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आरोग्यम् सुखसम्पदा

राष्ट्रीय स्वास्थ्य एवं परिवार कल्याण संस्थान

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HEALTH AND POPULATION: PERSPECTIVES AND ISSUES

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SPECIAL ISSUE ON LEADERSHIP AND GOVERNANCE

Health and Population:
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Special Editorial

Leadership is Visionary

Rajesh Bhushan

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Leadership plays a very important role in public health. Visionary leadership lays the foundation for the universal and equitable health services. Prudent leadership determines the development of balanced and need-based public health and curative services of the country during normal times; and during crisis– both natural and manmade. Good leadership in public health learns the traits from the experiences of the past and present health crisis; and plans the ground work of the services, based on the scientific evidence available.

During the current COVID-19 pandemic, each and every category of health and non-health personnel from various departments who could contribute their might were utilized. Their roles were specifically identified to the minutest detail along with the ways and means to coordinate with the concerned staff. The channels of communication were clearly defined. All this resulted in the efficient and effective management of a once in a century pandemic; and the likely disastrous consequences were averted.

Leadership in public health is an immensely desirable trait to effectively tackle tough public health challenges. It is a core competency of public health practitioners wherein a leader defines vision of an organization, influence the followers to move towards the vision, communicate effectively, build an effective cross-functional team, network with like-minded people and organizations, and challenge oneself to achieve the organizational and personal goals. The current COVID-19 pandemic is a testimony of the fact that leadership skills are of critical importance to tackle public health emergencies. The pandemic has provided an opportunity to reflect on how to lead in healthcare amidst a crisis. It also underscores the need of a transformative leadership which may hold value as we all navigate through the current corona-virus pandemic or the forthcoming challenges. The health institutions and medical colleges in the country need to incorporate public health management, leadership and communication trainings in the basic curriculum, and in-service trainings of all the health professionals. Short term packages should be made for non-health professions whose help may be needed, and in-service trainings must be conducted for them.

The theme ***'Leadership and Governance in Public Health'*** is very much relevant and appropriate in the current times when the entire country and world is grappling with an unprecedented pandemic. There is a dire need to develop and conduct leadership trainings for Public Health Professionals to strengthen the health care system of the country. Strong and resilient leadership among health professionals is also being

increasingly recognized and should be considered as an integral and cross-cutting competency required for strengthening the health systems in the country.

Along with the leadership training, mentoring is also recognized worldwide as a key capacity building strategy both at the individual level as well as at the organizational level. There is an evidence of relationship of mentoring on improving an individual's leadership and governance in the field of public health organizations. There is also a lack of sufficient literature about mentoring in public health workspace. The pathways to ensure effective implementation of mentoring in public health organizations to develop leadership and governance need to be identified and followed.

The requisite leadership skills are not imparted in basic undergraduate and post graduate courses presently being offered in the country. Though some courses are available, these courses are disjointed, fragmented, and not personalized as per the needs. There is a strong need to include relevant leadership models to structure and impart in-service leadership training among the healthcare professionals. Undergraduate as well as postgraduate health professionals should be taught leadership as a core skill. Short-term and executive trainings, customized mentorship programmes, fora and discussions facilitated through health professionals' associations are some other creative leadership development avenues which could be undertaken. There are limited opportunities for such trainings for mid and senior level programme managers of National Health Mission (NHM). A short-term leadership training will be highly effective. There is a need to adopt the training model under Programme Implementation Plan of NHM for middle and senior level programme managers.

Governance structures and their reform is another key area while addressing leadership. Various institutes have played a significant role in fostering initiatives and growth in public health governance and leadership in India, and have been instrumental in bringing positive changes to public health administration and human resource management. In addition, various national level public health associations like IAPSM (Indian Association of Preventive and Social Medicine), IPHA (Indian Public Health Association), etc. play an important and essential role in the current crisis; and they will continue to perform their roles effectively in the future pandemics as well.

Health and Population:
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Editorial

Leadership Training of Public Health Professionals in the COVID19 Era: Need of the Hour

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Leadership, managerial, and administrative skills are often understood as the exclusive skills. However, in real life, these skills are complementary and synergistic. According to John Kotter, "Most organizations are over managed and under led."[1] This statement is also true for public health in India. A good leader knows and takes administrative, managerial, and leadership action as the situation demands. A leader may take administrative actions such as follow existing procedures, take decisions based on rules, regulations, and precedence, follow hierarchy, maintain status quo, whereas managerial actions are focused on creating structures to achieve specific targets through effective and cautious use of available resources. It is common to see individuals who move up to leadership positions but continue to be an administrator or a manager. They "micromanage" their subordinates who feel disempowered and stop taking initiatives which lead to stagnancy in an organisation. Such leaders are still stuck in transactional style of administrators and managers, whereas they need to move to transformational style, which is the hallmark of an effective leader.[2] A good leader may take administrative or managerial actions when needed but should be more often focused on creating vision and transforming the organizations and individuals to achieve and go beyond organizational goals. They create right environment, anticipate future, and prepare the organization for it rather than striving for stability.[3]

Leadership skills among public health professionals (PHPs) have assumed even more importance in today's world in view of rapidly changing disease pattern, according higher priority to universal health coverage and health in all policies along with the fact that health being demanded as a human right. Without these skills PHPs run the risk of being side-lined when it comes to decision making. Most of us become accidental leaders as we never receive training in leadership skills. This not only undermines the effectiveness of PHP but also the credibility of public health as a specialty. Jim Collin's five levels of leadership[4]discussed in the article by Kumar S and Kumar N in this issue are useful to understand the levels of leadership. It can be adapted to leadership in PHP.[1] Technical excellence in public health, which is a vital foundational skill denoting first level of leadership, is necessary but not sufficient to become a leader. One needs additional skills to become a leader which include team work, emotional competencies, prioritization (first things first), communication and listening skills, advocacy, negotiation, networking skills,

along with qualities of conviction, commitment, and courage to do and persist with what one thinks is right. Thus, leadership is a life-long journey, not a destination.

The leadership skills are lacking in PHPs as these are not part of their training curriculum at undergraduate or postgraduate level. Further, these are seldom discussed in conferences, meetings, and workshops or other continuing medical education activities. The possession of (or lack of) these skills among PHP doesn't credit (or discredit) them in promotion to higher posts. Moreover, there are very few training opportunities aimed to improve leadership skills in public health, especially in developing countries. This dismal scenario leads to formation of accidental leaders and not genuine leaders. The situation becomes ever more dismal when they are expected to perform leadership role while managing a health facility without leadership skills as they are trained only in technical skills. This eventually induces a 'hit and trial' approach rather than a 'well planned' approach to acquiring leadership skills which involve teamwork, effective communication, networking, advocacy, change management, organization culture and much more.

Current Initiatives in Public Health Leadership in India

In India there have been some efforts to inculcate leadership skills among young public health professionals by Indian Public Health Association (IPHA) and Indian Association of Preventive and Social Medicine (IAPSM). Both these associations are committed to support capacity building of health professionals, in technical and leadership aspects. IAPSM has constituted a health system and management committee with an attempt to bridge the gap between technical and leadership skills by mean of conducting national and state-level seminars, workshops and fellowship programs. Recently IAPSM has organized a virtual young leader national conclave which aimed at nurturing champions in discipline of public health and community medicine.[5] The recently held conference of IAPSM at PGIMER had a preconference workshop on the International Public Health Management Development Program (IPHMDP) which generated interest among faculty and students of public health discipline in public health management leadership.[6,7] Indian Academy of Public Health of IPHA has recently initiated an online course on leadership for young PHPs and regularly holds preconference workshops on leadership for public health professionals.[8] Besides, the recently started Masters of Public Health and Post Graduate Diploma in Public Health Management disciplines has very limited content on leadership and management. Very limited numbers of institutions in the country like Manipal University, Indian Institute of Health Management and Research, Public Health Foundation of India and a few other medical and health management institutes offer public health leadership courses, but most are not in-service oriented and do not focus on competency-based adult learning pedagogy.[9–11]

In 2016, Post Graduate Institute of Medical Education and Research Chandigarh started IPHMDP for middle and senior level managers of 161 Indian Technical and Economic Cooperation (ITEC) countries. This program is supported by the Ministry of External Affairs, Government of India. Till date, over 500 professionals from 70 countries have been trained in various aspects of leadership and management.[12] In 2021, PGIMER launched virtual e-IPHMDP Basics course which is a competency-based learning programme of three months duration involving multipronged blended methodology comprising of lectures, group discussions, practical assignments, live interaction with faculty, quiz, videos and contextual resource material. The aim of this program is to build effective leaders for future generations.[13]

Public Health Leadership in Crisis Situations

The recent pandemic of Coronavirus Disease 2019 (COVID 19) has again highlighted the need to strengthen the public health leadership skills among PHPs. Besides actively playing a technical role wherein public health professionals guide government and other institutions they should act as a front runner in leadership role for meticulous planning of interventions, their effective implementation and monitoring and evaluation. In the light of highly unpredictable scenario, they should be able to apply change management principles, effective communication with decision makers, team work and collaboration with the stakeholders and motivating their teams for managing such unprecedented situations effectively. It is also important to take prompt decisions, inculcate creativity and 'out of box' thinking among the colleagues.

"During crisis a leader takes in more responsibility and delegates less" –Anonymous. The following five leadership skills (5C's) need special focus during public health crisis. First, Collaboration and ability to work with a team of teams, as there is a dire need for multi-sectoral engagement and influencing the political leadership, bureaucracy, and local self-government. The public and other stakeholders need to be aware of the certainty of action by the leaders. They need to be informed of what is being done and why and where we are going. Second, Continuous Learning: As the disease entity is new and we learn new things and characters as the pandemic unfolds, the leaders needs to be open to new learnings and ideas, and encourage learning 'as you go'; Third, Communication Skills are very important for leaders in pandemic as misinformation and panic hamper the control efforts to a great extent which make the things further worse and more complicated. The communication should be open, transparent, measured and frequent. It should be proactive using all available channels of communication including social media to contain the info-demic and panic-demic which become a worrying part of the pandemic; Fourth, Community Focus and Engagement: During health crisis it is vital to adopt the whole of the population approach to address the communication needs of every citizen- those infected, recovered, or susceptible high-risk groups besides the rest of the population. Fifth, Capacity Building: Crisis also offers a window of opportunity such as building self-capacity as well as of the health system. The leaders must identify and effectively use these opportunities to strengthen the health policy, health in all policies, and health systems to respond to the crisis for putting in place a more resilient health system for the future.

Conclusion

Leadership skills are vital for public health professionals, which has been amply highlighted during the COVID-19 pandemic. PHPs should inculcate the higher order transformational leadership skills to establish their importance in the politico-administrative setup of the country. Thus, there is a dire need to develop and conduct leadership trainings for PHPs to strengthen the health care system of the country.

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Leadership Development for Strengthening the Health System in India

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Abstract

Strong and resilient leadership among health professionals is increasingly recognized as an integral and cross-cutting competency required for strengthening health systems, and to tackle the constantly evolving 21st century health challenges. It is time to consciously and strategically invest in leadership development of health professionals and produce change agents through transformative education. Undergraduate as well as postgraduate health professionals should be taught 'leadership' as a core skill. Short-term and executive trainings, customized mentorship programmes, fora and discussions facilitated through health professionals' associations are some other creative leadership development avenues which could be undertaken. Leadership skills should be developed in conjunction with management principles and competencies for holistic development. Female healthcare professionals with exemplary skills should be progressively engaged in top leadership roles for robust healthcare management. Concerted efforts and comprehensive approaches in healthcare leadership development would pave the way for smarter and remodelled health systems in the 21st century.

Key words: Leadership development, Health system, Management, Transformative learning.

Need for Leadership in 21st Century

The well-known WHO health systems framework[1] presents the six building blocks of health systems namely- health service delivery; health workforce; health information systems; medical products, vaccines and technologies; health financing, and leadership and governance while keeping the population at the core of the framework. Leadership remains a critical block of the health systems framework. Notably, while leadership is an independent building block of health systems framework, it also cuts across other building blocks of the health system. Without able, competent and effective leadership; it would be challenging to provide the needed, dignified and quality health services to the population. Advancing the agenda of health workforce or health information systems is also difficult in the absence of an effective leadership. Poor leadership would also lead to difficulties in advancing issues linked to health financing, medical products, vaccines and technologies.

The 21st century has seen a lot of transition in the health sector. Populations are exposed to threats from communicable and non-communicable diseases, as well as new emerging and re-emerging infections. They are also fraught with the need to meet the demands of an overworked public health system, the soaring costs of healthcare, and the issue surrounding the numerical shortage and poor distribution of healthcare providers globally. The health system is exposed to constant reforms arising from the interplay

of internal as well as external organizational factors. Internal factors such as the need for transparency and accountability arise from a growing demand for demonstration of valid results while external factors include the changing population demographics, economic factors, globalization, government policies, etc[2]. Traditionally, hospital and healthcare system leadership was viewed largely as the purview of non-physician administrators. However, with the 21st century health challenges, this perspective is changing and quickly evolving with the need for more physicians and nurses in top leadership roles being recognized[3]. Strong leadership is a fundamental requisite for realizing the vision of such transformed healthcare systems. The health system needs to exercise leadership that can effectively mobilize all its resources for maximizing the health impact, and channelize the trans-disciplinary learning into a well-coordinated multi-sectoral action on the wider aspects of healthcare provision[4].

India needs a smart health system for dealing with the public health challenges of the 21st century. A smart health system would translate into a system that is strong and sturdy, sustainable, vibrant, robust and resilient, agile, efficient, resource-optimizing, effective, equity-promoting, inclusive, empathetic, people-centric, technology-driven and culturally-sensitive. The ongoing pandemic of COVID-19 has taught and continues to teach us several valuable lessons. It has highlighted the fact that history is more than the path left by the past; it influences the present and has the potential to shape the future. The COVID-19 crisis has prioritized the need for strong, resilient public health leadership at all levels, in all areas, for everyone. It is critical to leverage the learning from the COVID-19 pandemic for strengthening the health systems in India. The need of the hour is to recreate health systems that can anticipate, avert, attenuate and abbreviate any health threat while dependably delivering all the needed health services with efficiency, equity, and economic prudence, and continuity, commitment and compassion, with quality and dignity as hallmarks. Leadership development, therefore, is an integral requirement for building stronger health systems.

Leaders: Born or Made?

When it comes to leadership development for health system strengthening, a few questions need to be addressed– are leaders born or can they be made? Some may be born but most are made. Can people learn how to be a leader? Yes, with great certainty, people can learn to be a leader. One school of thought suggests that the most dangerous leadership myth is that leaders are born[5]. However, there is a strong contention that the opposite is true. Leaders are made, not born. This reemphasizes the need to invest consciously, strategically and systematically in building leadership skills and competencies among the health professionals.

Transformative Learning– Instructional Reform

A multi-pronged approach could be used for building leadership competencies. One of the important issues that needs to be highlighted is redesigning of our health professionals' education with emphasis on transformative learning. Transformative learning is the most recent instructional reform in health education, considered as the highest of three successive levels, the previous two being informative learning and formative learning[6]. Informative learning emphasizes the need for transfer of knowledge, information and skills, thereby producing experts. A step further, comes formative learning which in addition to the information and skills transfer, encompasses socializing, values, ethics and morals, thus initiating the production of professionals[5]. The most recent and advanced reform is transformative learning which while including the critical objectives of informative and formative learning, additionally emphasizes the

importance of development of leadership attributes. It underscores the importance of creating leadership competencies which would produce enlightened change agents for the improved functioning of the health system. Therefore, transformative learning could be considered as one of the most important and critical drivers for health education reforms for the 21st century.

As put forth by John Kotter[7], "Leadership is very much related to change. As the pace of change accelerates, there is naturally a greater need for effective leadership". The instructional reform of transformative learning involves inclusion of competency-driven curricula with periodic adaptations to local context, promotion of inter-professional and collaborative partnerships among working teams and strengthening educational resources. These need to be backed by institutional reforms which would foster joint education and health planning mechanisms, accounting for social origin, age, gender compositions of the health workforce, networking of hospitals and academic centers, and a culture of critical inquiry[5]. An interdependent professional education will help us to have leadership development as a vital part of health professional education.

Leadership Development Initiatives

The other question that needs to be addressed in this context is: Are there enough opportunities for leadership development? The answer is yes. Several different leadership development initiatives can be undertaken. Young students enrolled in medical, nursing, public health, pharmacy, physiotherapy and other health-related courses are the future leaders of the healthcare systems with a clear vision and inspired leadership abilities. Developing leadership skills among them is of vital importance to meet the accountability, an intrinsic part of leadership and governance. An early-start opportunity for these young leaders would be to include leadership as a part of the under-graduate and post-graduate curricula in their respective medical, nursing, pharmacy as well as public health schools; and thus, impart leadership skills to health professionals while they are still learning the nuances of the health science in their respective fields. Leadership skills should also be included in the core curricula of academic public health programmes such as Masters in Hospital Administration, Masters in Public Health, Applied Epidemiology Post Graduate programmes as well as health management programmes and other related disciplines. Short-term executive in service trainings also provide us an opportunity to build on some critical leadership competencies and skills. These are opportunities where in-service healthcare professionals can build their skills quickly and learn on-the-job. Already among the currently offered programmes, there exists a capacity building programme supported by the National Health Mission, intended to impart the public health management skills to medical officers and nursing staff of the public health system. This post graduate programme, a one-year diploma programme in Public Health Management[8], includes leadership and management. The students of this programme have the opportunity to learn about the various characteristics, a good public health leader must possess in order to face and appropriately address the challenges within and around the health systems. The launch of more such programmes would be a welcome move in strengthening the capacity of the young healthcare professionals; thus empowering them to emphasize and prioritize safe, high quality, compassionate care for communities, and fortify the health systems.

