entity but was merged for operational reasons. In others, DCM opposed the setting up of the School of Public Health (SPH) and refused to teach non-medical students. Many CM professionals look upon MPH as competitors and do not want to support courses for such students. Irrespective of this, many SPHs in these institutions utilise the services of faculty from DCM to teach students in specific MPH courses, especially in the initial years till full faculty of SPH joins, which could take several years.

No clear principles were identified in these

Image source: Pexels

decisions, and these were based on the institutional and departmental leadership thinking and personal opinions. While this issue does not have a straightforward and simple solution, we proposed certain principles and guidelines to be followed during the process of decision-making.

Advantages and disadvantages of MPH programs in medical schools

The existing platforms of field practice areas and being part of the health system give the medical colleges distinct advantages. However, a lack of diversity defeats the whole purpose of an MPH program. Medical schools vary greatly in both these aspects, and therefore, the advantages would not be uniform and would need to be understood in the individual college context. However, a lower priority for MPH students and a lack of multidisciplinarity would need to be addressed vigorously to mitigate these disadvantages.

Advantages	Disadvantages
• A close working relationship with the health system, which can be utilised for training MPH students.	• Lack of social sciences and multidisciplinary capacity in the faculty, resulting in very medicalised training in public health.
• The presence of a field practice area, which is well developed, can be very useful in community orientation as well as thesis work.	• For any medical school, medical undergraduates and postgraduates will always remain the focus, relegating the MPH students to a lower priority.

Table: Advantages and disadvantages of co-locating MPH programs in Medical Colleges

A review of the MPH program in the Arab world showed that the MPH programs offered by the Faculty of Public Health (FPH) and the Faculty of Medicine (FM) were comparable in offering core disciplines, but FPH offered more social and behavioural components, whereas FM had better practicum training.

Models for co-existence of DCM & SPH in medical schools

This group encourages medical schools to set up public health schools. This would need building on the advantages mentioned above and addressing the concerns. A decision to offer an MPH degree in a medical school is for individual schools to take based on institutional vision, priorities, and strengths. We do not recommend that all medical schools should do so. However, if it decides to do so, we are offering some guidance on how to navigate their co-existence.

Key principles of decision making

1. DCM in medical schools is a mandatory requirement for recognition by the National Medical Council and has to be retained. As per NMC guidelines, one department cannot give multiple

postgraduate degrees unless it satisfies their criteria separately.

2. Public Health is essentially a multi-disciplinary subject. Thus, multi-disciplinarity needs to be maintained and encouraged in all aspects, including faculty composition.

3. There should be complete professional and administrative equality of faculty of all disciplines taught in the SPH. No favourable treatment of the medical faculty should be permitted.

4. It should be remembered that the departments of Community Medicine greatly vary in their capacity and quality. In the model where these co-exist as one entity, the strengths and weaknesses of the existing DCM will greatly affect the quality of MPH programs.

Models for MPH in Medical Schools

Both are separate entities

- DCM runs the MD community Medicine Program/ UG
- teaching; SPH runs the MPH programs.
- No formal relationship between the two entities. Sharing or Joint teaching sessions are not envisaged.
- The faculty and the head of entity are separate and cannot be exchanged.
- There could be friction between the two entities.

Both are merged into one entity

- Both entities exist under one umbrella, for example as- Centre for PH & CM.
- DCM continues to be a distinct entity to satisfy the NMC norms for MBBS & MD.
- Chief of the combined entity could be from either of these sub-entities.
- Faculty members work as per their area of expertise.
- Promotes better collaboration and less competition.

Collaborative model

- Two are distinct entities with no umbrella body.
- Both entities headed by separate persons.
- Formal arrangements are in place & informal collaborations are encouraged through administrative provisions as well as a promotion of culture of collaboration.
- Such arrangements may succeed or fail due to personal factors.

The final choice of the model for each medical college depends upon institutional strengths, mechanisms/ policies and faculty interests. We need to gain more experience with these models to better evaluate their appropriateness.

Joint MPH/MD Programs

For medically qualified people, a two-year MPH degree followed by an additional year spent on clinical duties to qualify for an MD exit examination appears exciting. This addresses the concern that MPH, not being a medical degree, makes the person ineligible for the specialist cadre.

While attractive in principle, there are many challenges. The most important is that this may be perceived as a shortcut to an MD degree, given that the competition (both the entrance examination and the exam content) for entry to both is widely different.

Both courses are overseen by different councils, and each will need an examination or evaluation that satisfies their requirements. This also raises the question of the thesis being shared between two degrees. Before such courses are conceived, there is a need for a better integration of the oversight and other regulatory mechanisms. Currently, we do not recommend such courses.

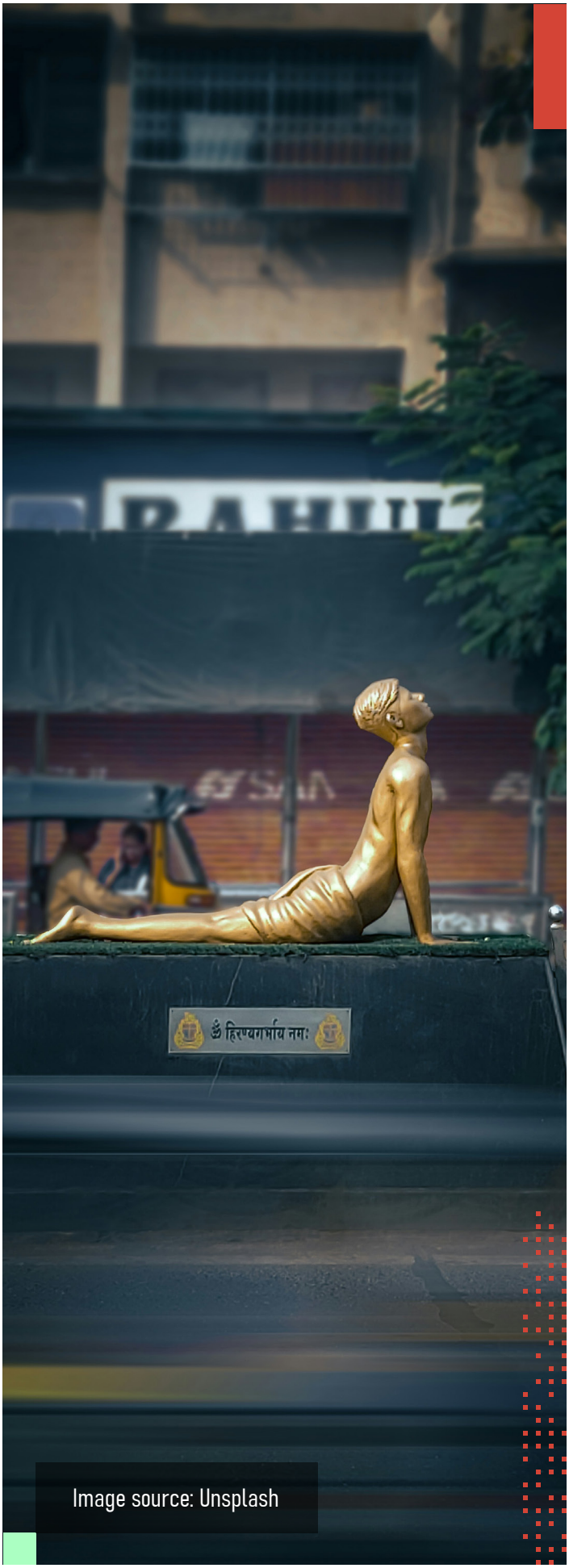


Image source: Unsplash

6. Linkages with the health system

The 2010 Lancet Commission noted that public health education has lagged behind workforce needs, with siloed training, outdated curricula, and weak connections to practice, leaving graduates underprepared. To remedy this, MPH curricula need to build in practical exposure to the health system, allowing students to gain hands-on experience in key areas such as data analysis, outbreak investigation, and program evaluation.

While health universities/institutions often provide such opportunities through their close linkage with health systems, non-health universities/institutions face challenges in this regard. Given the increasing number of MPH programs in non-health universities, they must form formal partnerships with the health system to be able to provide the students with practical experience and keep the curriculum aligned with contemporary health system needs.

How does the linkage benefit the MPH trainees?

a. Practice-based learning opportunities (practicums, rotations, and internships): Trainees can be placed in government agencies such as ministries of health or public health institutes at the national, regional, and district levels. This structured position will enable trainees to work directly with existing public health teams, similar to the District Residency Posting of NMC Postgraduate trainees.
b. Field visits: For MPH trainees, working in a field-level outbreak/epidemiological investigation/part of programmatic supervisory/monitoring teams is of utmost importance so that students can witness operational challenges and strategies firsthand and develop their team-building and managerial skills.
c. Health systems research: Trainees' research priorities can focus on specific challenges faced by local health systems, addressing operational weaknesses, evaluating interventions, or investigating population health issues relevant to those systems.
d. Exposure to public health laboratories: Visits or tenured exposure to state/national level public health laboratories can enrich their understanding of disease diagnosis and management within a tiered health system.
e. Professional development and networking: Students need exposure to interactions with health system leaders and observe their real-world experiences in communication and leadership. Connections with professionals from the public and private health sectors also lead to valuable networking benefits.

Health system linkages that can benefit MPH trainees

Practice-based Learning Opportunities

- Placements in national/regional/district govt. health agencies
- Work directly with public health teams
- Experience similar to NMC District Residency Posting

Field Exposure & Operational Understanding

- Participate in outbreak investigations
- Join supervisory/monitoring teams
- Observe real-world challenges
- Build teamwork & managerial skills.

Health Systems Research Opportunities

- Research on local health system challenges
- Evaluate interventions and operational gaps
- Study population health issues

Professional Development & Networking

- Interaction with health system leaders
- Insights into communication & leadership

Public Health Laboratory Exposure

- Visits or immersive postings in State/National public health labs
- Understand diagnostic workflows and lab-surveillance linkages

Method of establishing linkage:

A formal affiliation between the public health sector (at the district or state level) and an academic institution / non-health university established through a written agreement outlining collaboration and shared responsibility in education, research, and service is necessary to create the desired linkages. As an illustrative model, the Staged Model of AHD (Academic Health Department) Development entails:

Stage 1, informal relationships through limited interactions such as internships or teaching engagements.

Stage 2, organisations engage more frequently and consistently, fostering recurring collaborations in areas such as teaching, research, and student placements.

Stage 3, the relationship becomes official through a written agreement that defines both current and future collaborative activities, often limited to one primary area, such as education, research, or service.

Stage 4, partners reaffirm and broaden their collaboration that spans multiple domains, becoming more integrated and strategic in its approach.

Stage 5, the partnership reaches full maturity, characterised by active collaboration across all three domains — education, research, and service.

Collaboration models:

a. Professional advisory boards: Establish a board of senior health system managers and public health officers to provide feedback on the program and ensure that competencies match workforce needs.

b. Real-world case studies: Develop/modify course content with health system collaborators using current, relevant data, and situations. This ensures that students analyse contemporary issues, not theoretical problems.

c. Co-teaching, co-mentoring, co-research, co-publishing, and co-presenting– joint/ honorary teaching posts, i.e. encourage faculty to serve as consultants to health organisations and invite health system professionals to guest lecture or co-teach in the MPH program. Include joint funding mechanisms for projects.

d. Establish a mentorship model: Senior public health officers already working in the system can guide trainees. This mentorship provides hands-on experience and integrates the trainees' work into existing public health activities.

e. Deploy trainees and graduates to support public health emergencies, such as outbreaks and natural disasters, to enhance the health system's surge capacity in terms of trained human resources.

MPH programs and Health Systems: Modalities of collaboration

Professional advisory boards

Ensure the MPH program meets real workforce needs

Real-world case studies

Use current data and real situations in teaching

Co-teaching/co-mentoring/co-research

Share teaching, mentoring and research between faculty and professionals

Mentorship model

Pair trainees with experienced public health officers

Support public health emergencies

Deploy trainees and graduates during outbreaks and disasters

Evaluating the suitability of field practicum sites for MPH trainees

After establishing the connection between the academic institutions offering the MPH program and the health system, it is important to ensure quality training for the trainees. This includes providing practical exposure through carefully selected field placement sites that develop core public health competencies and ensuring effective supervision by field supervisors.

Choice of field placement site should be based on certain prefixed criteria rather than convenience and local level arrangement. Examples of such criteria are available from the CDC guidance document for the FETP Programme.

Field site supervisors should be selected and assigned for the trainees. The terms of reference for the field site supervisors must be established beforehand, for example, meeting regularly with the trainees during their field placement, identify projects in which trainees can contribute to their agency, facilitate the accomplishment of trainees' projects, provide feedback to trainees on their projects, help trainees avoid political or administrative difficulties, help guide trainees in the implementation of recommendations made in their field studies, and encourage publication and presentation of the trainees' projects (and not compete with trainees for authorship, presentations, or projects).

A specially designed short-course online/ offline for supervisors can also build up mentorship skills for field supervisors. The training may cover the following topics: overview of the MPH Programme, responsibilities of field supervisors, overview of trainees' required field activities and responsibilities, skills to provide technical guidance to trainees for completion of field study, and outbreak investigation, among others.

A good example of linkage with the health system is provided in the case study below.