While leadership skills can be developed through various capacity-building programmes, another prospect for building skills in this area would be to create and design tailor-made mentorship programmes for health professionals. The primary objective of this mentorship programme would be to provide guidance and

supervision through senior professionals in their respective disciplines, thus creating the second generation transformative leaders who would have the expertise to address the contemporary cross-cutting health systems issues. This mentorship programme could aid in shaping the thought process of the budding health professionals with a wide-range perspective early in their careers. This is crucial as leadership is not just one of the symbols within the framework for health systems strengthening but an over-arching concept which can benefit the system as well as its beneficiaries. Professional associations of respective health disciplines can play a huge role in facilitating such initiatives and motivating their members to collaborate for building leadership skills among the health professionals. This can help foster not only individual leadership abilities but may also ensure strong, long-term commitment to collaborative, cross-team and cross-boundary working. For instance, the Indian Association of Preventive and Social Medicine (IAPSM) has recently launched the mentorship programme for its young members. Another similar customized initiative is the IASPM Leadership Conclave. This is a platform where the young prospective leaders in the field of public health are given an opportunity to showcase their talent, learn from the senior colleagues and also demonstrate their leadership competencies and skills. These concepts can be replicated across other health disciplines as well. During the COVID-19 pandemic, when it is not possible to physically connect, IAPSM has also launched an e-connect academic initiative, providing a platform to junior students and potential future leaders to demonstrate and deliberate on relevant public health issues with other students as well as faculty members. Such initiatives, if designed strategically and comprehensively; can assist in giving young health professionals the much-needed boost to frame innovative solutions towards health system strengthening.

Leadership development has multiple dimensions. While holistic development has its merits, there is most certainly also a felt need for dynamic leaders within specific areas related to health. Young public health champions are needed to tackle the explicit health problems such as vector-borne disease, tuberculosis and other infectious diseases, non-communicable diseases, nutrition, urban health, etc. Leaders are also needed in thematic areas including specific components within the health systems framework- for instance, for advocating the need for expansions and advancement in the areas of health workforce or health information systems or service delivery related issues. Further, leadership is also a critical requirement in the area of health research to create evidence and translate that evidence appropriately and strategically for use in policies and programmes. Leaders would also be needed to further the agenda of health professional education, a core but often-neglected dimension for building strong health systems. Leadership development initiatives should be customized and programmed to focus on one or more such individual health related and health system related issues so as to create a pool of competent leaders including physicians, nurses, pharmacists, public health personnel, dentists, allied health professionals, etc. who would be available to tackle these issues efficiently as and when required.

Leadership and Management

In conjunction with developing the leadership abilities among the young health professionals through various platforms, the concept of evolution of management skills among them must also be considered and deliberated upon. Leadership and management are complementary skills, although often these are used inter-changeably. To put it simply, leadership is about doing the right thing, while management is about doing things right[8]. Stephen R. Covey has likened the relationship between management and leadership to the ill-fated, sinking Titanic with a quote “Efficient management without effective leadership is like straightening deck chairs on the Titanic”[10]. While leaders possess the ability to motivate the team towards a

common vision/goal, managers have the ability to provide guidance to the team with respect to the processes needed to be followed to reach that goal. Hence, it would be pertinent to design the development of leadership skills in alignment with the management principles and competencies for a holistic development of the health professionals.

Gender-neutral Leadership

Usually when leadership is discussed, it is instinctively thought to be a male-dominated role. However, in current times, many women leaders in various spheres in India as well as internationally, have demonstrated their abilities to successfully lead their teams from the front with clear goals and visions, appropriately-timed strategies and able decisions. Although there are many instances in the development sector where women leaders have exemplified their abilities as astute leaders, only a few of these have been abundantly highlighted. It is critical to invest more in such women leaders in the health sector with tremendous potential for advancing the agenda of health systems strengthening. The recently celebrated International Women's Day on 8 March 2021 with the theme "Women in Leadership: Achieving an Equal future in a COVID-19 world"[11] applauds the effective and efficient leadership of women across several countries and the variety of roles rolled-out by them in combating this pandemic. The emergence of female leaders in the health sector can become a centrifugal force for the larger good in the world in the long run.

Conclusion

Leadership development for strengthening the health systems in India remains a core topical issue for revisiting the health systems architecture, reanalyzing health challenges, aptly articulating health priorities and redesigning the new health systems in the 21st century. Concerted efforts need to be made at all the levels to include the spirit of leadership among the health professionals. A comprehensive approach in this direction will pave the way for India to proceed with the agenda of health assurance and sustainable development for the betterment of our tomorrow. Together, this will help us create *Swasth Bharat* along with *Swachh Bharat* and *Sashakt Bharat*. As aptly quoted by Mahatma Gandhi[12], "You may never know what results come of your actions, but if you do nothing, there will be no results."

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स्वास्थ्य एवं जनसंख्या :
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भारत में स्वास्थ्य प्रणाली को मजबूत करने के लिए नेतृत्व विकास

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**अपर प्रोफेसर, भारतीय जन–स्वास्थ्य संस्थान दिल्ली, भारतीय जन–स्वास्थ्य प्रतिष्ठान, गुड़गांव, हरियाणा।

सारांश

स्वास्थ्य व्यावसायिकों के मध्य मजबूत और लचीला नेतृत्व तेजी से एक अभिन्न और क्रॉस–कटिंग योग्यता के रूप में पहचाना जाता है जो स्वास्थ्य प्रणालियों को मजबूत करने तथा लगातार विकसित हो रही 21वीं सदी की स्वास्थ्य चुनौतियों से निपटने के लिए आवश्यक है। स्वास्थ्य व्यावसायिकों के नेतृत्व के विकास में सचेत होकर तथा रणनीतिक रूप से निवेश करने तथा परिवर्तनकारी शिक्षा के माध्यम से परिवर्तन लाने का समय आ गया है। स्नातक के साथ–साथ स्नातकोत्तर स्वास्थ्य व्यावसायिकों को 'नेतृत्व' मुख्य कौशल के रूप में सिखाया जाना चाहिए। स्वास्थ्य व्यावसायिक संघ के माध्यम से अल्पकालिक और कार्यकारी प्रशिक्षण, अनुकूलित परामर्श कार्यक्रम, मंचों और चर्चाओं की सुविधा आादि कुछ अन्य 'नेतृत्व विकास' के रचनात्मक विकल्प हैं जिन्हें अपनाया जा सकता है। समग्र विकास के लिए प्रबंधन सिद्धांतों और दक्षताओं के संयोजन के साथ ही नेतृत्व कौशल विकसित किया जाना चाहिए। शिक्षात्मक कौशल वाली महिला स्वास्थ्य परिचर्या व्यवसायिकों को सशक्त स्वास्थ्य प्रबंधन के लिए शीर्ष नेतृत्व की भूमिकाओं में संलग्न किया जाना चाहिए। स्वास्थ्य सेवा नेतृत्व विकास में समेकित प्रयास और व्यापक दृष्टिकोण 21वीं सदी में बेहतर और नए सिरे से तैयार की गई स्वास्थ्य प्रणालियों का मार्ग प्रशस्त करेंगे।

प्रमुख शब्दः नेतृत्व विकास, स्वास्थ्य देखभाल प्रबंधन, संगठनात्मक कारक, परिवर्तनकारी शिक्षा।

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Mentoring in Public Health: A Vital Strategy for Capacity Building of Leadership and Governance

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Abstract

Mentoring is recognised worldwide as a key capacity building strategy both at the individual level as well as at the organisational level. To achieve the sustainable development goals, mentoring in public health is a vital strategy to accelerate the pace of capacity building of leadership and governance. This in turn, will lead to a more robust public health system. This paper reviews the evidence of relationship between mentoring and improving an individual's leadership capacity and governance in the public health organisations. The evidence also highlights the lack of literature on mentoring in public health workspace including systematic reviews. Majority of the literatures on mentoring in public health is from the public health academia. The impact of mentoring in public health academia is multi-fold from stimulating interest in the field or to improve research or as intervention in community to better health outcome. However, in the workplace, there have only been few experiments to integrate it despite the many advantages it offers to better leadership and governance. The paper concludes with recommending the pathway to ensure an effective implementation of mentoring in public health organisations to develop leadership and governance.

Key words: Leadership, Governance, Mentoring, Public health, SDGs, Capacity building.

Introduction

Mentoring is a powerful strategic initiative which allows transformation in individuals and better quality of work output[1]. One of the important blocks of health system is leadership and good governance[2]. Leadership and governance is fundamentally about the characteristic of the individual that exercises it. Its result affects the performance of the organisation or the unit which in turn affects the performance of the health system. With a decade left to achieve the Sustainable Development Goals (SDGs), there is an urgent need to look at the strategies that can ramp up the pace of implementation in an accelerated manner to achieve the health system goals. This requires the individuals entrusted with leadership and governance in the public health system to develop their capacity. Performance development strategies of the human resources in leadership positions are critical.

Performance development of leaders among the human resources in health care can be done via different strategies which includes capacity building activities. While there are many initiatives which can facilitate this like training and development activities, self-learning, refresher programmes or continuous professional development programmes; mentoring offers several opportunities not provided by other means in the workplace.

Figure 1
Mentoring within the public health Human Resource Development in Healthcare

Mentoring is continuous with the focus on the person being mentored, called the mentee. It can be offered in any context including the workplace scenario. There are numerous evidences which highlight the role of workplace mentoring and the positive benefits that it yields for the organisation[3]. Evidence exists that mentorship can develop has the ability to radically enhance not just performance of individuals but also of organisations[4].

This article examines the role of mentoring to build leadership and governance capacity among the public health workforce among potential and identified leaders via the literature available in this area.

Mentoring Leadership and Governance in Public Health

Mentoring is a key strategy for improving retention[5]. Besides reducing turnover, mentoring reduces medical negligence rates. At the same time, it enhances job satisfaction, communication skills and professional identity[6]. It has also shown to improve clinical outcomes via implementation of clinical mentorship[7-11]. This has been demonstrated in different medical fields. Evidence even though limited, highlights the integration of mentorship in the health system in LMICs[12-14]. To tackle the human resource capacity development, mentoring is seen as a critical strategy to be implemented particularly among LMICs.

Three main factors account for effective mentorship programmes- mentor capability, opportunity in the mentorship programmes, and motivation in the mentorship programmes[15]. Systemic reviews on mentoring are there but hardly any regarding the role of mentoring in the public health workspace. Mentoring is recognised as a mainstream strategy in the workplace development in educational and business settings but it is not yet used as a mainstream strategy in the public health field[16]. Mentoring is extremely context-specific. The editors of the American Journal of Public Health[17] feel that mentoring is crucial in public health and strongly advocate increasing publications on mentoring.
While there are many styles of leadership, transformative leadership is vital in public health settings as the community is a key stakeholder. Transformative leadership is seen as sustaining and for the long term. This type of leadership which is advocated for the public health settings can be fostered through mentoring. Further, good leadership is closely associated with better governance. This cycle is aided via mentoring. The only process of providing capacity building of those in public health are via mentoring as it is a process

free from retribution and penalties. There is evidence in literature for mentoring as a key strategy in leadership development in different settings like business[18].

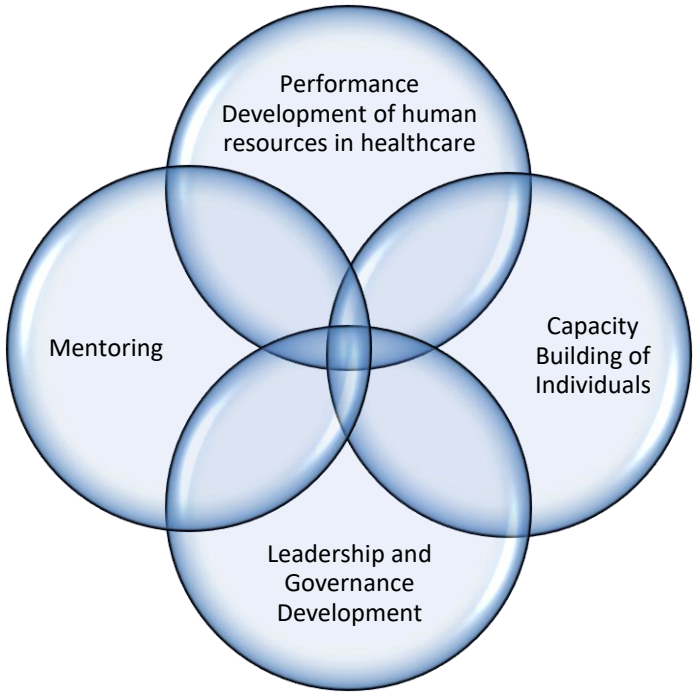
Leadership and working on governance are intrinsic to the role of the public health professionals. Currently, this is mostly learned on the job by learning from experience or via informal discussion and sharing. Presently, the different strategies for developing Leadership and Governance in Public Health in India are via modules taught in public health academia or via training sessions on these areas besides self-development via reading articles on the topic. Thein-service leadership development training courses are neither integrated into career progression nor compulsory[19]. The first author of this paper, Kumar, has spent 43 years as a public health professional states that there is no formal leadership training available either in undergraduate or postgraduate medical education. Even though in the parallel sectors of defence and bureaucracy, leadership training is there which is integrated. Mentoring is not among the several strategies mentioned by the author several strategies mentioned by the author, thus highlighting the lack of mentoring as a strategy for public health professionals[19].

Types and Impact of Mentoring in Public Health

Mentoring is mutually beneficial as it benefits the mentors and mentees as well as their institutions. In the context of public health organisation, this translates into strengthening the public health organisations and the outcomes. It is critical that mentee development will create the next generation of leaders.

Figure 2

Mentoring in the Organisational



Framework

The impact of mentoring is multi-fold. Some of them are:

- in public health academia, it has been shown to build student capacity, better community participation in healthcare and improve healthcare, and to build research capacity;
- it improves the capacity of the in-service professionals particularly those in rural areas; and
- it impacts on leadership development in public health.

Mentoring Impact in Public Health Academia
Role to Improve 'Learning by Doing by Provision of in Time Feedback'

A two-year 'learning by doing,' mentor-driven practical-oriented programme is being carried out for the last five years by the National Centre for Disease Control in Delhi, in close collaboration with the CDC, USA. A short term impact has been the increase in the interest in epidemiology reflected by the increase in applicants for this programme. On reflection, the authors attribute the success of the programmeto its mentors who play a critically important role in grooming the young professionals in their learning process[20].

Mentoring by Public Health Students in Community Setting

A research study has highlighted the role of reducing maternal death in Indonesia as a result of mentoring by Public Health Students topregnant woman to increase community participation. This mentoring programme for pregnant women was carried out by the Faculty of Public Health Diponegoro University, Indonesia, in the working area of Rowosari Primary Healthcare Centre during 2013–2015. The evaluation of this mentoring programme has shown that the efforts of the public health students bore fruit and increased community participation in preventing maternal mortality[21].

Impact of Mentoring to Advance Global Health Research

The *American Journal of Tropical Medicine and Hygiene* in its 2019 special issue published seven articles to facilitate guidance and adoption of mentoring in the context and culture of LMICs. The articles were a product of five workshops carried out in LMICs based out of Africa, South America and Asia. The authors recommended the use of progressing and peer mentoring[22]. The main purpose of mentoring is to accelerate and build global health research capacity in LMICs.

Mentoring Impact among In-service Professionals

A randomised controlled study was carried out in Karnataka among nurses which provided the evidence that mentoring on-site alongside the use of case sheets can improve the nurses' knowledge and skills on essential obstetric and neonatal care. The researchers recommended scaling up of this mentoring model to reduce maternal and neonatal mortality in India[23]. They felt mentoring like this was of particular benefit in rural remote areas of India. Another research carried out among the nursing professionals in Bihar, India, highlighted the role of mentoring in in-service training particularly in rural or remote areas[24]. This scoping review carried out in 2020 provides an overview of the current literature on in-service nurse mentoring[25]. A major finding of this review was the lack of literature in this area.

The Norwegian Institute of Public Health carried out a systematic review to understand the effect of employment-oriented mentoring programmes for vulnerable populations, which included immigrants, those with disability and chronic health issues alongside those with addiction issues among others. However, not a single article could meet the inclusion criterion for this study highlighting the dearth of evidences in this area[26].

Mentoring and Transformative Leadership

The evidence from M³ (multimodal mentoring)approach to promote public health infectious diseases research for diverse graduate students in 2019 highlights positive results[27]. Leadership characteristics and research productivity of 54 graduate scholars were analysed from among those who participated in the Dr. James A. Ferguson Fellowship– the Ferguson Emerging Infectious Diseases Fellowship Programme (Ferguson Fellowship). They participated in a pre and post-study of the mentoring intervention which was designed to increase the acceptance rate of students' research in conferences. The results showed that transformational leadership characteristics of these improved following completion of the Ferguson Fellowship. The fellows who received the multimodal mentoring intervention had almost 4 times (OR = 3.88; 95% CI [1.21, 12.47], $p < .05$) higher odds of getting their research abstracts accepted in scientific conferences as compared to their peers who did not receive this intervention. Another study, a Systematic Review of Mentoring in Africa, highlighted the improvement of managerial capabilities among other traits which improved the organisational performance due to mentoring in workplace[28].

Research has also shown that women leaders rarely have mentors, and this has affected their career progression into leadership positions[29]. The study also brought out the lack of mentorship models and the need for tailoring according to institutions. Mentorship is also proposed as a key strategy to address gender disparities and bias.It is vital that public health organisations recognise the key role a mentor can play and embed it in its organisation culture by emphasising mentoring as a key process. Researchers have suggested the use of mentoring in public health to address a number of significant issues. The range of these issues cover a lack of leadership in public health, shortages of human resource across diverse specialisations of public health, provide continuous skill upgradation among public health professionals[30].