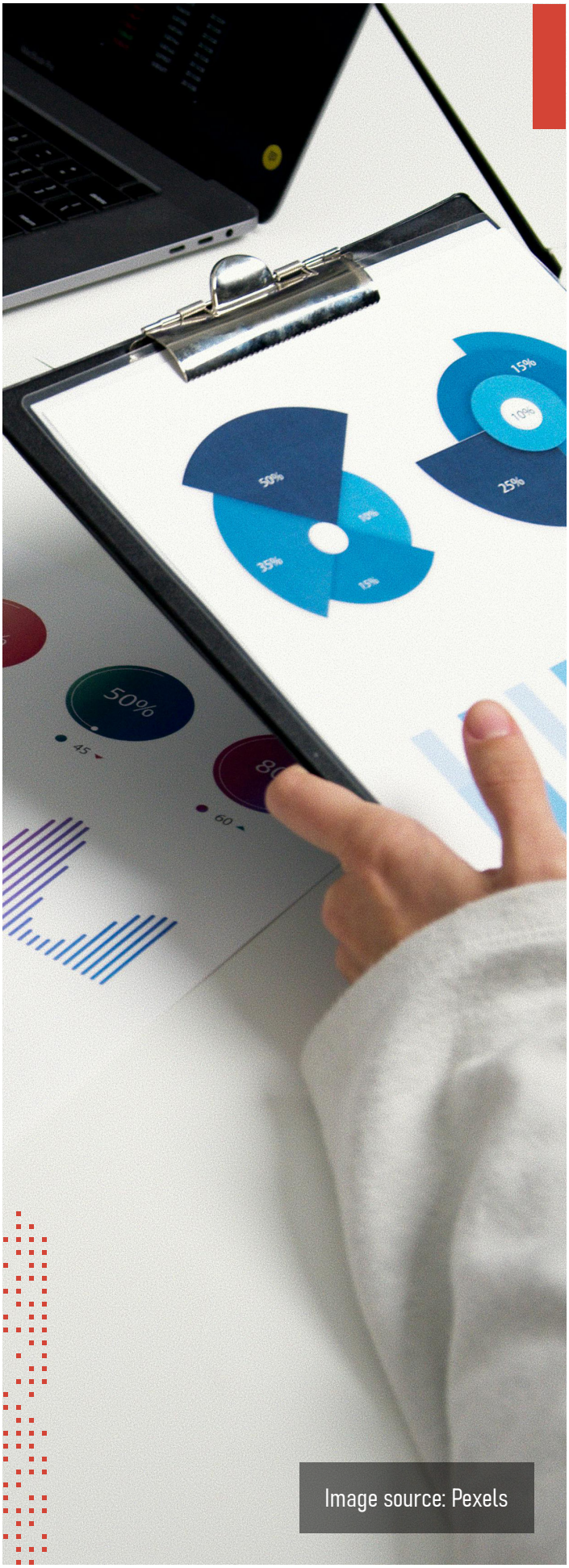


Image source: Pexels

Case Study

Building and sustaining linkages with the health system – the CSMCH/JNU experience

The Centre of Social Medicine and Community Health, Jawaharlal Nehru University, was set up in 1971 under the guidance of a committee chaired by Dr V Ramalingaswami. The committee shaped the vision of the Master's program and advised the CSMCH to build linkages across state health departments for student fieldwork.

Accordingly, the urban fieldwork is organised each year in collaboration with the Municipal Corporation of Delhi. The rural fieldwork is organised in collaboration with different state health departments across the country. The health system exposure is supplemented by collaboration with local NGOs (of the respective states).

There are several memoranda of understanding with state and national health agencies to facilitate these activities. Additional support is provided by the alumni network to the extent available. The Dr V Ramalingaswami committee also recommended that a 9-credit (25% of the credits) district health system study be conducted in the home district/state (of the respective students), both to have real-world exposure to district health systems as well as strengthen linkages. Some of these fieldwork reports have been published as working papers of the Centre.

Image source: Unsplash

Way Forward

To ensure that institutions/universities planning to start MPH Programmes have proper linkages and definitive commitments with relevant health departments at local/ state/national levels, accreditation agencies may consider a Readiness Assessment protocol in line with NMC guidance documents for starting post graduate courses.

In conclusion, we strongly recommend that any current or future authority which gives permission for starting an MPH program makes a MoU with the health system a mandatory part of the application process.

7. Advanced courses in public health

We typically describe advanced training as knowing more and more about less and less. In other words, an in-depth knowledge of a very specific area. While specialisation in medicine is clearly defined by age group, organ system, or specific disease, this framework does not translate neatly to public health. In public health, specialisation is less about narrowing to a single biological domain and more about applying core principles to particular areas of practice, such as chronic diseases, infectious diseases, nutrition, environmental health, and related fields, often culminating in global or international health.

PhD programs in public health are well defined, and therefore, the group has not spent much time discussing them. We focused instead on professional doctorates (DrPH) and Fellowships. There is a growing interest in advanced professional training for health system leaders that is more practice-oriented than an academic PhD.

In applied training programs, we apply the known approaches and skills of the discipline (eligible persons should already be competent in them before coming for these trainings) to a specific area like nutrition, environment, infectious diseases, chronic diseases, genetics, occupational health, and so on. Each of them has some specificities that require deeper knowledge and maybe some additional skills. For these, we could use fellowships of up to two years' duration.

Mid-career bureaucrats, programme managers, and senior health officials need advanced competencies in leadership, systems thinking, implementation science, policy analysis, program finance, and institutional change — skills that support immediate improvements in health service delivery. While traditional PhD pathways, which are research-intensive and have their own utility, may be unattractive to mid-career practitioners who require applied skills, time-flexible delivery, and clear career advantages without the demands of a thesis or prolonged academic commitment.

However, only a few institutions globally and some Indian public health schools have introduced DrPH or equivalent, but uptake remains low.

Plausible pathways and models

1. Traditional DrPH (Full program at an academic institution)
   - Two to three years of modular coursework plus an applied project/ portfolio (rather than a long thesis).
   - **Pros:** Rigorous credentials and academic oversight.
   - **Cons:** Time away from work, costs, and limited scalability.

2. Executive/Modular DrPH (work-integrated)
   - Part-time, modular delivery (weekend/ intensive blocks plus online), culminating in an applied capstone project within one's workplace.
   - **Pros:** Work-friendly, immediately applicable.
   - **Cons:** Requires institutional flexibility and strong mentorship.

3. Fellowship plus Accredited Advanced Diploma Stackable to Doctorate
   - A 12 to18 months executive fellowship awarding a postgraduate diploma that can be "stacked" (with additional modules and a capstone) to a full DrPH later.
   - **Pros:** Lower initial commitment and pilotable.
   - **Cons:** Longer path to doctorate if aspirant continues.

4. Employer-Sponsored In-service Doctorate (Hybrid)

- Programme co-designed and co-funded by the government (state/central governments) with academic partners. This includes secondments, protected time, and guaranteed career benefits.
- **Pros:** Strong alignment with system needs and HR rewards.
- **Cons:** Requires policy change and funding.

5. Integrated MPH-DrPH-PhD

- The integrated programme can be designed as a core MPH programme followed by an additional two years for DrPH and/or a three year option for PhD. This will retain the flexibility for a practitioner or an academic doctoral degree with appropriate exit options.

Some of the issues that need more discussion included design choices like full accreditation vs certification or national vs regional programs and using single institutional offering vs consortium model.

Benefits and risks of advanced courses

Benefits

- **System strengthening:** Capstone projects aimed at solving local program problems can translate into rapid, measurable improvements (better program design, improved indicators, and cost savings).
- **Leadership pipeline:** Builds a cadre of evidence-savvy managers who can implement reforms and use data for policy decisions.
- **Retention and motivation:** Offers career development without the sacrifices of a traditional PhD, improving retention of high-performing officials.
- **Academic-service nexus:** Strengthens partnerships between universities and health departments, improving translation of research to practice.
- DrPH can also nurture an alumni cohort of influencers which overall strengthens the discipline.

Risks

- **Low uptake if no clear career benefits.** *Mitigation:* Pre-negotiate HR recognition (promotion weight/special pay) with government, offer funded seats, publicise success stories from pilots.
- **Quality dilution if scaled too fast.** *Mitigation:* Start small with rigorous selection, defined mentoring ratios, and strong evaluation metrics, maintain consortium oversight, and set clear competency frameworks.
- **Operational constraints — time pressures of officials.** *Mitigation:* Flexible, modular delivery, protected time negotiated with employers, and online components optimised for asynchronous learning.
- **Funding sustainability.** *Mitigation:* Mixed financing: government co-funding, participant fees, and donor/philanthropic support, and demonstrate ROI from pilot to unlock recurrent budget lines.
- **Institutional resistance (academia/government).** *Mitigation:* Early stakeholder consultations, co-design curriculum, pilot recognition of the credential, and involve senior champions in MoHFW and major state health departments.

The metrics for success of these programs need to be evaluated on the following parameters.

- Enrollment and completion rates.
- Number and quality of capstone projects with demonstrable program impact (improved coverage, efficiency gains, cost savings, and policy adoption).
- Career advancement of alumni (promotions and leadership roles).
- Employer satisfaction and willingness to sponsor future cohorts.
- Cost-effectiveness estimate (value of program impact per rupee invested).

Overall, we recommend establishing a work-integrated, executive DrPH pilot co-designed by academic institutions and government, with built-in HR incentives and funding support. This approach will deliver rapid returns to the health system by equipping mid-career officials with practical leadership and implementation skills while providing a credible, recognised professional doctorate alternative to the PhD.

8. Regulating public health education

The significant traction that public health in India has gained in recent times is largely a post-1990s phenomenon, which was boosted by opportunities in research organisations, think tanks, NGOs, and the National Rural Health Mission (NRHM). These institutions are tasked with producing public health professionals to serve as a techno-managerial frontline force, including for public health emergencies.

Educational institutions with public health education programmes straddle institutions with a diversity of histories and roles. An early generation of legacy public health institutions with Diploma in Public Health (DPH) programmes, such as the All India Institute of Hygiene and Public Health (AIIHPH), Kolkata, transformed to a three-year MPH programme in 2003-4 (See case study later).

At the university level, Jawaharlal Nehru University was a pioneer, initiating an integrated Masters-PhD programme — the Master of Community Health (MCH) course that later changed its nomenclature to MPH. (Interestingly, the UGC mandated this change in 2006-7 in response to purported complaints that the MCH degree created confusion with the MCh super-specialty degree.)

The Sree Chitra Tirunal Institute of Medical Sciences and Technology, Thiruvananthapuram, under the Ministry of Department of Science and Technology, Government of India, which started its multi-disciplinary two-year MPH Program way back in 1997, is one among the few MPH programs, that are recognised as a medical postgraduate course by the National Medical Council (NMC). It has broadly adopted the Western pattern (Harvard University style) of multi-disciplinary teaching from the beginning.

The establishment of the Public Health Foundation of India (PHFI) in 2006, with a dual mandate to set up IIPHs and a public health accreditation mechanism, further spotlighted and accelerated the growth of MPH programs, leading to the current, arguably under-regulated, landscape.

The core challenge of a heterogeneous landscape

As MPH programs proliferate, a need for regulation becomes more critical. While institutional diversity can be a strength, the absence of a unifying regulatory authority has created significant challenges for what is intended to be a professional course demanding a uniform core curriculum.

Key issues arising from heterogeneity:

- **Curriculum and core competencies:** There is no universally accepted set of core competencies. The curriculum's focus often reflects the parent institution's strengths rather than a national standard for public health practice.

- **Admission criteria and institutional typology:** Eligibility varies widely, leading to a student body with different foundational knowledge. This is reflected in a diversity of institutional models:

    i. A predominantly medical faculty with a notional presence of social scientists (e.g., AIIMS, ND).
    ii. Mandated equal numbers of medical and social science posts (e.g., JNU).
    iii. A "mixed" faculty without explicit mandates. (e.g. SCTIMST)
    iv. Intake of exclusively medical (MBBS) graduates (e.g., ICMR-NIE).
    v. Intake of graduates with Bachelor's in medical/allied health sciences and Master's in social/natural sciences.

vi. Intake of students across all disciplines with a bachelor's degree.

- **Course duration and nomenclature:** The duration can vary, and the degree may have different names, creating confusion.
- **Evaluation and assessment:** Methods are not standardised, making it difficult to compare graduates.

This lack of a cohesive framework means the quality of an MPH is entirely institution-dependent.

The regulatory vacuum between NMC and UGC

The central problem is that the MPH exists in a regulatory vacuum, falling awkwardly between India's two primary higher education regulators — National Medical Commission (NMC) and University Grants Commission (UGC). This conflict is best exemplified in the case study of MD (MPH) from AIIH & PH, Kolkata.

1. The National Medical Commission (NMC): A mismatched mandate

The NMC's (and former MCI's) primary role is to regulate medical education for clinical practice. The medical graduates with MPH often face challenges in career progression as MPH is not "recognised" by NMC. The MPH, as a multi-disciplinary, non-clinical degree, does not fit this mandate. The MCI/NMC did not engage with MPH programs from the outset because many were located outside the medical college system and involved non-medical candidates, placing them outside the Commission's writ.

Historically, institutions like AIIMS and Sree Chitra (SCTIMST) leveraged their own Parliamentary Acts (e.g., Sections 23-24 of the AIIMS Act) to grant degrees with MCI approval. The lack of formal NMC recognition has acted as a "push" factor, discouraging MBBS graduates from pursuing the MPH, and has subsequently kept MPH professionals away from state and central public health cadres.

2. The University Grants Commission (UGC): A generalist framework

While most universities offering the MPH are governed by the UGC, its framework is designed for general academic degrees. The UGC notified the MPH degree in July 2014 through a gazette notification, specifying it as a two-year Master's program with a Bachelor's degree as the intake criterion. It was listed under the broad head of "Medicine & Surgery/ Ayurveda/ Unani/ Homoeopathy/ Health & Allied Sciences/ Paramedical/ Nursing," a category comprising a vast range of degrees.