Nursing has deployed mentoring in numerous ways as well as in the field of medicine. In a majority of the articles on mentoring, the details of the mentoring programme were rarely articulated. Incorporating mentoring and in public health workspace, is still a nascent field and much work as well as research requires to be done.

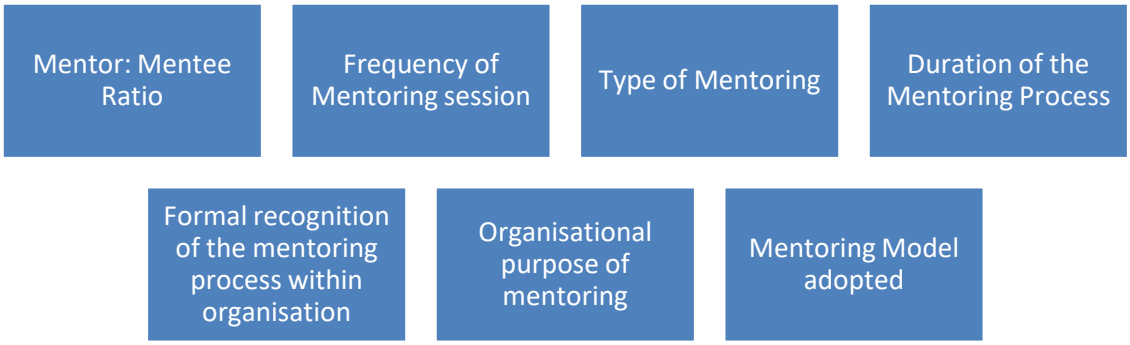
Effective Mentoring Programme Models to Promote Mentoring in Public Health for Capacity Building of Leadership and Governance

While the human resource department's focus is on retention, performance development would be the setting where mentoring programme maybe housed. It could also be housed within the quality department as strategies for quality improvement is their mandate. This includes improving quality of leadership and governance. Or it could be located within the programme as effective programme implementation can also take place with better mentoring process.Without the leadership support, mentoring process will never take off in the organisational context. Public health organisations may use the following to demonstrate their commitment to mentoring- policy statements, career advancement policies, financial incentives, provision of

resources both infrastructure and human resource. The institutional commitment to mentorship may come in the form of advancement and promotion, financial support, and the allocation of space and personnel.

The Champion of the mentoring process also should be from the organisation. The organisation must include 'mentoring' as one of the key aspects in the job profile of the official formally who should have the capacity to take on this role with proper understanding of the organisation.There are multiple components to mentoring which must be thoughtfully implemented in an effective manner. This is highlighted in Figure 3 below.

Figure 3
Components of Mentoring



To make it effective, the mentor : mentee ratio needs to reviewed. The ratio needs to be maintained at a level of feasibility. Strongly connected to this, is the number of times the mentor and mentee is expected to meet; also, whether it is a long-term commitment or a short-term commitment between mentor and mentee. At the macro level, whether the mentoring programme will have longer term validity or not will depend on the public health organisation's perspective and commitment of the leadership. These are vital for the sustainability of the organisation.

Pathways to ensure effective implementation of mentoring in public health organisations are:

i. Mentoring is to be articulated as a key organisational strategy for achieving the health outcomes via better leadership development and governance capacity building;
ii. Leadership has to articulate mentoring for leadership and governance development and its importance in meetings or reports;
iii. Mentoring is to be included in the job description of those who are identified as 'to be mentors' and in the mentee job description, to avail of organisational mentoring process;
iv. Identify those staff which require mentoring in the context of leadership and governance;
v. Mentoring is to be integrated into performance appraisal of the mentor and aligned to organisational plans;
vi. A champion of mentoring is to be identified within the organisation to ensure effective implementation of mentoring and must be empowered to implement this process;

vii. Review of the mentoring process and multi stakeholder satisfaction measurement with mentoring including a grievance redressal system has to be in place;
viii. Ensure fairness, trust, confidentiality and non-judgmental mentoring process to be in place with the mentor being a facilitator and not a decision maker on behalf of mentee;
ix. Mentoring is a two process; great mentors alone cannot improve mentoring unless the mentee is also equally open-minded and receptive to participate in the mentoring process; and
x. Capacity building opportunities for the mentors are to be in place.

Recommendation and Future Directions

Research among nursing staff has highlighted the crucial role of mentoring the in-service staff for their professional development. Further, mentoring has been applied in public health academia to stimulate interest in the profession as well as to further research. However, research in public health organisations on how mentoring has been planned to foster leadership and governance is very scarce. There is also less research on the mentoring model and type of mentoring deployed by the public health organisations to develop leadership and governance initiative.

Mentoring is not new to India particularly in the realm of mentoring for leadership and governance development. It is deeply embedded in the Indian culture and values. History highlights the role of mentoring utilised by the Indian kings to better their leadership and governance. The *Guru-Shishya* (ancient teacher-student relationship) legacy of India was of a mentor with the mentee imbibing the values and getting continuous feedback as part of the process. It was not one of the formative and summative assessments alone but wherein mentoring was embedded as an integral part. Hence, the Indian public health systems is to integrate mentoring not just in the academia but in the public health workplace to promote leadership and governance. This is vital for accelerated capacity building of leadership and governance. More empirical research is needed that will demonstrate the benefit of formal mentoring programmes and their return on investment. Workplace mentoring is a cost-effective capacity building strategy to address the huge issue of rapid scaling up of leadership and governance development in public health management.

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जन–स्वास्थ्य में परामर्श :
रोगियों के दृष्टिकोण एवं उपचार नेतृत्व एवं शासन के क्षमता निर्माण हेतु एक महत्वपूर्ण रणनीति

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सारांश

संगठनात्मक तथा व्यक्तिगत, दोनों ही स्तरों पर, मेंटरिंग को एक प्रमुख क्षमता निर्माण रणनीति के रूप में वैश्विक मान्यता प्राप्त है। एक स्थायी विकास लक्ष्य को प्राप्त करने के लिए तथा नेतृत्व और शासन के क्षमता निर्माण की गति में तेजी लाने के लिए जन–स्वास्थ्य में मेंटरिंग एक महत्वपूर्ण रणनीति है। परिणामस्वरूप यह रणनीति एक अधिक मजबूत जन–स्वास्थ्य प्रणाली को बढ़ावा देगी। यह शोध–पत्र जन–स्वास्थ्य संगठनों में व्यक्गित नेतृत्व तथा शासन में सुधार पर मेंटरिंग–संबंधों के साक्ष्य की समीक्षा करता है। यह साक्ष्य, प्रणालीगत समीक्षा सहित जन–स्वास्थ्य कार्यक्षेत्र में मेंटरिंग पर साहित्य की कमी को भी दर्शाता है। जन–स्वास्थ्य में मेंटरिंग पर उपलब्ध अधिकांश साहित्य जन–स्वास्थ्य शैक्षणिक समुदाय से संबंधित है। जन–स्वास्थ्य शिक्षा में मेंटरिंग का प्रभाव इस क्षेत्र में रुचि बढ़ाने, शोध में सुधार करने, तथा स्वास्थ्य के बेहतर परिणामों के लिए समुदाय में हस्वक्षेप करने से कई गुना अधिक है। हालांकि, कार्यस्थल में, बेहतर नेतृत्व और शासन के लिए कई लाभों के बावजूद इसे एकीकृत करने के लिए केवल कुछ ही प्रयोग हुए हैं। नेतृत्व तथा शासन विकसित करने के लिए, सार्वजनिक स्वास्थ्य संगठनों में मेंटरिंग के प्रभावी कार्यान्वयन को सुनिश्चित करने की अनुशंसा के साथ यह शोध–पत्र समाप्त होता है।

प्रमुख शब्द: नेतृत्व, शासन, सलाह, जन–स्वास्थ्य, एसडीजी, क्षमता निर्माण।

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Leadership Training for Public Health Professionals: Proposed Methodology based on the Learning from a Decade's Experience

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"A genuine leader is not a searcher for consensus, but a builder of consensus."—Martin Luther King

Abstract

Most of the public health professionals land up in leadership positions accidentally. The leadership skills are not covered in the curriculum in most of the public health courses. There are at least twenty in-service courses available for health professionals in India. However, these courses are disjointed, fragmented, and lack individual focus in skill development. There is a need to include relevant leadership models for imparting in-service leadership training. The Jim Collins Five Levels of Leadership Model can be adapted to impart training tothe public health professionals. Leadership development is a lifelong process which must be personalized to every professional. This paper shares authors' experience in leadership capacity development in public health, health research, academics, programme management and public health emergencies. It proposes a methodology for leadership training courses based on four steps of Fact, Reflect, Act and Review. The basic courses of public health professionals should also incorporate leadership training in the curriculum using this methodology.

Key words: Accidental leaders, Genuine leaders, Three Domain Model, Levels of leadership, Publichealth, Leadership training, Leadership model, Leadership skills, Leadership curriculum.

Introduction

Leadership skills are very important for every public health professional (PHP). Unfortunately, these skills are not imparted in most of the medical and public health schools. It is not part of the basic training curricula in both the undergraduate and post graduate medical education nor any structured in-service training courses available for the PHPs. An accidental leader may learn leadership skills by hit and trial, self-learning by reading, observing other leaders or taking up formal courses.[1]There is a formal leadership training in many sectors such as defence services and bureaucracy which does not exist for the PHPs. There are many in-service training courses available for PHPs but these are neither integrated into career progression nor compulsory for promotions. Most of the PHPs move up in the hierarchy based on seniority. They are expected to provide leadership in health at the district, state and central level, and public health institutions including national public health programmes without any formal leadership training.

There is a very limited published literature on in-service training courses for leadership capacity development in public health in India. This paper shares the authors' experiences from leadership capacity development in public health, health research, academics, programme management and health emergencies over a decade. It proposes a methodology for leadership training courses based on four steps of Fact, Reflect, Act and Review[2]to make the leadership courses more effective. This methodology can be very useful in designing future leadership training programmes for PHPs in both basic and in-service training courses.

The Need for Leadership Skills among Public Health Professionals

A PHP is expected to lead and manage planning, implementation, monitoring and identification and addressing bottlenecks to reach the unreached with leadership skills at all levels in the health system. We need to strengthen the leadership skills of the PHPs to address the issues at four levels in operationalization of the health programmes:

i. **Policy level:** The policies in health and other sectors related to health give a strategic direction to health and related interventions. PHPs need leadership skills to influence the decisions at all four stages of policy cycle i.e. policy review, agenda setting, formulation and implementation. The effective leadership skills are required to convince the policy makers, politicians, administrators, and civil society organizations at the national, state and community level. The four major skills are:

a. **Negotiation**: Introduction of many interventions (such as vaccines for Rota virus, Pentavalent, and Human Papilloma Virus) took long time to convince many stakeholders. These delays resulted in many preventable diseases and deaths.

b. **Networking:** It is very important for PHPs to build a strong network within the health ministry, related ministries, and other stakeholders.

c. **Advocacy and Communication:** These skills are keys in influencing decisions at the policy level.

d. **Decision Making**: Early introduction of cost-effective and safe-interventions available to address the public health issues of national and local concern including both common and uncommon diseases.

ii. **Managerial Level:** The central, state, district and sub-district level officials can become more efficient in managing the programme by strengthening their skills in management, logistics, mobilizing other sectors and motivating their teams in timely reaching out to the unreached. Healthcare delivery is teamwork. Team building, coaching, mentoring and emotional competency skills are important to effectively use the health teams to achieve the programme goals.

iii. **Implementation Level:** Strengthening planning with local stakeholders, decentralized participatory planning and monitoring by engaging all the functionaries, formal and informal community leaders. The existing fora such as Village Health, Nutrition and Sanitation Committees at the community level and patient welfare committees (*RogiAarogya Samiti*) at the hospital level can also be effectively mobilized to achieve the programmes goals. The implementation can also be improved by tapping into other initiatives such as mother and child tracking system, ANMol (Auxiliary Nurse Midwife online) which is a real-time

online recording and monitoring system. The skills for this include time management, motivation, social mobilization, collaboration and partnership with stakeholders. These skills become even more important during public health emergencies and other disasters such as epidemics, earthquakes and cyclones.

iv. **Research and Evidence level:** Skills to identify and generate strong evidence to address bottlenecks in priority areas:A major role of PHPs is to help policy makers prioritize and focus on effective evidence-based interventions to address implementation and operational issues. The skills for this include technical proficiencies, excellent oral and written communication, ability to evaluate strength of available evidence for health interventions and ability to identify evidence gaps and generate evidence through high quality research, where required. Without these skills, resources may be diverted to other interventions which are not effective undermining the trust in the health system.

Accidental and Genuine Leaders

An 'Accidental' leader is one who lands up in a leadership position without essential skills and the 'Genuine' leader is one who has acquired leadership skills to effectively play the leadership role.[2] Almost all the PHPs start their public health career and move up the hierarchy as accidental leaders. Only those who acquire and practice leadership skills become genuine leaders and become more effective in their work as compared to the accidental leaders. Since there is very little exposure to leadership training in basic courses, in-service training courses become very important to develop genuine leaders by imparting the needed skills. Table 2 summarizes the characteristics of genuine and accidental leaders and lists out thedifferences.

Table 1

Characteristics of Genuine and Accidental Leaders

Area	Genuine Leaders	Accidental Leaders
1. Leadership Source	Depend on skills, demonstrate leadership skills beyond the position they hold. Ask employees to do what he wants.	Depend on authority, Leadership thrust upon them due to position held. Command employees to do what he wants.
2. Leadership Skills	These leaders move up in the hierarchy based on the leadership skills they possess, acquire, or demonstrate on the job.	Reach leadership positions due to seniority or influence or academic achievements or domain expertise or sheer good luck. Often lack skills.
3. Self-awareness	Know their strengths and weaknesses. Continuously review their skills and sharpen these. Believe in life-long learning.	May or may not be self-aware. Often feel they know everything.
4. Vision	Have a vision for self, organization, team members and steer self and others towards it.	Often lack vision and believe in short term results.

5. Focus on	Future, vision, values,and culture.	Present, structures, and hierarchy
6. Team Building	They say "we". Strongly believe in teamwork and encourage it in others. Commands respect. Sets pace of work. Tells people how to do.	They say "I". Believe in achieving results by whatever it takes, even at the cost of team building. Demand respect. Assign tasks. Tell people what to do.
7. Create Leaders	Believe in coaching, mentoring and identifying potential leaders and develop new leaders.	Do not build second rung of leaders. Focus only on completing their tenure.
8. Style	Transformational	Transactional
9. Organizational Culture	Give priority to create a good organizational culture.	Give priority to following and establishing rules and regulations.
10. Networking	Build a strong and effective network within and outside the organization.	Build favourites and cronies around themselves to get what they want.
11. Values	Emphasize values such as integrity, quality, transparency, trust, and openness.	They work based on personal whims and fancies and not focused on values.
12. Legacy	Leave a legacy. The people in the organization remember them long after they leave.	Do not leave a legacy. Often forgotten after they leave.

Need for Personalized and Continuous Learning

"Never Stop Learning because Life Never Stops Teaching" –Anonymous

The leaders who are continuously learning and acquiring new leadership skills are genuine leaders. Genuine leaders continuously reflect on various situations they face, and expand their knowledge regularly. They evaluate their progress and based on this, frequently update their leadership skills.

Three Simple Models for Use in Leadership Capacity Building

There are numerous models and theories of leadership available in the literature.[7] It is important for in-service courses to identify leadership models that are appropriate for capacity building of PHPs. A Google search of word 'leadership' threw 259 crore sites in 0.74 seconds. Based on the review of literature, approaches of leadership capacity building approaches in various trainings and experience of a decade in leadership courses, authors find three models most appropriate and relevant for use in designing and facilitating leadership capacity development of PHPs. The three models given below:

Fact, Reflect, Act and Evaluate Life-long Learning Model

This learning cycle of Fact, Reflect, Act and Evaluate (Fig 1) continues lifelong. [2] This approach has been adapted from NHS, UK leadership programme[4] and is being currently used in Leadership and Management Programme (LAMP) training.[6] This model helps in developing personalised leadership for every individual

who wants to become a leader. This model highlights the need for lifelong learning and training courses only acting as boosters in the skill development.

Figure 1
Continuous Learning Cycle of Leadership Fact, Reflect, Act and Evaluate[2]

Five levels of public health leadership: After extensive search for leadership model appropriate for health professionals, the authors found Jim Collin's Five levels of leadership as the most appropriateto understand how various skills starting with technical competencies are important for a PHP to become a leader.[8]This model has been adapted to health professionals as shown in Figure 2.

Figure 2
Jim Collin's Five Levels of Leadership Adapted to Public Health Professionals[2]

This model helps us to identify various skills that a PHP should acquire as they move up from technically competent PHP to a visionary public health leader. The five levels of leadership in this model are not silos and can be developed simultaneously.These have been put in a pyramid for easy understanding. These levels are[7]:

Level 1: Competent Public Health Professional: Leaders at this level are highly technically capable individuals with appropriate technical qualification. This is foundational and every PHP must remain on top of technical knowledge and skills. They have the talent, knowledge, skills, and good work habits. They are competent to perform all the functions required for his/her job. To remain at this level of leadership hierarchy, they need to continue to update their knowledge and skills through continued life-long learning.

Level 2: Contributing Team Member: The PHPs at this level not only perform their own tasks but contribute to the accomplishment of the team tasks. They use their skills and capabilities to achieve team objectives. They have skills to work effectively with others in a team setting.