However, unlike other professional degrees in that list (medical, dental, law) that are governed by their respective councils, the MPH had no such council. The UGC has neither the history nor the specialised expertise to define, monitor, and enforce the specific, practice-oriented competencies required for public health. Its oversight focuses on input (like infrastructure) rather than graduate outcomes, and it cannot act as a professional council that sets standards for practice or maintains a register of professionals.

Proposed future pathways

Options for regulation

The most viable and detailed proposal is the creation of a **'National Public Health Education Council.'** This will ensure that all MPH graduates are equipped with the necessary skills to meet India's health challenges, thereby professionalising the discipline and strengthening the nation's health system for the future.

Public health education is not confined to schools of public health. It spans medical schools, nursing schools, law schools, business, and urban planning institutions. Given this multidisciplinary nature, there is a need for a central coordinating body to bring coherence, avoid fragmentation, and ensure quality across diverse institutions in India.

We can also learn from examples of other countries. For example, in the United States of America (USA), the most recognised

accreditation body is the Council on Education for Public Health (CEPH), which uses competency-based standards to evaluate and assure program quality. It sets the most rigorous standards for MPH programs in the USA. Its accreditation is a benchmark of quality and indicates that a program has voluntarily undergone a thorough evaluation to meet accepted professional standards.

Similarly, the National Public Health Education Council in India should be an apical, multidisciplinary body that sets standards, accredits programs, fosters interdisciplinary collaboration, and promotes both workforce development and public health literacy across sectors.

This statutory body would serve as the dedicated regulatory authority. Its mandate and functions would include:

- **Accreditation of programs:** To be the sole body responsible for accrediting all MPH programs in India.
- **Standardisation of curriculum and competencies:** To define and update core competencies and curriculum frameworks.
- **Regulation of admissions:** To set minimum standards and guidelines for admission criteria.
- **Implementation of a standardised exit assessment:** A national-level exit exam to certify that every graduate has achieved the minimum required professional competencies.
- **Creation of a professional register:** To maintain a national register of qualified public health professionals, creating a distinct professional identity and defining career pathways.

This proposal is one of several potential options for the future of MPH regulation, which include:

1. Being granted by "general" universities (the status quo).
2. Being granted by new generation "public health" universities (e.g., PHFI University).
3. Bringing MPH under the respective health sciences universities of the states. (eg: Kerala University of Health Sciences)
4. Setting up of a National Public Health Education Council of India by an Act of Parliament (as detailed above).
5. Bringing MPH (and BPH) under the ambit of the National Allied and Healthcare Advisory Council.

Aligning the MPH with the National Education Policy (NEP), 2020

A critical question is how to align the traditionally two-year MPH with the NEP's provision for a one-year Master's. A simple compression is unfeasible as it would compromise depth and practical training. The key is to leverage the NEP's flexibility.

The NEP provides for:

i. A two-year Master's for those with a three-year Bachelor's.

ii. A one-year Master's for those with a four-year Bachelor's with Research.

iii. An integrated five-year Bachelor's/ Master's. The credit levels are specified as 40 credits for a one-year PG/Diploma and 80 credits for a two-year PG.

The following four models are proposed for alignment:

1. Retain the two-year MPH as a professional Master's degree: The NEP allows for a two-year Master's. We strongly argue that the MPH, as a professional degree, requires this duration to impart its comprehensive curriculum and hands-on competencies, especially for students entering from diverse non-health backgrounds (e.g., BA Sociology) who need time to cover foundational sciences and a field practicum.

2. Develop a five-year integrated Bachelor's/Master's in Public Health (BPH/ MPH): The NEP encourages integrated programs. A five-year program admitting

students after Grade 12 would create highly trained, dedicated professionals from an early stage, aligning with the NEP's goal of fostering multi-disciplinary learning.

3. Offer a differentiated one-year MPH for specialised entry: This would be a viable, intensive option focused on specialisation, but open only to students who have completed a four-year Bachelor's degree with a major in Public Health. This 4+1 model requires that foundational competencies have already been covered at the undergraduate level. This should only be offered by institutes with long-standing and well-established MPH programs.

4. Create a modular (1+1) MPH using the Academic Bank of Credit (ABC): This model embraces the NEP's core principles of flexibility and multiple entry/exit points. This provision can be leveraged for wider institutional collaborations, including offering electives for both generalist MPH and concentrations or specialisations.

- **Year 1:** A standalone Post-Graduate Diploma in Public Health (PGDPH) covering all essential core competencies. A student could exit after this one year, with an employable qualification, with credits stored in the ABC. However, this should not be treated as a professional degree.

- **Year 2:** An optional second year for the full MPH, focusing on advanced specialisation, a research dissertation, or an intensive internship. This is necessary to be called as a public health professional.

One good thing about NEP is that it enables the schools of public health to do cross or inter-school courses giving students more choices for electives and concentrations by accepting external credit points.

Conclusion and recommendations

The current state of MPH education in India is a paradox of high potential and high risk. The diversity of institutions is a strength that can foster innovation, but the absence of regulation threatens to devalue the degree and compromise the quality of the public health workforce. Aligning with the NEP does not mean forcing the MPH into a one-year box. For a professional and practice-oriented degree, the two-year duration remains the gold standard for producing quality professionals from diverse academic backgrounds.

Case Study

MD (MPH Epidemiology) Course at All India Institute of Hygiene and Public Health (AIIH&PH), Kolkata

MD (MPH Epidemiology) Course is a unique three-year NMC recognised course conducted at All India Institute of Hygiene and Public Health, Kolkata, since 2016. The course focuses on specialisation in epidemiological research and methods, with a strong emphasis on understanding disease causation and applying effective strategies for disease prevention and control.

The program equips learners with the ability to apply epidemiological principles to community and national health priorities, use essential public health sciences and statistical software, and conduct descriptive and analytical research. Graduates learn to investigate outbreaks and other public health events, design and evaluate surveillance systems and programs, and uphold ethical standards in data collection and human subject protection. The course also builds competencies in teaching, communication, leadership, advocacy, and collaborative decision-making, while fostering lifelong learning and continuous professional development.

The course has an interesting genesis dating back to its introduction as a two-year MPH (Epidemiology) course for doctors which was subsequently upgraded to three years MPH Epidemiology Course, entry point being through All India PG Entrance Examination for MBBS graduates and was permitted by the erstwhile Medical Council of India (MCI) in 2016 and subsequently obtained recognition as well.

The course was renamed as MD (MPH-Epidemiology) from MPH (Epidemiology) by the National Medical Commission (NMC), Post Graduate Medical Education Board (PGMEB). Total number of seats are seven and the course is affiliated to the West Bengal University of Health Sciences (WBUHS).