Level 3: Competent Team Manager: At this level, PHPs become competent managers, having acquired skills to organize people and resources towards effective and efficient achievement of set objectives. They are competent professionals and team players who have become effective health managers. They are clear about the objectives and focus of human and other resources for achieving the objectives.

Level 4: Effective Public Health Leader: At this level, the competent managers of level 3 become effective leaders who catalyzethe commitment of their organization to vigorously pursuit a clear and compelling vision, and stimulate higher performance standards among the staff. These leaders lead the organization well and leverage networks both inside and outside the organization to achieve the desired results and adapt to the changing environment successfully. The orientation of the person reaching this level needs to change to look at the bigger picture both within and outside the health sector environment.

Level 5: Visionary Public Health Leader: These leaders embody all levels of the pyramid. These leaders build great organizations and leave behind capable individuals whom they have groomed who sustain the great work even after the leaders have left. The level 5 leadership produces excellent and lasting results by building great organizations and act with respect, care, and fairness for the wellbeing of the all involved.

Three Domain Model for Leadership Capacity Building

The third model which is useful for capacity development among public PHPs is the 'Three Domain Leadership Model' (Figure 3). The various skills included in a training course can be structured and planned using this model. This model captures various skills of leadership in the three domains of leadership with self skills of the leader in the centre, skills to deal with their fellow workers in the second domain and the skills for dealing with the society and external environment in the third domain. [7] This model is a simple tool to follow in leadership development and acquire those skills. It helps in simplifying the skills, qualities and characteristics required for a genuine leader. Each domain reflects the skills described below:

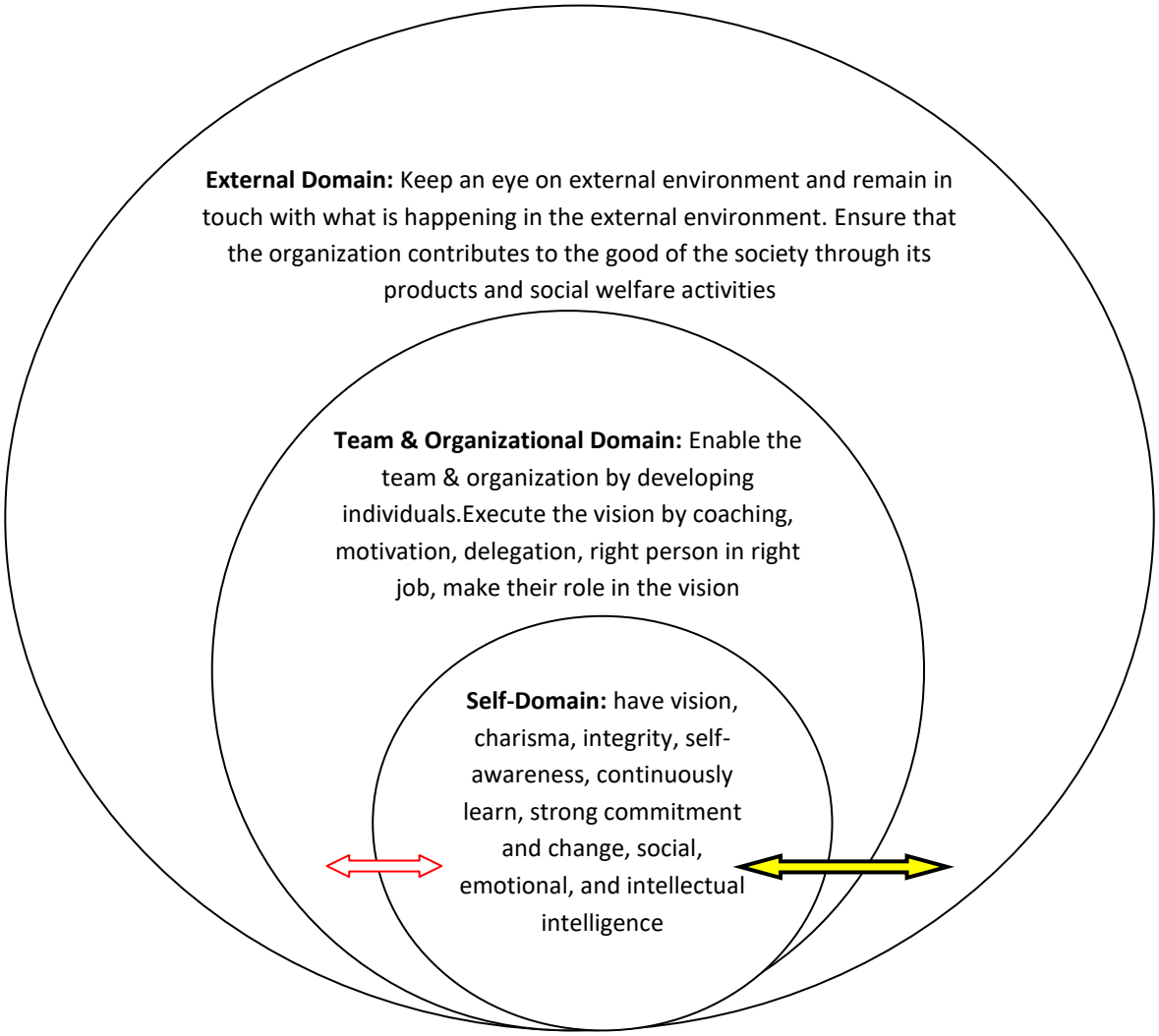
The Self Domain: This domain of leadership includes what leaders need to lead self. If leaders cannot self-lead themselves, they cannot lead others. This domain includes that a leader should have vision, charisma,

integrity, self-awareness, communication skills, change, social, intellectual, and emotional intelligence, etc. The genuine leader is the model of behaviour and values one wants to inculcate in the employees. The leaders are in the centre of the organization. Everyone looks up to them for direction and guidance. They transform the individuals in the organization and motivate them to get the best out of them and channels every one's efforts so that they work in synergy to get the best results.

The Team and Organization Domain: Genuine leaders enable their team and the organization by developing individuals. Through their traits, skills, and attributes, they help their team to execute their vision. They do this by enabling the organization through developing skills in everyone in the organization to achieve the organizational goals to fulfil the vision. They are in constant touch with their employees through formal and informal networks and keep changing their approach based on what they learn through their network to maximize the efforts to achieve the organizational objectives.

The External Environment Domain: Genuine leaders keep an eye on the external world, how it is changing and what are the implications on the organization. Theykeep in mind how their organization contributes to benefit the society. No organization exists in vacuum, and its existence and growth is linked to the society, its norms and values. No organization can grow when the sector and the society it is part of, perishes. They are in constant touch with the external environment within and outside the industry that affects their organization. Genuine leaders actively try to ensure that their organization is contributing for the betterment of the society. Genuine leaders actively engage self and employees in activities to benefit the society. The genuine leaders develop a strong network beyond the sector to get a regular feedback on how the organization they lead is perceived to benefit the society.

Figure 3
Three Domain Model for Leadership Capacity Development[7]



Leadership Training Courses Available in India

The leadership training is missing in most curricula at the undergraduate and post graduate medical degree level except a few courses such as MD (Community Health Administration) at the National Institute of Health and Family Welfare. To address this gap, there are many in-service training courses available[1]. A recent study by the International Clinical Epidemiology Network (INCLEN) found 20 in-service courses relevant to PHPs in India, 12 in public health and eight in health research[3]. However, these courses are disjointed and fragmented. Many countries are investing in strengthening leadership among the health professionals in a systematic manner, such as the National Health Scheme Leadership Academy, UK[4] and LEAD in Canada.[5] Leadership skills are highly personal and very few courses use individualized approach such as INCLEN Institute of Global Health's Leadership and Management Programme (LAMP)which has been conducting courses since 2012.[6] Its objective is to build a new generation of health research leaders. The course is based on pre course assignments to

assess each participant's baseline skills. This is followed by a face-to-face intensive residential training phase. Each participant prepares a personal leadership development plan with time-bound activities. Post-course follow-up is done with the facilitators through three virtual contacts. The certificate is awarded only after satisfactory progress is made by the participants in implementing their respective individualized leadership development plan.

Experience in Leadership Training over the Last Ten Years

The authors have been engaged in leadership capacity development for over a decade. Several leadership courses and sessions have been heldfor international participants for many countries in South Asia, Eastern and Southern Africa,and about a dozen national courses designed for participants from all over India. The content and methodology have been evolved on the feedback from the participants. Details of the courses based on which these lessons are derived are described in Table 2.

Table 2

Summary of Types of Courses Facilitated, Duration, Content and Methodology Used

Course/Sessions	Course and Participants	Methodology
Standalone Session(s) on Leadership	1. Emotional Competency for Team building for UNICEF Kenya staff 2. Leadership Skills for Faculty of RIMS, Ranchi 3. Leadership for Hospital administrators under Global Alliance of Physicians of Indian Origin for Apollo Hospitals, Apollo Hospital, New Delhi	Plenary, Discussion and suggested readings
Session(s) on Leadership in other courses	1. Planning and Management of Urban Health Programmes, and Management of Health Programmes (3 for Urban Health and 3 for Health), Bangladesh 2. WHO Training of Trainers for Health in All Policies for Anglophone African countries in Johannesburg, South Africa and South East Asia, New Delhi (2 Batches) 3. Leadership in Certificate Course on Quality Assurance in Healthcare, and Health Management for health programme and, Know COVID to No COVID for ESI) by Public Health Foundation of India (10 Courses) 4. Training of NCD programme managers by PGI Chandigarh and AIIMS, New Delhi (Three courses) 5. Leadership for in-service Management training of participants from Bangladesh, Bhutan, Tibetan Authorities, Sri Lanka, ONGC, ESI, Apollo Hospital at IIHMR, Delhi (15 courses) 6. Building Organization Culture of Excellence and Leadership for Directors and Deputy Directors of New AIIMS in Induction Course at NIHFW, New Delhi. One batch each	Plenary, discussion and suggested readings

One Day Workshops	1. Workshops for Leadership for Family Planning Managers and, Leadership for Public Health Managers at International Public Health Conference, Solo, Indonesia (2 half day workshops) 2. Leadership for Public Health Professionals Preconference workshops (Three workshops one each at Tripura, Kakinada and New Delhi)	Assignments for baseline, Readings, plenary, exercises and discussion
2 to 4 days Non-residential	Leadership in Academics (One Course each for faculty of Symbiosis University, SGT University and IIHMR, Delhi)	Assignments for baseline, Readings, plenary, exercises and discussion, personal leadership development plan
2 to 4 Days Residential	UNICEF Uganda Teambuilding for Alive Section's team	Readings, assignments, case studies, plenary sessions, exercises and discussion
5 to 14 days Non residential	1. Online 'Leadership in Crisis Situation with focus on COVID Pandemic' by Indian Public Health Academy (Two batches) 2. Revised Leadership and Strategic Management Courses in MBA equivalent course (Two Batches)	Assignments for baseline assessment of skills, Readings, plenary, discussion, Meet the Leaders, personal leadership development plans
5 to 14 days Residential	1. Leadership Training for Health Managers of BRAC, Bangladesh (Two courses) 2. Project Proposal and Leadership Government & NGOs officials (Two batches) 3. Leadership and Strategic Management Training of Trainers in Decentralized implementation (Government and WHO) 4. INCLEN's Leadership and Management Program (LAMP) Six courses on Leadership in Health Research for Researchers from government, private, NGOs, academic and health research institutions	Assignments for baseline assessment of skills, Readings, case studies, plenary sessions, exercises, discussion and personal leadership development plan, Post workshop contacts for mentoring in LAMP and BRAC courses

Depending on the duration of the course and the identified needs of the potential PH leaders, the content included all or some of the following topics: leadership concepts, theories, models and their application, emotional competencies, time management, negotiations, advocacy, networking, team building, proposal writing, strategic management, project management, collaboration, difficult behaviour, decision making, resilience, managing up and across, technology in healthcare, communication and listening skills, organizational behaviour andculture, change management, evidence to policy, entrepreneurship, and meet the well-known leaders. The course content was, at times, modified based on the feedback during the course.

The highlights of these courses (based on feedback from the participants and facilitators) include: (i) Pre-course assignments helped in assessment of baseline of leadership skills, expectations of the participants, and initiated reflections before they turned up for the course; (ii) Pre-course reading material shared with participants, initiated their learning of new skills and refinement of their existing skills; (iii) The work on personal leadership development plan (PLDP) started before they arrived for the course as they were asked to prepare the first draft based on the baseline assessment. This plan was kept dynamic as they revised the relevant sections based on the discussion after every plenary session; (iv) The plenary sessions were designed based on the need of the participants assessed from the pre-course assignments; (v) Eminent leaders in the field of public health shared their life experiences and tips with the participants; (vi) The last session was devoted to discussion on each participant's PLDP with peers and facilitators; (vii) Post-course mentoring contacts to review the progress in learning of leadership skills as identified in the PLDP. It is felt that at least three mentoring contacts are required to put the participants well on path of learning for leadership skills. It was heartening to see a substantial progress made by the participants after the training with an increase in publications, improved team work and collaboration within and beyond their departments, moving into many decision making committees of their institutions and becoming office bearers in the professional bodies, improved work-life balance, etc. Without post-course contact, most of the participants acquire only the knowledge of the skills and return to their old ways of working without improving leadership skills.

Proposed Methodology for In-service Leadership Training Courses

Based on the experiences of the above international and national courses listed in Table 2 above and applying the models of continuous learning (Figure 1), Five Levels of Leadership (Figure 2) and Three Domains of Leadership Capacity Development (Figure 3) the following methodology is proposed:

a) **Pre course assignments to assess baseline of leadership skills of every participant:** It sensitizes the participants to their skills and skill gaps. It also helps facilitators to design each session to address the needs of the participants attending the course. This should be done through baseline skills assessment of each participants and cover the skills included in the course with the help of exercises made available online. This gives them opportunity to address, REFLECT step of the four steps continuous learning cycle. After receiving the completed baseline assessment assignments, the participants receive the basic reading materials. This is part of the step to give them basic information about of leadership i.e.FACT step of the learning cycle.

b) **Face to face course residential course**: This phase comprises plenary sessions (FACT), review of skills based on baseline assessment (REFLECT) and revision of personalized leadership development action plan (Act) after every session, and interaction with the established leaders.

c) **Personal Leadership Development Plan:** Based on the above, the emerging leaders prepare their personal strategic career development plan to continue their journey on becoming effective public health leaders. They continue to learn and improve throughout their professional life as they move upwards in their career ladder.

d) **Post-workshop mentoring contacts** asin INCLEN Course. The participants are regularly contacted for three contacts after they have returned to their workplace. The progress in their action plan is reviewed (Reflect & Evaluate) with facilitators and peers.

e) **Certification:** On completion of the above, it is mandatory for award of certificate of successful completion of the course.

f) **Regular self-review and Self-evaluation by each participant:** After the formal training course is over, the participants should continue to regularly review and evaluate their own progress.

It is important for the emerging public health leaders to understand that learning in leadership is a lifelong continuous process. This requires a regular review of experiences, and identifying areas for further strengthening the new skills required. The participants can continue to share their experiences and learn from each other after the course. They can create groups using social media platforms such as WhatsApp, Telegram etc. This was done for many courses facilitated by the authors and found useful by the participants.

Conclusion

Leadership skills are vital for the PHPs. These skills are not imparted in basic undergraduate and post-graduate courses which leaves a vacuum. The in-service courses step in to fill this vacuum. There are at least twenty courses available in India imparting leadership training to health professionals. However, these courses are disjointed, fragmented, and not personalized. There is a strong need to include relevant leadership models to structure and impart in-service leadership training. The Jim Collin's Five Levels of Leadership Model can be adapted to leadership in health to impart training tothe PHPs. The Three Domain Model can be used to group skills under three broad domains skills for managing self, team and external environment to become a genuine leader. Leadership development is a lifelong process which must be personalized as per the requirement of every professional. The methodology for leadership training courses should be based on the four steps of Fact, Reflect, Act and Review which also incorporates adult learning principles to make the leadership courses effective and personalized. Evaluation of leadership courses for PHPs is required to develop evidence-based methodology for making leadership courses more effective. The courses for public health professionals should also incorporate leadership training in their curriculum. The "genuine leadership" is vital to improve health situation in India.

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जन–स्वास्थ्य व्यवसायिकों के लिए नेतृत्व प्रशिक्षणः प्रस्तावित कार्यप्रणाली एक दशक के प्रज्ञता अनुभव पर आधारित है

*संजीव कुमार एवं ''नीता कुमार

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"एक वास्तविक नेता आम सहमति का अंवेषक नहीं होता, अपितु वह आम सहमति का निर्माता होता है।'
–मार्टिन लूथर

सारांश

जनसंख्या विस्फोट विकासशील देशों की प्रमुख चुनौतियों में से एक है। भारत जनसंख्या को नियंत्रित करने के लिए राष्ट्रव्यापी परिवार नियोजन कार्यक्रम शुरू करने वाला पहला देश है जिसे बाद में चिन्हित किया गया और इसका उद्देश्य समग्र परिवार कल्याण था। गर्भनिरोधक का प्रयोग भारतीय समाज में एक वर्जित विषय रहा है जिसके कारण आधुनिक गर्भ निरोधकों की अत्यधिक आवश्यकता है। वर्तमान अध्ययन भारत के पूर्वी राज्यों में से एकए उड़ीसा की एक शहरी विन्यास में आयोजित किया गया था। यह पाया गया कि वर्तमान में विवाहित, जमीनी स्तर के स्वास्थ्य देखभाल कार्यकर्ता के परिवारों में से 40 प्रतिशत से अधिक ने कभी भी गर्भनिरोधक विधि का उपयोग नहीं किया है। वर्तमान में विवाहित स्वास्थ्य कर्मियों में पांच में से एक ने महिला नसबंदी पद्धति को अपनाया।

मुख्य शब्दः गर्भनिरोधक अभ्यास, बुनियादी स्वास्थ्य कार्यकर्ता, परिवार कल्याण, नसबंदी ।

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Building Capacity of Programme Managers under National Health Mission on Public Health Management and Leadership: Experiences and Way Forward

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Abstract

Leadership and management play a crucial role in advancing public health. Both skills are vital to be imbibed among the public health professionals, especially working in programme settings. However, there are limited opportunities for such trainings for mid and senior level programme managers of National Health Mission (NHM). Importantly, the recent COVID-19 pandemic recognizes the value of leadership and management skills needed by the state and national and level public health workforce. We used Kern's six steps conceptual framework for development and implementation and Kirkpatrick four step frameworks for evaluation of International Public Health Management Development Programme (IPHMDP) which aimed at inculcating management and leadership skills to programme managers under the NHM. The result shows that the programme was highly relevant and contextual, effectively used multipronged adult learning pedagogy and well-designed. The state and national governments should adopt this validated training model under the Programme Implementation Plan (PIP) of NHM for middle and senior level programme managers in India.