However, the inclusion of both MD and MPH in the course title has led to confusion among stakeholders, including students, employers, and academic institutions, regarding the course's primary focus and alignment with traditional public health education. This dual nomenclature raises questions about whether the course is primarily a medical degree with a public health component (three-year NMC-recognised PG degree) or a public health degree with medical training (two-year non-NMC recognised MPH degree), potentially affecting its perception and acceptance. The resolution of this dilemma is crucial for ensuring the course's continued relevance and appeal in India's public health education landscape.

9. Quality of MPH programs

Being a professional course, the quality and level of excellence of MPH programs in India need to be consistently maintained. The quality of the MPH programs depends on the curriculum, faculty expertise, practical experience, a connection to public health practice both in government and private sector, and an accreditation system.

The group discussed several pathways to ensure quality. The focus on quality should be part of all the components in the design and implementation of MPH programs. The quality measures may include the following:

- Common entry and exit exams
- Well defined core competencies
- Appropriate faculty quality and mix
- Establishing council for public health education
- Accreditation or self-regulation
- Monitoring system using standard indicators

Common entry and exit exams

Common entrance and exit exams will ensure basic minimum standards while allowing flexibility for multidisciplinary learning. One option is to assess existing exams conducted by various organisations (for admission to other disciplines in science, medicine, and engineering) and possibility of addition of public health as a subject within the framework.

Another option is developing a new entrance exam for entry to public health courses. A common exit exam can also be considered which will enable a standardised assessment of competencies and comparability across institutions.

Well defined core competencies

The program's objectives should be clearly established and aligned with the broader goals of the public health system and needs of the country. A set of core competencies have been proposed (previously described) which every graduate must achieve, regardless of their disciplinary background. These competencies should reflect the needs of the health system in India, be periodically reviewed, and form the baseline for accreditation and quality assurance. A mix of evaluation methods can be used to assess if the core competencies were acquired before the graduation.

At the same time, uniformity should not mean rigidity. MPH programs must allow flexibility for multidisciplinary strengths, regional priorities, and innovation in pedagogy. Accreditation and continuous professional development can ensure consistency in graduate competence while respecting the multidisciplinary nature of public health education. In addition, MPH courses should be aligned with the New Education Policy (NEP).

Appropriate faculty quality and mix

The faculty should include a mix of medical and non-medical faculty to ensure that all the disciplines required for core competencies are covered. The faculty should have experience of working in public health teaching or research in addition to the core qualifications.

The medical faculty may include MD/DNB in community medicine or MD/DNB in other medical specialties with suitable public health or epidemiology training. The non-medical faculty with PhD in relevant disciplines should be recruited. The disciplines covered by non-medical faculty may include (not limited to) such as biostatistics, data science, social sciences, environmental sciences, health economics, and health communication.

The group suggests that at least 8-10 full time faculty with diverse backgrounds are required to teach various courses and guide the research projects in various domains. A faculty student ratio of 1:5 can be considered to ensure quality of MPH programs. A unit with 8-10 faculty with the right mix can cater to approximately 25-30 students per academic year.

Establishing council for regulation

Currently, there is neither an accreditation council nor a formal structure or system of collaboration between academic stakeholders. There is no formal regulatory mechanism for the accreditation of public health courses, including MPH programmes. There is a need for an apex body with representation from teaching institutions, faculty, students, professional associations (such as IPHA), and the government.

Accreditation

Accreditation is one of the mechanisms to be considered given the wide variation in MPH content and context across institutions. Accreditation of public health programmes will establish guidelines for regulating high-quality academic standards, responsiveness, and ethical practices in public health education in India.

Since there is no formal body to conduct accreditation, a peer review based self-regulatory approach will be a good starting point. To begin with, the standards/indicators should be developed for accreditation involving stakeholders and voluntary approach to accreditation should be encouraged. A collective mechanism where all MPH-offering institutions design a common accreditation framework may be a practical solution.

A self-regulatory approach can include internal and external peer review assessments. Eventually, accreditation could be managed through a national-level accreditation council or professional body such as DNB. Accreditation should be operationalised through an apex body using self-assessment, peer review, and periodic renewal.

Monitoring system using standard indicators

A strong monitoring system is essential to assess the quality of public health education in the country. Regular internal audits and accreditation renewals will ensure accountability and provide opportunities for benchmarking against national and international standards. Broadly, the indicators can be developed using the logic model, including input, process, output, and outcome indicators.

An example of self-regulated accreditation approach at global level is accreditation of Field Epidemiology Training Programs (FETP) developed by Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET). (https://www.tephinet.org/what-we-do/fetp-accreditation-and-quality-improvement).

The Association of Schools and Programs of Public Health (ASPPH) initiatives are another example of a quality improvement in the public health education in the USA. The Council for Public Health accredits the institutions which come together on the ASPPH platform to advance quality education and ongoing capacity building for the member institutions.
https://aspph.org/our-work/education/

Case Study

Framework of quality indicators for Field Epidemiology Training Programs

Field Epidemiology Training Programs — Fellowships at ICMR-NIE, Chennai, developed a set of quality indicators drawing from the global framework developed by TEPHINET. The list below includes a few of the indicators which are being used by the program.

	Level	Indicator/Domain	Numerator	Denominator	Source
1	Input	Teacher-student ratio	Number of faculty	Number of students	Learning Management System (LMS)
2	Input	Diversity in student enrollment	# students enrolled in training by role, position and workplace location	Total # of students enrolled	Program documents
3	Input	Diversity of faculty	Qualitative indicator- Disciplines represented among faculty	Qualitative indicator- Disciplines represented among faculty	Institutional Website
4	Input	Adequacy of course materials (in terms of documents such as learning objectives, teaching materials, instructor manual, exercises, readings, assessment materials)	# of intended modules with adequate course materials for all sessions	# of intended modules	Program documents - review checklist prepared by experts
5	Process	Course attendance	Students with 75% attendance	# of students enrolled in a cohort	Attendance management system
6	Process	Student mentoring	Median hours of guide-student meeting per student	Median hours of guide-student meeting per student	LMS
7	Process	Student mentoring	Median days of field mentoring per student	Median days of field mentoring per student	LMS
8	Process	Classroom time ratio	# of weeks spent in the field	# of weeks spent in classroom	Program documents
9	Process	Courses feedback	# of students who gave 3 or above rating for each course	# of students enrolled	Feedback system
10	Output	% of students that meet program's core competencies	# of students that meet program's core competencies	Total # of students enrolled	LMS
11	Outcome	Placement	# who got employed within one year of the course & type of employment	Total # of students enrolled	Alumni follow-up

The authors suggest that a group of stakeholders should come together to develop a framework for quality indicators. The few examples given here suggest the type of indicators which can be considered. Broadly the input indicators will include resources such as funding, faculty, faculty student ratio, infrastructure, and access to field sites.