Key words: Public health leadership, Global health, Capacity building, Programme managers, Values and competencies-based curriculum, IPHMDP.

Introduction

Leadership is an important skill of human development and when lacking, progress in society, at the community, national or individual level cannot be achieved[1,2]. The current practice of public health management necessitates a diversity of leadership skills in order to comprehensively and efficiently respond to the complex needs and demands of the current and ever-evolving healthcare system[1,3]. Thus, inculcating leadership and managerial skills among the healthcare workforce is of prime importance in dealing with generic and specific public health issues and emergencies. This need of capacity building in managing public health has been a mandate of various developmental organizations and governments[4,5].In the United States, leadership skills are integral aspects of three of the six core competencies as identified by the ACGME[6]. These include interpersonal and communication skills, practice-based learning and improvement, and systems-based practice[6]. Similarly, the Academy of Medical Royal Colleges in the United Kingdom developed the Medical Leadership Competency Framework to describe the leadership competencies for the doctors. The major areas of this framework include demonstrating personal qualities, working with others, managing services, improving services, and setting direction[7].

Various developing economies including India have made significant progress in the last two decades in the realm of public health management. However, there has been poor quality of service delivery, inefficient recruitment and retention system, lack of skill-based training of programme managers leading to critical shortage of trained manpower[8]. The National Rural Health Mission (NRHM), launched in April 2005, envisages providing affordable, equitable and quality health care to the population of India. In 2013, the National Health Mission (NHM) was launched by subsuming the National Rural Health Mission and National Urban Health Mission. The NHM mandates implementing the in-service training to improve the performance of the Health and Family Welfare Programmes. It is imperative that all the health functionaries in the district acquire the knowledge and skills (technical, communication and managerial) to provide the health care services effectively and efficiently. Realizing the importance of NHM as a key to national development, sufficient resources both human and financial, have been allocated to ensure effective implementation of the healthcare system[9].However, providing quality health care service to the population, requires upgrading clinical and management skills of the healthcare personnel. A medical graduate and post graduate learns clinical skills as part of their training curriculum but management and leadership skills are almost non-existent. They learn these skills through experimentation in the field settings. Common Review Mission conducted by the Government of India has also highlighted the absence of constant leadership as a prime factor for the poor performance of the healthcare indicators[10].Thus, the development of a skilled public health management workforce trained in the management and leadership skills is the need of the hour which can galvanize and optimize the existing resources through their management competencies for achieving the organizational goals.

Numerous studies globally have highlighted the need of leadership and management competency trainings for the healthcare professionals[11,12]. A systematic review demonstrated that leadership interventions had a beneficial effect on the leadership behaviours of the participants based on both subjective and objective changes in behaviour[12]. In Australia, a study has shown the importance of health-promoting leadership model on the employees' resources[13]. Considering that only a few training opportunities are available on leadership skills for the state and national level public health managers of India, we designed a compact one-week International Public Health Management Development Program (IPHMDP) with a vision to build the capacity of programme managers of the national health mission who are aspiring to be the leaders in the public health domain. The programme aimed at enhancing the management and leadership skills with emphasis on management, leadership, planning, human resource management, financial management, supply chain management, monitoring and evaluation, total quality management, change management, public health communication, team building, health management information system, entrepreneurship, innovations and governance, marketing in healthcare, ethics in public health research for young public health professionals working in the NHM in India in order to ensure effective programme implementation as well as respond to the emerging public health needs. The aim of this article is to narrate a conceptual framework behind the IPHMDP, the implementation process along with the preliminary results obtained in terms of increase in their knowledge and feedback about the programme.

Methodology

Using Kern's and Kirkpatrick Conceptual Framework for Development of Programme

The authors used Kern's six steps conceptual framework for the development and implementation of the programme, and four step Kirkpatrick model for the programme evaluation. The competency focused

Kern's framework is based on the need-assessment of the participants which has been widely used in medical and health sciences for developing, implementing, evaluating and continually improving the educational approaches[14–17]. The Six-Step approach includes: i) Problem identification,ii) Targeted needs assessment, iii) Goals and objectives, iv) Educational strategies, v) Implementation and 6) Evaluation and feedback. The 4-level Kirkpatrick model has also been effectively used to evaluate the healthcare training programmes which are often described as 'the worldwide standard for evaluation of effectiveness of training'[18–23]. The Level 1 is Reaction (degree to which participants find the training favourable, engaging and relevant to their work), Level 2 is Learning (estimate participants' knowledge, confidence and commitment based on their participation in the training), Level 3 is Behaviour (application of learning's back in their job), Level 4 is Results (evaluates outcomes occur as a result of the training). The evaluation for all parameters was done through a 3 point Likert scale (1: poor, 2: average and 3: good).

The first phase involved a thorough review of literature- specifically the National Health Mission document, Common Review Mission reports as well as the scientific articles and reports of NHM evaluation of different states to enunciate the common challenges faced during the effective implementation of the NHM. It was followed by focus group discussions with the subject experts from renowned medical and management institutes of the country along with the middle and senior programme managers of the National Health Mission. The FGDs centred on the key skills desired by a programme manager and the key challenges they face in diverse public health management domains. After repeated deliberations, the programme curriculum along with its goal and objectives were finalized, and a training module was designed. Special care was taken to address the appropriateness and adequacy of content, flow of the modules and the programme expectations in the training module. Thereafter, there was a detailed discussion on the training methodology (educational strategies) which needed to be adopted for the programme. Considering the felt need of the participants who are already working in NHMs in their respective states with wide variation in expertise and experience, the group felt that a multipronged adult learning competency-driven curriculum comprising short power-point lectures, video lessons, contextual case study and reading material along with peer-to-peer formal (discussion forums on specific topics, presentation of best practices in their respective countries) and informal learning (interest booster components like management games during lunch/coffee breaks, contests, quizzes, etc.) would be appropriate to sharpen their management and leadership skills. In addition, field-visits were organized for demonstrating best practices which are relevant and contextual for NHM settings. Besides, a cultural programme was contemplated to be arranged where the participants showcase the culture of their states and meet informally for future networking and for collaborations. The implementation phase (after going back to their NHM settings) involved providing a structured lesson learnt, plan to the participants on the actions which they would like to incorporate in their routine settings.

Box1

Common Challenges Faced during Effective Implementation of the National Health Mission- Common Review Mission reports

1. Poor planning of human resource deployment and HMIS data utilisation
2. Lack of skill development trainings and attrition of quality trainers
3. Poor communication with community leading to low community awareness and confidence in health systems
4. Poor knowledge of programme managers on Health Management Information System (HMIS) with inadequate feedback mechanisms
5. Poor application of quality principles in service delivery
6. Inadequate fund utilisation and poor budgetary management
7. Poor supply chain management leading to inefficiencies during procurement
8. Poor application of IT tool in human resource and supply chain management
9. Suboptimal monitoring and evaluation of national programmes
10. Potential role of leadership of health system in networking with district administration and other stakeholders
11. Need for newer strategies and interventions for emerging disease underscore need of innovation and 'out of box' thinking

Thereafter, the group deliberated upon the short-term and long-term evaluation through post-test (a short questionnaire administered immediately after the programme) and submission of action plan implementation report (a list of activities accomplished in 6 months after they return back to their respective states). In addition, feedback proformas were prepared and administered to the participants after each day and at the end of the programme. Besides, feedback of the participants and facilitators (resource persons) of the programme were considered to be taken through short interviews conducted during the breaks between lectures or during lunch/coffee intervals on its relevance in professional development and their routine works. Since we adopted a continually evolving educational approach, the programme curriculum and its objectives, educational approaches, evaluation and feedback mechanisms were being refined after each subsequent programme conducted under the broader umbrella of International Public Health Management Development Program (IPHMDP).

Programme Settings

The first five-day (later became 10 days after request from the participants) programme was conceived and conducted in the year 2016 by the Post Graduate Institute of Medical Education and Research, India- an institute of national excellence under the Act of Parliament, Government of India in technical collaboration with the International Against Tuberculosis and Lung Diseases (The Union) and Chitkara University, Punjab, India. Later, two more national programmes were conducted in the years 2016 and 2017. It was later scaled to international audience of Indian Technical Economic Cooperation (ITEC) countries (161 countries in Asia, Africa, East Europe, Latin America, the Caribbean as well as the Pacific and small island

countries) under the flagship scheme of the Ministry of External Affairs, Government of India. A total of eight programmes have been conducted till date. The current article summarizes the results of three programmes which were being conducted for mid and senior level program managers of the National Health Mission.

Programme Content

The programme consisted of 14 modules (each lasting 2 hours) on areas of management, leadership, planning, human resource management, financial management, supply chain management, monitoring and evaluation, total quality management, change management, public health communication and team building, health management information system, entrepreneurship, innovations and governance, marketing in healthcare, ethics in public health research. Table 1 depicts the schedule of the 5-day programme.

Table 1

Schedule of 5-day International Public Health Management Development Programme

Day and Date	Time	Topic of Presentation	Module Chairs/ Resource Persons
Day 1 Date	09:30am-11:30 am	INAUGURAL SESSION AND PANEL DISCUSSION 'Meet the Leaders'	
	MODULE 1-MANAGEMENT PRINCIPLES Chairs for the session: XYZ		
	12:00 am -1:00pm	Introduction to Public Health Management	Resource Faculty
	01:00pm-2:00pm	An approach to strengthening health systems	Resource Faculty
	MODULE 2- STRATEGIC PLANNING AND MANAGEMENT Chairs for the session: XYZ		
	03:00pm-4:00pm	Project/Program Strategic Planning and Management	Resource Faculty
	04:00pm-5:00pm	Logical Framework Analysis- A tool to planning	Resource Faculty
Day 2 Date	MODULE 3- HUMAN RESOURCE MANAGEMENT Chairs for the session: XYZ		
	09:30am-10:30 am	Human Resource Planning and Job Analysis	Resource Faculty
	10:30am-11:30 am	Training Need Assessment	Resource Faculty
	MODULE 4- COSTING AND HTA Chairs for the session: XYZ		
	12:00 am -1:00pm	Costing health care	Resource Faculty
	01:00pm-2:00pm	Health Technology Assessment	Resource Faculty
	MODULE 5- SUPPLY CHAIN MANAGEMENT Chairs for the session: XYZ		
	03:00pm-4:00pm	Material Planning and forecasting including purchase procedures	Resource Faculty
	04:00pm-5:00pm	Inventory Control techniques	Resource Faculty

Day 3 Date	MODULE 6- MARKETING IN HEALTH CARE Chairs for the session: XYZ		
	09:30am-10:30 am	Health Care Marketing Strategies and Techniques	Resource Faculty
	10:30am-11:30 am	Advocacy and Networking on public health issues	Resource Faculty
	MODULE 7- LEADERSHIP AND MANAGEMENT Chairs for the session: XYZ		
	12:00 am -1:00pm	Leadership in Public Health	Resource Faculty
	01:00pm-2:00pm	Role of Public Health Management and Leadership in attaining health related goals of SDGs.	Resource Faculty
	MODULE 8- PUBLIC HEALTH COMMUNICATION AND TEAM BUILDING Chairs for the session: XYZ		
	03:00pm-4:00pm	Principles of PH Communication	Resource Faculty
	04:00pm-5:00pm	Strategic Behavior Change Communication Planning	Resource Faculty
Day 4 Date	MODULE 9- HEALTH MANAGEMENT INFORMATION SYSTEMS Chairs for the session: XYZ		
	9:30am-10:30 am	Introducing Health & Hospital MIS	Resource Faculty
	10:30am-11:30 am	MIS Frameworks & Demonstration of HMIS Model	Resource Faculty
	MODULE 10- MONITORING AND EVALUATION Chairs for the session: XYZ		
	12:00 am -1:00pm	Introduction to M& E	Resource Faculty
	01:00pm-2:00pm	Assessing program performance and Impact	
	MODULE 11- TOTAL QUALITY MANAGEMENT Chairs for the session: XYZ		
	3:00pm-4:00pm	Quality Assurance and Improvement in health care	Resource Faculty
	4:00pm-5:00pm	Accreditation of health care facilities	
Day 5 Date	MODULE 12- ENTREPRENEURSHIP, INNOVATIONS AND GOVERNANCE Chairs for the session: XYZ		
	9:30am-10:30 am	Governance in Health Care	Resource Faculty
	10:30am-11:30 am	Entrepreneurship and Innovations in Hospitals- Challenges and Opportunities	Resource Faculty
	MODULE 13- ETHICS IN PUBLIC HEALTH RESEARCH Chairs for the session: XYZ		
	12:00 am -2:00pm	Ethics in Public Health Research	Resource Faculty
	MODULE 14- CHANGE MANAGEMENT Chairs for the session: XYZ		
	03:00pm-4:00pm	Applying Theories of Change Management in Health	Resource Faculty
	04:00pm-5:00pm	Valedictory Session	

Selection of Participants and Facilitators

The participants include the middle and senior level managers working in NHM at the state and national level or academicians and non-governmental organizations involved in planning and implementation of national healthcare programmes in close collaboration with NHM. The participants were selected after taking a written commitment from them for replication of the programme's learning in their settings along with a recommendation letter from their supervisors. The selection of participants was done at least one month prior to the programme through an open call for applications and wider circulation through major professional groups, letter of nomination to NHM, e-mails to professionals and technical partners, and postings on various social media handles including the institute websites. A total of 20-40 participants were selected by taking representations from different states of the country, gender, academic profile, organization and experience. The invited facilitators of the programme were subject experts who have rich experience in public health management. They were selected from amongst the leading public and private healthcare organizations, national and international developmental agencies, academic institutes and non-governmental organizations working at the grass root level.

Figure 1 and Table 2 depict the geographic distribution of the 87 participants who completed the programmes.

Figure 1

State-wise (India) Geographical Distribution of Participants in IPHMDP (2016-2019)

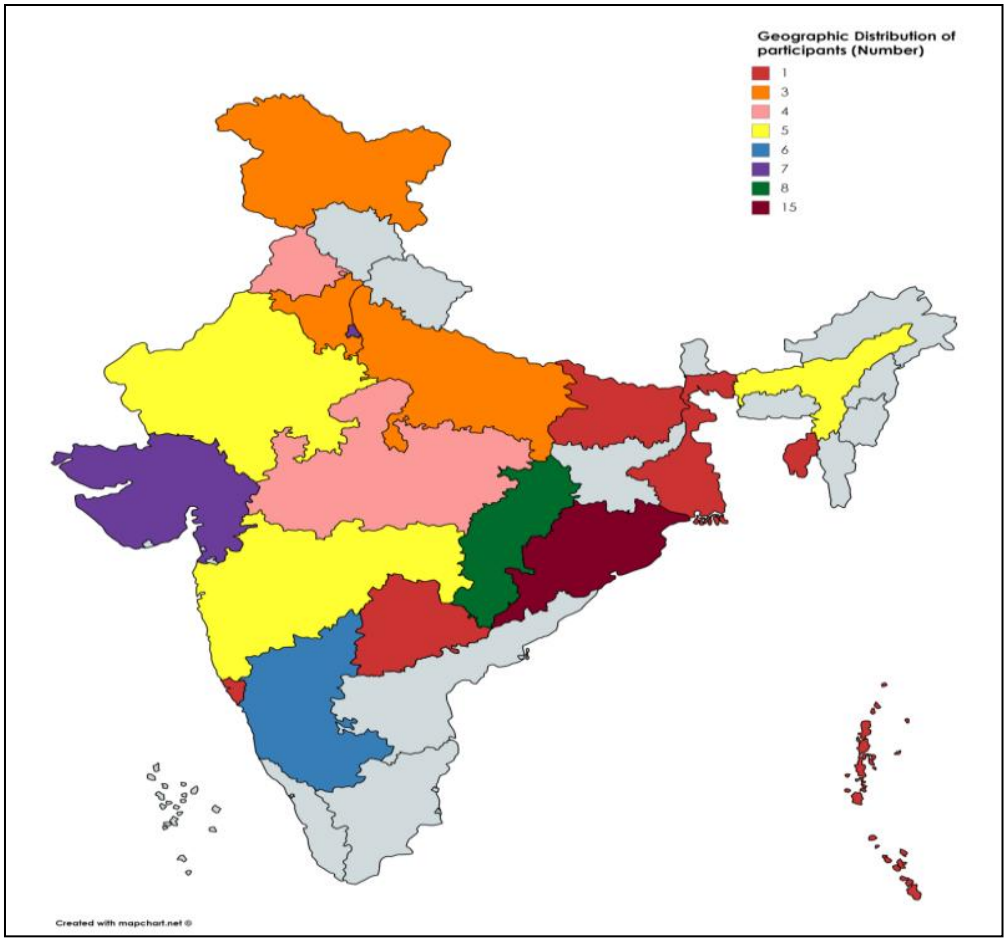


Table 2

Distribution of Participants of International Public Health Management Development Programme

Demographic Characteristics		Programme			
		1st	2nd	3rd	Total
Gender	Male	27	20	14	61
	Female	9	7	10	26
Qualification	Post Graduate	30	26	24	80
	Graduate	6	1	0	7
Profession	Academic	16	8	8	32
	Public health Managers	14	18	11	43
	Private/ NGO/medical officers/others	6	1	5	12

Findings

Problem Identification and Stakeholder Need Assessment

The primary problems and challenges of public health managers of India identified by literature review and focus group discussions were poor capacity to plan, implement and evaluate the programmes or initiatives, inadequate supplies and logistics, limited knowledge on financial management, poor health information management systems, lack of communication skills along with limitations on effective leadership. Besides, lack of formal management and leadership trainings along with their theoretical and extensively elaborative curricula were cited as primary barriers to effective public health management. These factors underscored the need for a competency-based contextual programme for public health managers of the country for the overall improvement of the health indicators.