The process indicators may include teaching time, mix of lecture versus practical hands-on sessions, exposure to health system/ public health organisations, and student feedback about various courses. The output indicators will include job placements, assessment of core competencies and field practice/ research in collaboration with the health system. Also, the indicators can be developed for both long term and short-term periods. The indicators need to be dynamic and not permanent. There is a need for review after every 3-5 years.

10. Career pathways

Career pathways after MPH in India

MPH graduates in India have a wide range of career opportunities across government agencies, NGOs, international organisations, private healthcare firms, consulting companies, academia, and research institutions. They can work in the field of public health policy, disease surveillance, epidemiology, healthcare strategy, program management, and advocacy roles.

The public sector offers opportunities in ministries, state health departments, and research centres, while NGOs and global organisations like the WHO and UNICEF require professionals for community health programs. The private sector, including healthcare consulting, insurance, pharmaceuticals, and digital health startups, also provide significant career paths. MPH graduates can pursue doctoral studies or contribute to public health research. Emerging fields include climate-health, public health law, and data analytics. Additionally, entrepreneurship in health tech, telemedicine, and social health initiatives is emerging as a promising avenue. Below is a focused, practical guide describing the main career pathways available to MPH graduates in India.

Current career pathways for MPH trainees

MPH training provides skills in epidemiology, biostatistics, health systems, program design and evaluation, health policy, often basic management, and research methods thereby making them suitable for roles that combine data, program implementation, policy, and management rather than frontline clinical work. We list some possible career opportunities below.

Image source: Unsplash

Government sector **(Health)**

A. National / State Public Health Programs (NHM, NCDC, state/district health societies)

- **Entry routes:** Contract/outsourced positions via NHM/state health society advertisements, short-term consultancy, project-based posts, some permanent positions via state PSC or health department notices.
- **Typical roles:** Program Officer, District/State Epidemiologist, Surveillance Officer (IDSP), Monitoring & Evaluation (M&E) Officer, Data Manager, NCD/Immunisation/TB Program Coordinator.
- **Progression:** Junior consultant → Program Manager/Senior Technical Officer → State Nodal Officer / Director-level program roles.
- **Key skills:** Field epidemiology, survey methods, data cleaning/visualisation, program planning, stakeholder engagement, M&E frameworks.
- **Tips:** Gain hands-on experience with NHM projects, learn DHIS2/IDSP dashboards, get FETP exposure if possible.

B. Government research institutions (ICMR institutes, NCDC, AIIMS/INI research units)

- **Entry routes:** Scientist/Research Fellow posts (formal calls), Project Assistant/Research Associate roles on funded projects.
- **Typical roles:** Research Assistant/SRF, Epidemiologist, Biostatistician, Data Analyst, and Project Coordinator.
- **Progression:** Scientist B/C → Scientist D or PI/Project Lead for funded studies.
- **Key skills:** Research design, biostatistics (R/SPSS/Stata), grant writing, ethics, lab/field study coordination.
- **Tips:** Publish early, apply for JRF/SRF opportunities, learn grant procurement, and GCP basics.

C. State health departments & municipal health (urban health, public health units)

- **Entry routes:** Government hiring through state notifications, deputations, contractual hires for projects (e.g., urban health missions).
- **Typical roles:** Public Health Specialist, Urban Health Officer, Surveillance/Outbreak Investigator.
- **Progression:** District/State level administrative and technical roles.
- **Tips:** Familiarise with state health programme guidelines and reporting structures.

D. Regulatory & policy bodies (MoHFW, CDSCO, NABH, state directorates)

- **Entry routes:** UPSC/state public service cadres, lateral hires, and contractual consultants.
- **Typical roles:** Policy analyst, Health Economist, Program Evaluator, and Regulatory Affairs Associate.
- **Progression:** Senior policy positions, advisory roles.
- **Skills:** Health policy analysis, health economics, HTA introduction, and stakeholder consultation.

Government sector **(Non-health)**

A. Administrative roles

Entry routes: Lateral deputation from health cadres.

- **Typical roles:** Health administration posts, district-level management, program implementation leads.
- **Tips:** Combining MPH with civil service opens leadership positions in health policy and planning.

B. Statistical and planning services

- **Entry routes:** Indian Statistical Service, state planning boards, MOSPI attachments (competitive exams/appointments).
- **Typical roles:** Data/statistics specialist, health planning analyst.

Private sector **(Health)**

A. Hospitals and healthcare chains

- **Entry routes:** Hospital administration recruitments, operations roles, quality & accreditation teams.
- **Typical roles:** Hospital Administrator (junior), Quality & NABH Coordinator, Infection Control Officer, and Clinical Research Coordinator.
- **Progression:** Dept. Manager → Operations Head → COO/Medical Director (with experience).
- **Skills:** Hospital operations, quality improvement, patient safety, and basic finance.

B. Pharmaceuticals, CROs, and clinical research

- **Entry routes:** Clinical research coordinator roles, data management, and pharmacovigilance entry-level roles.
- **Typical roles:** CRA (Clinical Research Associate), Clinical Data Manager, Pharmacovigilance Associate, and Clinical Project Manager.
- **Progression:** Senior CRA → Project Manager → Head Clinical Operations / Medical Affairs.
- **Skills:** GCP, clinical trial processes, SAE reporting, CDMS/LIMS, regulatory dossier familiarity.

C. Health insurance, TPAs, and managed care

- **Entry routes:** Claims analyst, underwriting support, and medical review roles.
- **Typical roles:** Medical Reviewer, Claims Manager, Health Economist (HEOR), and Actuarial Analyst (with quantitative background).
- **Skills:** Health finance basics, claims workflows, Health Technology Assessment (HTA), and cost-effectiveness concepts.

D. Health tech and digital health startups

- **Entry routes:** Product/implementation associate roles, data analyst positions, and clinical informatics.
- **Typical roles:** Product Manager (health products), Implementation Specialist, Clinical Data Scientist, and UX researcher (health domain).
- **Progression:** PM → Head of Product → CXO roles in startups.
- **Skills:** SQL/R/Python, product sense, interoperability (FHIR basics), and telemedicine operations.

E. Diagnostics and laboratories

- **Entry routes:** Laboratory operations, data quality, and Quality Assurance (QA) roles.
- **Roles:** Lab Manager (non-clinical), QA/QC lead, and Data Analyst.

F. Corporate wellness and occupational health

- **Entry routes:** Wellness program coordinator roles in corporates and consulting firms.
- **Roles:** Wellness Manager, Occupational Health Coordinator, and Program Designer.
- **Skills:** Behaviour change communication, workplace health **promotion, and monitoring outcomes.**

Private sector **(Non-health)**

A. Management consulting and development consulting

- Entry routes: Analyst roles in consulting firms (Big 4, boutique health consultancies), NGO consultancies.
- Roles: Consultant (health systems, monitoring and evaluation), Project Manager, and Implementation Lead.
- Skills: Program design, costing, policy briefs, stakeholder mapping, and Excel/ PowerPoint expertise.

B. Data science, analytics, and market research

- **Entry routes:** Data analyst roles if you have quantitative skills.
- **Roles:** Data Analyst, Business Analyst, and Health Data Scientist.
- **Skills:** R/Python, SQL, machine learning basics, and dashboards (Tableau/PowerBI).

C. Corporate Social Responsibility (CSR) and foundations

- **Entry routes:** Program officer roles in CSR arms, and foundations.
- **Roles:** Program Manager, Grants Manager, and Monitoring & Evaluation lead.

International and development agencies / NGOs

- **Entry routes:** Program officer/technical specialist roles via competitive hiring by WHO, UNICEF, UN agencies, bilateral projects, and large INGOs.
- **Roles:** Monitoring & Evaluation Specialist, Technical Advisor (NCD/TB/HIV), and Program Manager.
- **Skills:** Donor reporting, logical frameworks, large program M&E, and cross-cultural coordination.
- **Tips:** Field experience, language skills, and network via internships/conferences help.

Cross-cutting and emerging pathways

1. Health Economics / Health Technology Assessment (HTA) / Health Economics and Outcomes Research (HEOR)

- Growing demand in pharma, consultancies, and government HTA cells.
- **Skills:** Cost-effectiveness, Markov models, decision analysis, and economic evaluation.

2. Implementation science and digital public health

- Roles in digital health evaluation, scale-up of interventions, and implementation research.

3. Fellowship and short courses that add value

- **FETP** (Field Epidemiology Training Programme) — high value for surveillance/epidemiology roles.
- **Short courses:** Advanced biostatistics, R/Python, GIS, HTA, implementation science, project management (PMP basics), and GCP.

Career trajectories (examples)

ENTRY (0-2 YRS)

Research assistant, program coordinator, data analyst, CRA, and hospital admin executive.

MID (3-7 YRS)

Research assistant, program coordinator, data analyst, CRA, and hospital admin executive.

SENIOR (8+ YRS)

State Program Head, Principal Investigator, Director of Programs, Head of Product/Chief of Party for donor projects, and Professor.

These are only indicative examples and there might be more. It just shows that there are multiple career choices that MPH graduates can have rather than focus just on government health system.

11. Key recommendations

Need of India-specific MPH programs

- To satisfy the needs of delivering a comprehensive set of public health services, India needs a much larger pool of public health professional workforce, beyond the predominantly government health system, than is currently being envisaged. This needs a complete rethink at policy level and needs further deliberations involving a wide pool of stakeholders and experts.
- Current MPH programs in India are largely adapted from western models, often lacking contextual relevance. We strongly recommend developing India-specific MPH programs while adopting best global practices. Addressing India's disease burden and a focus on Primary Health Care should be the leading philosophy.
- We recommend MPH programs in the Indian context as a two-year professional and practice-oriented program.

Ensuring multi-disciplinarity

- Currently, numerous institutions — both public and private — offer MPH programs with varied specialisations and varied eligibility criteria. We recommend establishing uniform and inclusive eligibility criteria nationwide to ensure consistency, transparency, and inclusiveness.
- Given the breadth of public health, entry criteria for MPH programs must reflect the field's interdisciplinary nature and include both those with health background and those without.
- Given the advantages of being a part of the health system and presence of a field practice area, the FRAME team encourages medical colleges to run MPH programs. However, care needs to be taken to ensure multi-disciplinarity of the program and inclusion of a wide variety of experts from the medical and social science realm in its faculty.
- Given the mandatory requirement for a department of CM for recognition by the National Medical Council and ensuring equality of multi-disciplinary disciplines, the authors suggest three different models. A desirable governance mechanism for situating a multi-disciplinary public health school within medical colleges needs further experience and deliberations.

Ensuring quality of MPH programs

- Public Health schools must impart a basic and uniform set of skills and competencies. We have classified the core competencies for India-specific MPH programs under nine domains. The list includes core competencies like system thinking and data analysis capabilities. MPH programs should focus on achieving cognitive (knowledge oriented), psychomotor (skill oriented), and attitudinal (perspective oriented) competencies.
- MPH program curriculum must allocate sufficient time to acquire these core competencies using a combination of lectures, case studies, hands-on exercises, field visits, immersion opportunities, and field projects. Adequate exposure to health system and primary health care should be ensured.
- In addition to core courses, concentrations/ elective courses could be offered in the second year of the program. The concentration areas can be chosen considering the strengths of the institution offering the program and emerging public health needs.
- Given the increasing number of MPH programs in non-health universities, the group strongly recommends formal

partnerships with the district/state health departments to provide practical experience to students. These can be through practice-based learning opportunities like practicums, rotations, and internships. This should also be simultaneously encouraged and enabled by the state health departments.

- MPH degree is a professional degree and hence needs to be managed like any professional course, including setting up accreditation systems and councils.

- We recommend establishing a quality or standards framework for the MPH programs focusing on input, process, outputs with outcomes as identified exit competencies and their benchmarking. This should cover (not restricted to) entry criteria, course curriculum, faculty strength and expertise, practical experience in community and health system, and exit criteria.

- The group, while recognising institutional diversity as strength, also takes cognisance of the absence of a unifying regulatory authority which has created significant challenges for what is intended to be a professional course demanding a uniform core curriculum. We recommend a regulatory authority with the register of professionals.

- Aligning the two-year MPH course with the NEP's provision for a one-year Master's is quite challenging as we recommend only core competencies to be covered in the first year. We do not recommend simple compression as it would compromise depth and practical training. For a professional and practice-oriented degree, the two-year duration remains the gold standard for producing quality professionals from diverse academic backgrounds.

- MPH programs must be accredited by a council or professional body for public health courses, like the NMC and INC. We recommend setting up of a Public Health Education Council of India which should be an apical, multidisciplinary body that sets standards, accredits programs, fosters interdisciplinary collaboration, and promotes both workforce development and public health literacy across sectors.

Ensuring career pathways

- The group feels that the current Indian market is not yet mature for specialist MPH courses. For the time being we recommend that the specialisation should be initially developed through concentration areas and followed up by doctoral studies.

- The group encourages development of advanced public health training and doctoral courses. In addition, India should encourage a DrPH program as a doctoral degree for practitioners of public health.

- The group recognises and emphasises the wide range of career opportunities available across government agencies, NGOs, international organisations, private healthcare firms, consulting companies, academia, and research institutions for MPH graduates. We advocate that the competencies of the MPH graduates match their requirements.

- There is a need to advocate for a specialised public health cadre at all the states and open up career opportunities for trained MPH professionals to be absorbed in leadership and program management positions in order that career opportunity avenues are secured for the successful professionals.

- There is a need for better management of the demand and supply of public health workforce to address the present deficiency, but also to not end up with overproduction of public health professionals.

Strengthening MPH courses in India

A roadmap for multi-disciplinarity, quality, and career pathways

FRAME India

A Framework for Restructuring and Advancing MPH Education in India

For further information contact:
frameindiainitiative@gmail.com