87 participants from 22 states attended the national programmes; 36 participants in the first programme, 27 in second and 24 in the third. Out of the total 87 participants, 26 were (29.8%) females and 61 (70.1%) were males. Majority of the participants were post graduates (n=80, 91.9%). 85 respondents (97.2 %) agreed to the relevance of the programme to their work setting and for professional development. All the participants (100%) agreed to the fact that such training programmes should be incorporated into their routine practice.

Formulation of Goals and Objectives

The need-assessment led to the formulation of the following goals and objectives.

Goal: Enhance the skills and competencies of the middle and senior-level programme managers in leadership, team building, planning, monitoring, evaluation, project management, resource allocation, budgeting, financial reporting, total quality management and public health communication for addressing public health challenges and strengthening efficiency of organizations in limited resource settings.

Objectives

1. To enable the participants understand the concepts and principles of health management.
2. To build the capacity of the middle and senior-level managers in designing, implementing, monitoring and evaluating programmes and project operations.
3. To illustrate with relevant case studies, how the managerial functions can be leveraged to improve the overall competiveness within the organization.
4. To equip the participants on appreciating the gaps in the current scenario and envision the future trends in health care management for effective decision making.

Drawing up Educational Strategies

Among all the participants, 85 (97 %) reported that the aim and objectives of the modules were well met during the programme. A blend of teaching methods was used to address the different learning styles and course needs. Its design focused on learning through a mix of traditional formal learning methods (lecture, power point presentations, case studies) and informal learning methods (exercises, real case scenarios,

management games, videos, mobile applications). The strategy has been conceptualised in such a manner that emphasis will be on application-based learning in which the participants will be able to prepare an action plan for their organization during the programme which will be implemented within six months of completion of the programme. During the programme, 81 (93.5%) participants expressed that the mix of methodologies (presentation, exercises, case studies) used in this programme was 'excellent', whereas 79 (91%) participants rated the quality of mixed teaching method as the 'most effective' at the end of programme.

Implementation Framework

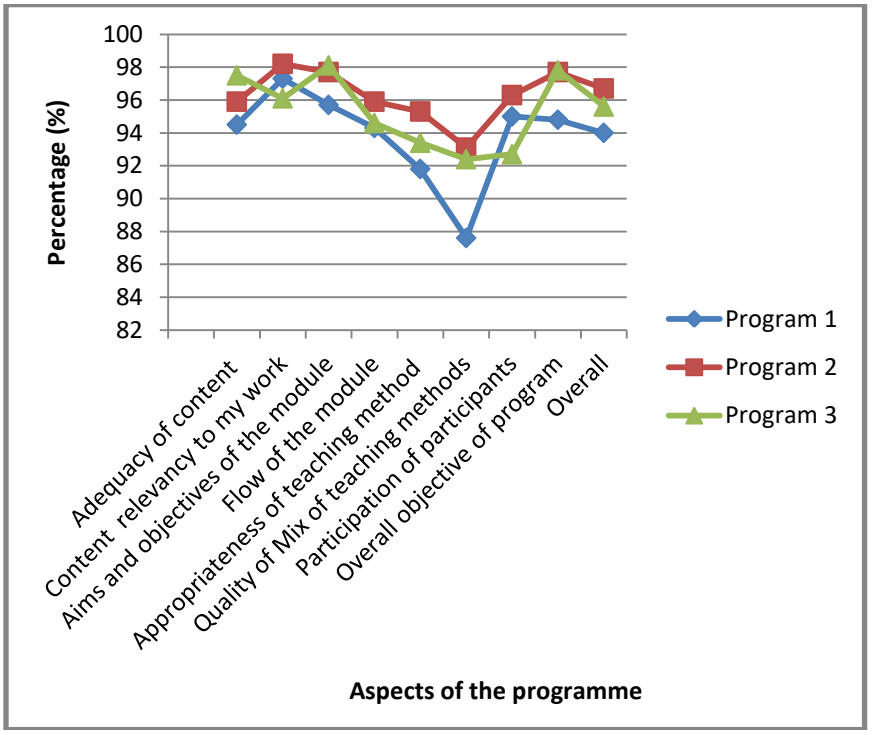
Most of the participants (n= 85, 97.2%) opined that the programme was highly relevant to be replicated in their settings whereas 83 (94.9%) cited that the flow of modules were excellent. Besides, 83 (94.9%) participants reported that the content of the course was adequate and 84 (96.7%) indicated that the programme modules met their expectations.

Evaluation and Feedback

Most of the participants (n=83, 95.4%) rated the overall course as 'good;' 52 (59%) participants submitted their action plan within one week following the programme; and 70 (80.4%) participants implemented their action plans within the six-month period. 25 (35.7%) participants conducted similar training/ workshop/webinars in their settings while 12 (48%) were engaged in health promotional activities, collaboration and implementing knowledge learnt in academic/programme settings.

Figure 2

Aspects of Public Health Management Programme Assessed on the Kerns Framework



The evaluation of the training programme was also done in four stages of Kirkpatrick's model viz. reaction, learning, behaviour and results(Table 3).

Table 3

Evaluation of Training Programme Based on FourStages of Kirkpatrick Models of Framework

Parameters	**Poor n (%)**	**Average n (%)**	**Good n (%)**
Programme information about the logistics and other information about the programme	0(0%)	3 (4%)	84(96%)
Venue of the programme, requisite facilities and necessary comforts	0(0%)	11 (13%)	76(87%)
Flow and content of the presentations	0(0%)	11 (13%)	76(87%)
Pace and the sequencing of the sessions facilitating easy transfer of learning	0(0%)	10 (12%)	77(88%)
Mix of teaching methodologies (presentation, exercises, case studies)	0(0%)	12 (14%)	75(86%)
Engagement during programme leading to active learning	0(0%)	8 (9%)	79(91%)
Appropriate number of participants	0(0%)	10 (12%)	77(88%)
Effective and highly experienced Faculty?	0(0%)	12 (14%)	75(86%)
Support Team	0(0%)	3(3%)	84(97%)
Prior knowledge about "take-away" from the programme	0(0%)	8 (9%)	79(91%)
The programme met its stated objectives	0(0%)	6(7%)	81(93%)
This programme was relevant to job responsibilities	0(0%)	0(0%)	87(100%)
Resource material provided in programme settings	0(0%)	1(1%)	86(99%)
Increased my familiarity with state of the art/ best practices	0(0%)	6(7%)	81(93%)
Strengthened knowledge and skills in selected area of public health management	0(0%)	3(3%)	84(97%)
The programme overcome language and other barriers for better understanding	0(0%)	3(4%)	84(96%)
Developed networks and relationship with other participants	0(0%)	0(0%)	87(100%)
Increased knowledge and skills to develop strategies for countering the public health problems	0(0%)	10(12%)	77(88%)
I intend to use what I learned from the programme in my work	0(0%)	2(2%)	85(98%)
Recommend this program to my colleagues	0(0%)	5(6%)	82(94%)
Overall rating of this programme	0(0%)	9(10%)	78(90%)

Reaction

84 (86%) participants rated the logistics of the programme and information sharing with them prior to the programme as "good." Many were of the opinion that the venue had all the requisite facilities and necessary comforts (n=76, 87%) and the presentations were well prepared (n=76, 87%) and paced (n=77, 88%).

-Wonderfully designed programme and systematically managed
-Learning environment was innovative through peer-to-peer interactions, management games and videos
- The stay was very pleasant and comfortable. The training halls were very well organized with banners of the management related diagrams and illustrations.

75 participants (86%) opined that adult learning approach and mixed teaching methodology was very relevant for effective engagement during active learning. 77 participants (88%) stated the appropriateness of the number of the participants as 'excellent,' and 75 (86%) participants termed the quality of resource faculty as 'excellent.' A total of 81 (93%) and 87 (100%) participants felt that the programme met its stated objectives and is relevant to their job. Majority of them (n=86, 99%) agreed that the resources/materials provided will be helpful in their programme settings.

-It was a very meticulous selection of experienced experts. They have well-prepared presentations, case scenarios and group activities.
- A systematic approach of organizers, blended with personal attention was outstanding.
-Innovative teaching methodology was the USP of the programme. Action plan and field tours provided contextual experience to us which we will replicate when we go to our state NHMs
-The programme helped in my personal development, career; and will definitely be a role model to other programmes in India and Globally.

Learning

81 (93%) participants believed that the programme enhanced their understanding about the best practices of the National Health Mission of different states whereas majority (85, 98%) of them were confident about replicating it in their settings. All (n=87, 100%) agreed that the programmes helped them in developing networks and relationship with other participants. 77 (88%) expressed that their knowledge and skills increased significantly following the programme for countering the public health problems in their respective states. Most of them (82, 94%) assured to recommend the programme to their colleagues back in their respective states. The learning evaluated through the pre and post examination conducted at the beginning and end of the programme showed that there was a significant improvement ($P<0.0001$) in knowledge of participants across all the programmes (Table 4).

-The content and flow of presentations were simple and understandable.
-Interactive informal sessions including role plays and games were very productive.
-We learnt the theoretical concepts of public health management in practical contextual settings which we will implement in our organization.

Table 4

Impact of Public Health Management Programme on Participant's Knowledge Score

Programme	Pre Test (Mean ± SD)	Post Test (mean ± SD)	T-statistic	DF	p value	Inference
Programme 1 (n=25)	11.35 ± 0.8	12.6 ± 0.7	5.174	48	<0.0001	Significant
Programme 2 (n=20)	16.19 ± 0.6	20.82 ± 0.5	26.511	38	<0.0001	Significant
Programme 3 (n=40)	16.71 ± 1.4	22.43 ± 1.7	16.427	78	<0.0001	Significant

n denotes the number of questions asked during pre-post test.

Behaviour

70 (80.4%) participants submitted their action plan one week following the programme out of which 25 (35.4%) implemented their action plans within a six-month period. Majority (n=13, 52%) of the participants conducted similar training/ workshop/webinars in their settings, while the remaining participants were engaged in health promotional activities, collaboration and implementing knowledge learnt in academic/programme settings(Table 5).

Table 5

Output of IPHMDP Received through Action Plan Submitting by Participants

Output	Number (n=25)
Health Promotional activities	1
Implementing knowledge and ideas in academic/ programme settings	6
Teaching and training/ workshop/conference /webinar	13
Other Academic collaboration / new setups, Planning of camps, etc.	5

The participants' overall satisfaction about the programme was excellent (n=78, 90 %) whereas 9 (10%) of them rated as it average and nobody scored it as poor.

Table 6

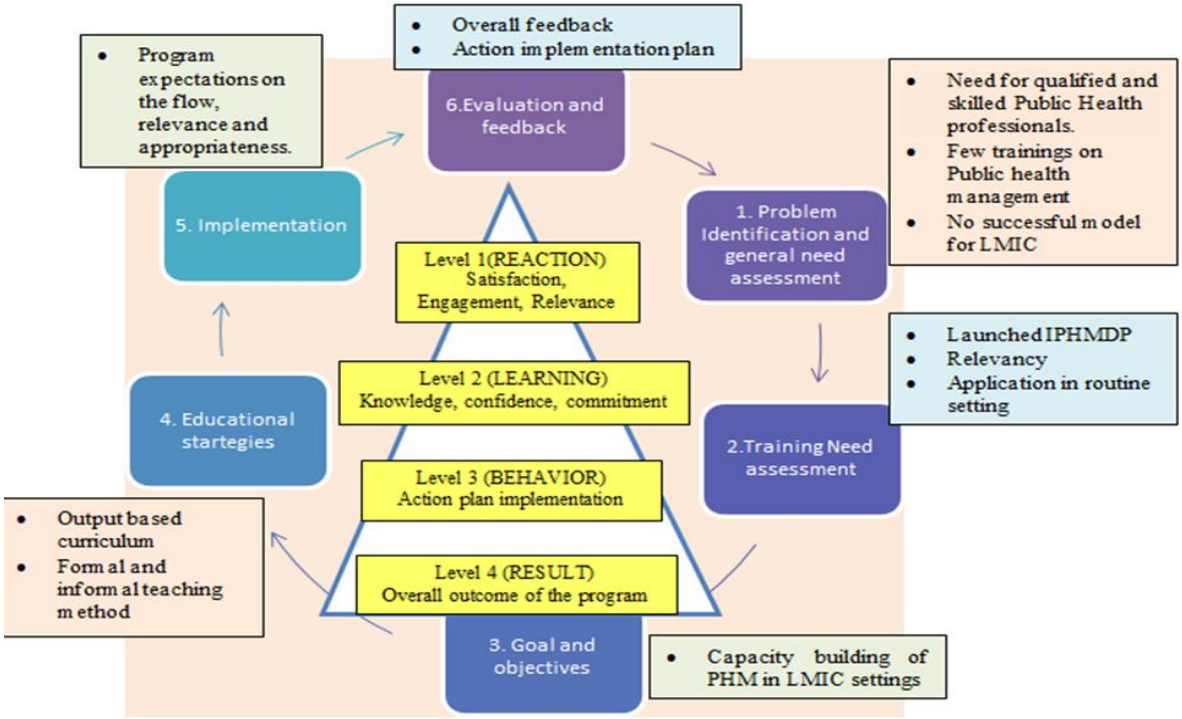
Evaluation of Programme Based on Different Parameters of Kirkpatrick Framework

Parameters	Poor n (%)	Average n (%)	Good n (%)
Programme information about the logistics and other information about the programme	4(2.5)	14(7.7)	160(89.8)
Venue of the programme, requisite facilities and necessary comforts	7(2.5)	12(7.3)	158(90.1)
Flow and content of the presentations	3(4.2)	10(7.0)	165(88.8)
Pace and the sequencing of the sessions facilitating easy transfer of learning	3(1.7)	8(5.4)	167(92.9)

Mix of teaching methodologies (presentation, exercises, case studies)	3(1.7)	14(7.8)	161(90.6)
Engagement during programme leading to active learning	1(1.7)	7(8.4)	170(89.9)
Appropriate number of participants	3(1.7)	4(4.7)	171(93.6)
Effective wand highly experienced Faculty?	4(0.8)	5(3.9)	169(95.3)
Support Team	6(2.5)	2(3.2)	170(94.2)
Prior knowledge about "take-away" from the programme	4(2.5)	13(14.6)	160(82.9)
The programme met its stated objectives	4(1.7)	6(4.7)	168(93.6)
This programme was relevant to job responsibilities	4(2.5)	26(5.0)	148(92.5)
Resource material provided in program settings	4(2.5)	9(0.8)	165(96.6)
Increased my familiarity with state of the art/ best practices	3(1.7)	13(4.2)	162(94.1)
Strengthened knowledge and skills in selected area of public health management	3(1.7)	8(2.3)	167(96.1)
The programme overcome language and other barriers for better understanding	3(1.7)	15(7.4)	160(90.9)
Developed networks and relationship with other participants	3(1.7)	8(4.3)	167(94.0)
Increased knowledge and skills to develop strategies for countering the public health problems	4(2.5)	9(4.8)	165(92.7)
I intend to use what I learned from the programme in my work	3(2.5)	8(2.6)	167(94.9)
Recommend this program to my colleagues	4(3.3)	1(0.9)	172(95.8)
Overall rating of this programme	4(2.5)	8(4.6)	165(92.9)

Figure 3 represents the diagrammatic representation of public health management program on Kirkpatrick and Kerns the Framework.

Figure 3
Diagrammatic Representation of Public Health Management Programme
on Kirkpatrick and Kerns Framework



Discussion

The present study evaluated the implementation of a public health leadership and management curriculum for NHM professionals, using Kern's six-step approach to curriculum development for public health leadership education. The curriculum was feasible to deliver in contextual setting of NHM and the evaluation results were overwhelmingly positive. The novel training provides an opportunity to replicate the public health leadership development programmes not only to public health mangers of NHM across the country but also to other LMIC settings with an aim to build the capacity of public health managers. This work also aimed at training participants for recognizing and redressing the management and leadership issues in the context of existing resources which could offer practical solution to programme managers to implement the learning in their settings.

Key lessons learned during the creation of the curriculum included the pivotal importance of undertaking stakeholder need-assessment and literature review, using mixed method adult learning pedagogy, choosing content adaptable to the settings, and selection of appropriate resource persons from diverse settings. Besides, small group critical reflection on leadership content, the strategic importance of extensive faculty engagement and the value of longitudinal evaluation into leadership training and assessment was emphasized as being done in the earlier studies[24–26]. When revising or creating new sessions for the participants, we focused on opportunities for participants to develop skills in critical areas of leadership which encourages participants to centralize their own role in health management[24,26].

Leadership development training is often being overlooked in academic curriculum of public health as highlighted by the study participants, which is documented in other studies as well[2,26]. There has been growing recognition of the importance of leadership trainings in healthcare management[3,26]. The current study demonstrates that our leadership development programme for NHM managers was successful in building the capacity of the public health workforce through carefully selecting the diverse participants from various fields. We found that such comprehensive public health leadership programme implemented in modular courses, strengthens the competencies of public health managers which can further be corroborated in similar settings to address the diverse challenges in public health leadership.

There were few challenges during the implementation of the programme. First, the duration of the programme was short to inculcate the necessary knowledge and skills desired in public health managers on seemingly extensive topics. It has been intentionally kept short as the participants from NHM are seldom being relieved for longer duration for physically attending a programme. However, we provided sufficient resource materials to them to compensate for the short duration of the programme. We also want them to have a basic understanding about the potential topics so that they vouch for subsequent advanced courses in those areas. Second, we couldn't accommodate more number of participants in a programme as it is a competency-based curriculum which is only effective for a cohort of 30-35 participants. We are making effort in this direction by launching the e-programme on a virtual platform. Third, some of the participants couldn't submit their action plan implementation report after 6 months of completion of the programme as they might have been occupied in their day to day work. We intend to ensure liasoning with their supervisors in our future programmes for ensuring action on implementation of learning by the participants in their contextual settings. Moving forward, we realize the benefit of applying a continual process to our curriculum review and development which will help us to meet our participant's need in the current public health environment. Further, we aim at conducting the cost-effectiveness of the training programme so that we can advocate its inclusion in the national Programme Implementation Plan (PIP).

Conclusion

Public health is an emerging trans-disciplinary field that integrates public health concepts and functions with health care delivery at the community level. The healthcare managers must have a vision that maximizes the contributions of public health towards a value-driven healthcare system. Using a systematic approach of Kern's six steps for curriculum development, we created an innovative management and leadership development training curriculum for public health managers aimed at imbibing necessary knowledge and skills to manage the health system effectively. Given the increasing relevance of leadership skills to programme managers combined with the current paucity of such leadership programmes in the country, designing a practical educational approach using a standardized framework is critical to address challenges in the health system towards achieving the Sustainable Developmental Goals. The state and national government should adopt this validated training model under Programme Implementation Plan (PIP) of the National Health Mission for middle and senior-level programme managers.

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स्वास्थ्य एवं जनसंख्या :
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जन स्वास्थ्य प्रबंधन एवं नेतृत्व पर राष्ट्रीय स्वास्थ्य मिशन के अंतर्गत कार्यक्रम प्रबंधकों की क्षमता निर्माण : अनुभव एवं आगे की राह

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सारांश

जन–स्वास्थ्य के विकास में नेतृत्व तथा प्रबंधन महत्वपूर्ण भूमिका निभाते हैं। ये दोनों कौशल जन स्वास्थ्य व्यावसायिकों, विशेष रूप से कार्यक्रम सेटिंग्स में कार्य कर रहे व्यवसायिकों के मध्य आत्मसात करने के लिए महत्वपूर्ण हैं। यद्यपि, राष्ट्रीय स्वास्थ्य मिशन (एनएचएम) के मध्य एवं वरिष्ठ स्तर के कार्यक्रम प्रबंधकों हेतु इस तरह के प्रशिक्षण के अवसर सीमित हैं। महत्वपूर्ण रूप से, कोविड–19 महामारी के समय राज्य एवं राष्ट्रीय स्तर के जन स्वास्थ्य कार्यबल हेतु नेतृत्व तथा प्रबंधन कौशलों को आवश्यक मूल्यों के रूप में मान्यता मिली है। हमने विकास एवं कार्यान्वयन हेतु केर्न के छह चरणों के वैचारिक ढांचे तथा अंतर्राष्ट्रीय जन स्वास्थ्य प्रबंधन विकास कार्यक्रम (आईपीएचएमडीपी) के मूल्यांकन हेतु किर्कपैट्रिक के चार चरणों के ढांचे का प्रयोग किया, जिसका उद्देश्य राष्ट्रीय स्वास्थ्य मिशन के अंतर्गत कार्यक्रम प्रबंधकों में प्रबंधन एवं नेतृत्व कौशल विकसित करना है। इस शोध के परिणाम यह दर्शाते हैं कि यह कार्यक्रम अत्यधिक प्रासंगिक एवं संदर्भगत था तथा इसका प्रयोग बहुआयामी वयस्क शिक्षा–विज्ञान हेतु तथा कार्यक्रम को भली–भांति डिजाइन करने के लिए किया गया था। राज्य एवं राष्ट्रीय सरकारों को भारत में मध्यम तथा वरिष्ठ स्तर के कार्यक्रम प्रबंधकों हेतु एनएचएम की कार्यक्रम कार्यान्वयन योजना (पीआईपी) के अंतर्गत इस मान्य प्रशिक्षण मॉडल को अपनाना चाहिए।

मुख्य शब्दः जन स्वास्थ्य नेतृत्व, वैश्विक स्वास्थ्य, क्षमता निर्माण, कार्यक्रम प्रबंधक, मूल्य और दक्षता–आधारित पाठ्यक्रम, आईपीएचएमडीपी।

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Public Health Leadership and Governance in India: Role of National Health Systems Resource Centre (NHSRC)

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Abstract

National Health Systems Resource Centre (NHSRC), a technical support unit of the National Health Mission (NHM), was created as an organisation with the mandate to assist in policy and strategy development in the provision and mobilization of technical assistance to the states/UTs and in capacity building of the Ministry of Health and Family Welfare (MoHFW) at the centre as well as in the states. Since its inception in 2006, NHSRC has played a significant role fostering initiatives and growth in public health governance and leadership in India. NHSRC has been instrumental in bringing the positive changes to public health administration and human resource management including leadership at various levels as a national level technical support organisation. It works closely with the states/UTs for planning and strategy development for recruitment, training and retention of HRH and is directly involved in capacity building at the state, district and peripheral levels. Strengthening governance mechanisms through National Health Accounts (NHA) of India and Common Review Mission (CRM) are other notable activities of NHSRC.

Key words: Public health leadership,Public health governance, National Health Mission, NHSRC.

Introduction

Leadership and Good Governance form one of the six building blocks of a Health System and has been defined as "the oversight and guidance of the whole system, public and private, to protect the public interest", and includes "ensuring that strategic policy frameworks exist and are combined with effective oversight, coalition-building, the provision of appropriate regulations and incentives, attention to system-design, and accountability."[1] To put it simply, good governance under an effective leadership will try to protect the interest of the public by framing empathetic and evidence-based policies with vision, foster partnerships which will add value to the efforts to achieve the common goal and build institutional mechanisms which will ensure accountability and transparency. Leadership in public health is progressive; starting from a competent public health professional to contributing team member and later competent team manager and eventually an effective and visionary public health leader.[2] However, technical competencies alone cannot make a strong public health leader out of someone. Public health leadership skills can be acquired and developed if the person has thorough technical competency, listening and communication skills, emotional intelligence, ability to set priorities, people management skills, etc. A combination of hard work, introspection of self and support systems which enables holistic development of an individual is required.

Public health governance has been defined as a wide range of steering and rule-making related functions carried out by the governments/decision makers as they seek to achieve the national health policy objectives that are conducive to the universal health coverage.[3] These functions include policy development, resource stewardship, continuous improvement, partner engagement, legal authority and oversight.[4] Thus, public health governance, like governance in any other sector, involves complex interactions between all the decision-making entities involved which in the case of India; are the central government, state governments, district authorities, local self-governments, private players, civil societies and the communities. The collective goal of all these actors is to ensure an environment which will result in the highest possible health outcomes for the population and to provide affordable and quality healthcare services for all.

National Rural Health Mission (NRHM), later NHM, a centrally-sponsored scheme is one of the most critical social welfare schemes launched by the Government of India on 12 April 2005. It aims at providing affordable, accessible, equitable and quality public healthcare to everyone, especially to the poor and vulnerable. NRHM sought to address health and healthcare in a holistic manner by addressing not just the biological aspects of diseases but also the social determinants of health which are the social, economic and political dynamics that work together and produce hierarchies based on income, education, occupation, gender, caste, etc. Core vision and strategy of NRHM were centred around decentralisation and devolution of power to local self-governments, involving communities in decision making, flexible financing, capacity building, monitoring progress against standards and innovations in human resource management.[5] Thus, core concepts of public health governance were addressed by envisaging leadership at all the levels. The Union Cabinet vide its decision dated 1st May 2013, approved the launch of National Urban Health Mission (NUHM) as a Sub-mission of an over-arching National Health Mission (NHM), with NRHM being the other Sub-mission of NHM.

NHSRC was established in 2006 with the mandate to assist in policy and strategy development in provision and mobilization of technical assistance to the states/UTs and in capacity building for the Ministry of Health and Family Welfare (MoHFW) at the centre as well as in the states. The goal of this institution is to improve health outcomes by facilitating governance reform, health systems innovations and improved information sharing among all the stake holders at the national, state, district and sub-district levels through specific capacity development and convergence models. NHSRC has been instrumental in identification and evaluation of good and replicable practices adopted by the states/UTs using a virtual platform namely National Healthcare Innovation Portal, and conducts an annual national level summit to disseminate selected innovations which are replicable and scalable. It also facilitates the field visits of state teams to other states/UTs for further learning and adaptation of the selected practices/innovations.

Role of NHSRC in Public Health Governance and Leadership

Over the years, NHSRC has been instrumental in promoting and supporting good governance in the health sector. It has facilitated professional and scientific human resources for health (HRH) management in the Health and Family Welfare sector, providing support for capacity development at central, state, district and sub-district levels. Over a period, a pool of institutions and individuals to provide capacity support has been created. NHSRC provides evidence-based insights on wider determinants of health outcomes, develops frameworks for pro-poor innovations that reduce out of pocket expenditure and disease burden of poor

households. Partnerships amongst different stakeholders, including collaboration with NIHFW, SIHFW, IIPS, PRCs, public health academics and other institutes of eminence have resulted in tangible benefits. Coordinating, capacity building of SHSRCs and PMUs, providing support for efficient implementation of the NHM at the central, state, district and sub-district levels are other activities. As part of the governance mechanisms, developing a state-of-the-art monitoring and evaluation system based on latest technology and innovations, facilitating and designing systems for improving transparency, accountability, community participation and technological innovations in the Health and Family Welfare Systems. As a result, knowledge management, documentation, and dissemination of knowledge and experiences as well as good practices in health systems in India and across the world have strengthened the health systems. NHSRC regularly provides policy advice to the Central and State Governments pertaining to the Health and Family Welfare sector with a view to promote, facilitate and improve programme management at all the levels.[6] It acts as a think tank of the MoHFW in drafting policies, guidelines and other technical documents; and provides a platform for experts from across the country and other relevant stakeholders to provide inputs into such policy and direction-setting documents of the government.

Leadership at Various Levels of Public Health Administration

In India, public health policies are framed and programmes are designed by the Ministry of Health and Family Welfare (MoHFW). Implementation as well as the monitoring of these programmes are undertaken by the states/UTs as 'Health' is a state subject as per the Constitution of India. States have the flexibility to tweak various aspects of the programmes designed by the MoHFW to suit best to their local contexts. Administration of public health services varies across the states/UTs. In most of the states, there is no clear demarcation between the administration of clinical services and public health services.

Under the NHM, institutions have been established at various levels to improve the public health management capacities. State Programme Management Units (SPMUs) and State Health Systems Resource Centres (SHSRCs) were created with the objective to conduct overall planning and monitoring of programmes and for further knowledge generation through implementation of research and evaluation studies. This was later expanded to create leadership and governance structures at the District (DPMU) and Blocks (BPMU) levels. DPMUs are responsible for the planning and implementation of public health programmes, training and capacity building, development of district health action plans, and monitoring and evaluation of all programmes under the NHM. Similarly, BPMUs are formed at a more decentralised level to carry out similar functions as DPMUs. NHSRC, as the apex body for technical support to NHM, has been instrumental in the development of SHSRCs across states and UTs in the country and continues to provide technical and programmatic support to SPMUs across the country.

The Directorates of Health and Family Welfare under the Department of Health and Family Welfare, manned by the regular government employees, has been traditionally responsible for the planning and delivery of public health services in the states/UTs. However, Directorates of many states lack the much-needed expertise and experience in public health, suffer from excessive centralisation and governance issues.[7] In order to accomplish the 'architectural correction of public health care system' envisaged under the NHM, administrative reforms are being carried out. Recently, the Government of India with the support of NHSRC has taken the first step in this direction by constituting an expert committee to finalise the core principles of a public health management cadre. NHSRC acts as the point of contact of this very challenging and visionary endeavour as designing a public health cadre will be for a long term, and will

have enormous impact on the evolution of our public health system into an effective, efficient and responsive system.

Human Resources Management

At the advent of NHM, the HRH sphere in India was plagued with unavailability of skilled individuals in adequate numbers and uneven distribution of HRH. This scenario of acutely skewed distribution was acknowledged and for the first time, an attempt was made to develop a set of standards which needed to be adhered to by the vast network of public health institutions in the country. Indian Public Health Standards (IPHS), launched in 2007, subsequently revised in 2011-'12, laid down staffing norms along with infrastructure, drugs, equipment norms, etc. for all the public health institutions in the country. Setting these norms was the first step to create the perception that HRH can be used optimally, if planned and managed scientifically. With the increased allocation of funds under NHM, states/UTs were able to make an effort to close the gap between the positions sanctioned by the state governments and the posts required to meet the NRHM norms. Still, there were states, many of them low performing with severe crunch, especially in rural areas. This posed a problem as more than 70 percent of the population of the country reside in rural areas. NHSRC has been instrumental in coming up with diverse and innovative measures for attracting doctors and nurses to work in rural areas. These include regulatory measures like rural service as a prequalification for admission to post graduation, rotational postings among HRH posted in rural areas, financial and non-financial incentives, introduction of a cadre of mid-level healthcare providers, etc.[8]We have been able to achieve this by making policies based on evidence, by understanding the intricacies at the ground level by working shoulder to shoulder with the state governments and by coming up with innovative and context specific solutions which are thoroughly scientific. NHSRC works closely with the states/UTs for planning and strategy development for recruitment, training and retention of HRH. We are equipped with the technical capacity not to just frame policies but to ensure the implementation and monitoring of these policies on ground to recruit and build capacities of public health professionals with the potential to become public health leaders.

Quality Assurance and Certification of Public Health Facilities

Improving access to 'quality' healthcare is one of the stated goals of NHM and thus, one of the primary objectives of NHSRC is to 'facilitate quality improvement in 'public health facilities'. Public sector healthcare setup consisting of district hospitals, community health centres, primary health centres and sub-centres are the major providers of healthcare all over the country, especially in rural areas. However, no mechanism was earlier available to assure the quality of services provided in these public health facilities. At the time of launch of NRHM in 2005, ISO 9001 Quality Management System (which is a generic standard applicable to both products and service organizations) was implemented in the public health facilities of India. However, this standard did not cover the service provision and the clinical component which would significantly impact the health outcomes[9]. In due course, a need for developing an exclusive quality assurance framework for public health facilities was perceived. Under the leadership of NHSRC, the National Quality Assurance Programme (NQAS) was launched in 2013 for quality improvement of public health facilities along with an inbuilt certification system. These were developed keeping in mind the specific requirements of the public health facilities, and is currently available for DH, CHC, PHC (urban and rural). These standards are ISQUA accredited and meet global benchmarks in terms of comprehensiveness, objectivity,

evidence and rigour of development. NHSRC acts as the national level secretariat for the quality assurance and certification of public health facilities under NQAS programme. Along with NQAS, NHSRC also facilitates the implementation of flagship programmes like the LaQshya programme (quality certification of labour rooms) and *Kayakalp* award scheme which was launched to promote cleanliness, hygiene and infection control practices in public health facilities. These initiatives have added to the governance reforms in public health facilities by ensuring an organised process of checks against standards and evaluation based certification.

Healthcare Technology

Strategic use of healthcare technology has the potential to drastically improve accessibility, affordability and equity in healthcare service provision in a country like India where the resources are scarce and the scale is huge. At the advent of NHM, MoHFW lacked adequately trained HR to cater to the healthcare technology related needs of the public health facilities. To fill this gap, NHSRC established a separate division in 2013 to support MoHFW on policies and strategies related to healthcare technologies especially medical devices under NHM. It also supports Department of Pharmaceuticals, Indian Pharmacopeia Commission, Bureau of Indian Standards, etc. on matters pertaining to medical devices. NHSRC also functions as a 'World Health Organisation Collaborating Centre for Priority Medical Devices and Health Technology Policy.' Along with this, NHSRC provides support to the National Biomedical Equipment Maintenance Program, Free Diagnostics Initiative, *Pradhan Mantri* National Dialysis Programme; and prepares technical specifications for medical devices in public healthcare facilities.

National Health Accounts

Understanding a country's health financing system allows recognising the funds available for health, ways to raise more funds, and efficient and equitable allocation of these funds arethe integral components of good governance. National Health Accounts (NHA) has been accepted as an important tool worldwide to track financial resource flows in a country's health system. NHA estimates provide baseline health financing indicators to all the stakeholders in the health sector to plan for better resource allocation. NHSRC institutionalised NHA in 2016 and bought out NHA estimates for India after a gap of ten years and has been regularly updating these accounts since then. Since 2016, NHSRC acts as the NHA Technical Secretariat (NHATS), and has developed NHA guidelines for India. NHATS conducts periodic National and State Health Accounts using a Global Standard Framework System of Health Accounts, 2011 contextualized to the Indian Health System. This allows tracking the total health sector expenditures in the country by source, schemes, providers and functions. NHATS builds capacity at the national and state level for generating NHA by training individuals and institutions. It has developed a strong network of institutions and organizations at state level across the country.[10]

Common Review Mission (CRM)

Another activity aiding public health governance is the Common Review Mission (CRM), an annual monitoring and evaluation mechanism inbuilt into NHM. All CRMs are collaborative efforts of a multidisciplinary team of government functionaries, public health experts, civil society members and development partners to reflect and examine the changes achieved under the NHM.[11]Thirteen CRMs have been undertaken since the launch of NRHM. Since 2007, NHSRC has been the lead agency conducting

this exercise. While the administrative coordination is done by theMoHFW, technical aspects like the analysis, drafting, discussions and finalization of the report is done by NHSRC. CRMs have been instrumental in identifying the gaps in various building blocks of the health system across states/UTs, and has helped in taking timely corrective actions from time to time.

Conclusion

NHSRC is an organisation set up with the vision and zeal to bring tangible improvements to the public health system in India. It has effectively delivered on its objectives and has shown enough flexibility to streamline its functions in consonance withthe constantly changing requirements of the healthcare system. The NHSRC has assumed increasing importance over the years, and has grown organically under the able and foresighted leaderships and functions as the national secretariat for flagship programmes like the ASHA programme, National Quality Assurance Programme (NQAS), Biomedical Equipment Management and Maintenance Programme (BMMP), *Ayushman Bharat*– Health and Wellness Centres (AB-HWCs), etc. Of late, NHSRC has added a new division to undertake implementation research in partnership with organisations across the country, to ensure that mid-course corrections are undertaken to avail maximum benefit out of each public health programme under the NHM. Trajectory of further growth of NHSRC will depend largely on the course taken by the NHM.In view of the dynamic and ever-evolving complex health systems and the changing health needs of the population, NHSRC as an organisation, has a lot to contribute to the public health leadership and governance of the country. It aspires to constantly evolve and adapt to ensure that India achieves the SDG 3 goals and Universal Health Coverage (UHC) for its population in a timely manner.

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भारत में जन स्वास्थ्य नेतृत्व एवं शासनः

राष्ट्रीय स्वास्थ्य प्रणाली संसाधन केंद्र (एनएचएसआरसी) की भूमिका

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सारांश

राष्ट्रीय स्वास्थ्य प्रणाली संसाधन केंद्र (एनएचएसआरसी), राष्ट्रीय स्वास्थ्य मिशन (एनएचएम) की एक तकनीकी सहायता इकाई है जिसका निर्माण राज्य/संघ राज्य क्षेत्रों को तकनीकी सहायता प्रदान करने तथा उनके संचलन में सहायता करने के अधिदेश के साथ–साथ केन्द्र एवं राज्यों में स्वास्थ्य एवं परिवार कल्याण मंत्रालय के क्षमता निर्माण के लिए भी किया गया है। 2006 में अपनी स्थापना के पश्चात से, एनएचएसआरसी ने भारत में जन स्वास्थ्य शासन एवं नेतृत्व में पहल तथा विकास को बढ़ावा देने में महत्वपूर्ण भूमिका निभाई है। राष्ट्रीय स्तर की तकनीकी सहायता संगठन के रूप में विभिन्न स्तरों पर नेतृत्व सहित जन स्वास्थ्य प्रशासन एवं मानव संसाधन प्रबंधन में सकारात्मक परिवर्तन लाने में एनएचएसआरसी द्वारा महत्वपूर्ण भूमिका निभाई गई है। यह एचआरएच की भर्ती, प्रशिक्षण एवं प्रतिधारण हेतु योजना तथा रणनीति विकास के लिए राज्यों/केंद्र शासित प्रदेशों के साथ मिलकर कार्य करता है तथा सीधे राज्य, जिला एवं परिधीय स्तरों पर क्षमता निर्माण में शामिल है। भारत के राष्ट्रीय स्वास्थ्य लेखा (एनएचए) तथा साझा समीक्षा मिशन (सीआरएम) के माध्यम से शासन व्यवस्था को सुदृढ़ बनाना एनएचएसआरसी की अन्य उल्लेखनीय गतिविधियां हैं।

मुख्य शब्दः जन स्वास्थ्य नेतृत्व, जन स्वास्थ्य शासन, राष्ट्रीय स्वास्थ्य मिशन, एनएचएसआरसी।

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Leading from the Forefront: Role of Indian Association of Preventive and Social Medicine during the COVID-19 Pandemic in India

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Abstract

COVID-19, which is a disease caused by the Novel Corona Virus, has been playing havoc across the globe, and India has also been severely affected by the same. The Indian Association of Preventive and Social Medicine (IAPSM) is a professional organization that has set an exemplary role in leading the country in this critical phase, in its battle against COVID-19. Under theeffective leadership of skilled and competent members, the IAPSM has been in the forefront of advisory, service delivery, capacity building and research, at all levels from international, national, state, district, organization, to the most peripheral communitylevel. This has been possible because the organization is composed of a closely interconnected, highly-skilled group of professionals who are committed to realize the vision and mission of overcoming the COVID-19 pandemic, and thereby achieving the highest level of health in the country.

Key words: Leadership, IAPSM, COVID-19, Pandemic, Capacity building.

Introduction

The world has experienced several influenza pandemics in the 20th and 21st century viz. Spanish Flu (1918-'19), Asian Flu (1957-'58), Hong Kong Flu (1968-'69) and Swine Flu (2009-'10). Widespread regional epidemics of Corona virus have also occurred in the present century as Severe Acute Respiratory Syndrome (SARS) in 2002-'04 and Middle East Respiratory Syndrome (MERS) in 2009-'10.[1] Currently COVID-19 which is a disease caused by the Novel Corona Virus, is playing havoc across the globe. This was declared a pandemic by the World Health Organization on 11 March 2020.[2] India has also been severely affected and the country is now facing the second wave of the pandemic.[3]

Being a public health emergency affecting the entire community, the role of Community Medicine professionals has been vital to its containment, mitigation and prevention. The discipline of Community Medicine provides the skill to acquire and implement a holistic view of health and medical interventions, in form of ongoing activities during outbreaks or epidemics, through service, research, capacity building and planning evidence-based health policies and programmes, and leading a multidisciplinary team for the same.[4]The Indian Association of Preventive and Social Medicine (IAPSM) is a national professional organization with more than 5800 members across the country. These members are specialists in the field

of Community Medicine and Preventive and Social Medicine, serving in Medical Colleges, National and State Government Health Departments, and various health institutions, working in the field of research, training, epidemiology, surveillance, etc. Many members are also working as experts in international development agencies, non-governmental organizations, or working as freelance Public Health Consultants.[5]

A proverb says "If you want to go fast, go alone. If you want to go far, go with others." An ideal leader likewise, takes the team along, to achieve the objectives of an organization. The IAPSM, under the able leaders and through its skilled and competent members, is playing an outstanding role in leading the country in this critical phase, to achieve the vision and mission of overcoming the COVID-19 pandemic. The present review highlights the contribution of IAPSM by leading the country efforts from the forefront, at various levels.

Leadership by IAPSM

Information was collected from all the Medical Colleges and public health institutions across the country. The activities undertaken by the IAPSM Members in the context of COVID-19 were consolidated across all levels of hierarchy in a three-tier structure i.e., at the National level, State and District level and at the level of the Organization, in addition to leadership at the grass-root level in the community. These activities performed at all the levels have been discussed in various domains viz. policy development, research, capacity building, containment measures, curative services, community interaction and awareness generation.

Leadership at the International Level

Indian Association of Preventive and Social Medicine is also a member of the Organized Medicine Academic Guild (OMAG) which is a collaborative effort of fifteen professional associations and governmental organizations. The major focus of OMAG is to promote values of collaboration, excellence, innovation, and commitment in delivering the implementation of the Global Health Security Agenda (GHSA) and at the same time, promoting the Indian perspectives on GHS. The foundations of the OMAG are rooted in the belief that a growing, active and vibrant guild of organizations is a vital source of expert opinion, multisectoral implementation and action, besides being an important source of educational support for action packages defined in the GHSA. IAPSM is leading OMAG from upfront during pandemic times. On the capacity building front, three international workshops were conducted with 161 Indian Technical Economic Cooperation's Senior managers working for COVID management in their countries. The program was sponsored by Ministry of External Affairs, Government of India. In addition, one international Management Development Programme was conducted along with Senior Managers, where more than 80 countries participated that included SAARC countries as well as many countries from the African and South American regions.

Leadership at the Country Level

The goal of Community Medicine is promoting health and preventing diseases, by utilizing professional management skills and enabling people's participation. IAPSM, with its esteemed members, has been at the forefront since beginning of the first wave of the pandemic. In the early days of the COVID-19 pandemic

in the country, the President of the IAPSM had dialogue with the Honourable Prime Minister of India regarding the role of Community Medicine in overcoming the critical situation. In collaboration with the NITI Aayog, the faculty members were involved in the assessment of preparedness of hospitals for COVID-19 pandemic and development of post COVID-19 Exit Plan. Faculty members have also worked with the Federation of Indian Chamber of Commerce and Industry (FICCI) to develop modules on COVID-19 for healthcare workers. The modules were submitted to NITI Aayog for further dissemination and were also hosted on the Medvarsity online platform. The 48th Annual National Conference of the Indian Association of Preventive and Social Medicine was organized at PGIMER, Chandigarh, which was the first virtual conference on such a large scale. The conference focused on strengthening the COVID care and management along with new innovations. The sessions during the conference provided valuable inputs to pandemic control at the policy level.

As part of the OMAG, envisioned with the aim of functioning as the conduit of expert advice and initiatives to the government in dealing with health and health-related outcomes, IAPSM is fighting the pandemic with scientific research and innovation. OMAG with its strategic constituents, has been assisting the government from strengthening systems encompassing primary care to management of the outcomes of the pandemic of COVID-19, through developing protocols and standard operating procedures; providing policy thrust of immediate concern in epidemics; identifying key research areas in epidemic preparedness, mitigation and management of outcomes, developing databases and strengthening technology platforms to make them responsive to the immediate needs of the epidemic; and creating a think tank for ready reference, expert opinion and advice on the health concerns needing immediate attention. As part of the OMAG, IAPSM was involved in preparation of the Policy Document for COVID-19-like pandemics preparedness and need for long term solutions to COVID-19-like pandemics.

A report on COVID-19 pandemic in India along with policy guidelines was prepared by the Joint Task Force of IAPSM along with the Indian Public Health Association (IPHA) and Indian Association of Epidemiology (IAE). The report was updated with a second volume being released within a month of the first. Along with other prestigious organizations, IAPSM was also instrumental in developing Standard Operative Procedures (SOP) on COVID-19 Containment and Management in Peri-urban, Rural & Tribal areas. Resource material for widespread dissemination of messages have also been developed by IAPSM and released by the Ministry of Health and Family Welfare, Govt of India.[3]

Capacity building is essential to train and develop a competent workforce. Facility preparedness of outpatient services across the country has been assessed, soon after the onset of the pandemic in the country. IAPSM Members have developed e-Learning Modules for the Healthcare Workforce for COVID-19. Several Webinars, online and offline training sessions, and workshops have been conducted at the national level. For the young professionals, poster, slogan and quiz competitions have been organized that helped to increase their knowledge as well as boost up their enthusiasm in continuing the fight against the deadly disease. Innovative IEC materials in the form of comics, info-graphics and booklets have been prepared by the IAPSM in collaboration with PGIMER, Chandigarh.

Research to guide evidence-based management of the situation has been a key contribution of IAPSM Members which included research projects funded by various renowned national and international funding agencies, on important aspects of COVID-19 prevention and control. Several rounds of COVID-19 sero-survey have been undertaken by the Members to assess the prevalence and trends of SARS-CoV-2

infection in the population. Numerous research papers have been published in esteemed national and international journals.

Efforts of the discipline of Community Medicine have been documented through books and scientific papers, regarding various contributions made by the Department of Community Medicine of various Medical Colleges, towards containment of the COVID-19 pandemic. These documents describe how various domains of our disciplines of public health, community medicine, family medicine, epidemiology, health promotion, health management, health economics, nutrition, and environmental management, can collectively get engaged in providing their services in a coordinated manner. These can serve as blueprints for the future and can be replicated by any Department of Community Medicine for playing the role of a leader as well as effective team members of medical experts for dealing with such a crisis in any Medical College.

Leadership at the State Level

The Members of IAPSM were part of key committees and thus, involved in important decision making regarding COVID-19 containment at the State level viz. State and District Rapid Response Team, State and District Surveillance Unit, AEFI Technical Collaboration Unit, etc., with responsibilities of formulating guidelines for the State regarding surveillance, contact tracing, containment, de-containment, reporting mechanisms, vaccination, AEFI surveillance, data quality and handholding with the districts for implementation of the measures as per these guidelines.

Members have been Advisor for District Disaster Management Authority and Members of Disaster Management Committee in many States, and have worked closely with the District Administration team, developed guideline for dead body management, contact tracing and surveillance at the District-level along with conducting trainings for all officials of the District administration and Health department, staff of Corona Control Room and Integrated Disease Surveillance Programme.

Members, through their organizations, have continuously provided regular and timely inputs to the District, based on daily database of the District. They have developed projection estimates for burden of COVID-19 in terms of time, place and person distribution using epidemiological model, achieving up to more than 95 per cent accuracy which was shared with the government for planning and logistic requirement for the whole State. Containment activities viz. surveillance, contact tracing, preparation of micro-containment plan, supervision of activities, report compilation, assessment of hospital preparedness, etc. have been efficiently conducted and led by the IAPSM team members.Department of Community Medicine in many Medical Colleges across the country are successfully and efficiently running COVID-19 vaccination sites on behalf of the respective States, since the time of inception of the world's largest COVID-19 vaccination programme. These sites are managed by the Residents and supervised by the Faculty.

Leadership at the Level of Organization

Professionals of Community Medicine have taken the lead in their respective organizations to fight COVID-19 through advisory role, service provision and prevention measures.They have been Chairpersons and Members of Teams for COVID Task Force Committee and committees for various activities at the level of the Organization. They have been involved in making policy decisions and preparing guidelines on

administration and management of Dedicated COVID Hospitals, quarantine of health care workers, infection prevention and control, roll out of COVID-19 vaccination, etc.

As part of routine health care services, IAPSM Members have contributed to providing comprehensive primary health care to the community through the health centers under the Department of Community Medicine in all Medical Colleges, special clinics and Dedicated Severe Acute Respiratory Infections/Flu/Fever Clinics. To minimize contact with and between patients, all registered cases of antenatal women, under-five children and patients of non-communicable diseases registered with the health centres, have been provided with telephonic consultation. Their monthly doses of medicines have been supplied to their family members on their behalf. To avoid interruption of treatment, Residents and young Faculty Members have also provided specialized therapeutic care by providing support to patient management at the hospital fever clinics, outpatient department and indoor wards.

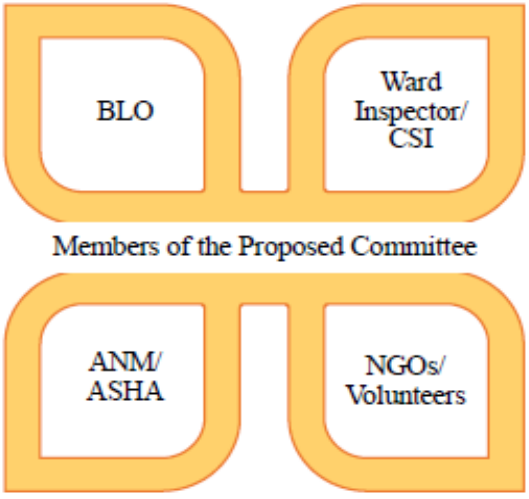
Members have been involved in conducting training of various levels of healthcare workers that included doctors, nurses, paramedical staff and grass-root and front-line workers through onsite as well as online modes along with classes for undergraduate and postgraduate medical and nursing students on COVID-19. Various issues were covered for relevant target groups viz. donning and doffing of PPE for COVID-19, infection control and prevention measures.

Leadership at the Community Level

Service at the doorstep was initiated by the IAPSM Members affiliated with various organizations. Community-based testing was carried out by rapid antigen testing at the doorstep, including testing of the workforce in factories. Teleconsultation services were also provided to the patients. Fever Clinics were run in the community to provide care at the point of first contact. Audit of Fever Clinics was done at real time which proved to be the best site for early detection of the disease, and to create awareness and knowledge to the grass-root workers regarding COVID-19, to reduce the transmission of the disease. Innovative establishment of Geo-fencing/Biometric attendance of suspects/quarantine individuals was initiated in close collaboration with the public health systems.

In urban areas, formation of Corona Control Committee in every ward was proposed to the Municipal Commissioner to strengthen the on-going field activities related to prevention and control of COVID-19. It was proposed to ensure the compliance of the community with control measures and to bridge the missing links, by conducting awareness and training sessions for frontline workers and survey teams working in the urban wards. Apart from the members mentioned in the Figure 1, the team can also include a team of prominent personalities, or representatives from the community, involve the minority communities in the society to overcome various challenges like vaccine hesitancy and discrimination of positive patients. Awareness and training session for BLOs, ASHAs/ANMs, and ward in-charges was also conducted. The sessions were focused on strengthening the community preparedness for prevention and control of COVID-19 with special emphasis on biomedical waste management both at the household and facility level.

Figure 1
Members of Proposed Corona Control Committee



Awareness generation was actively done through continuous IEC programmes in the health centers and the community involving all the stakeholders including local and religious leaders. Front-Line and grassroot level workers were given hands-on training at the health centers regarding measures for prevention of COVID-19 and warning symptoms for attending health facilities to seek treatment. Efforts were made to ensure community participation in finding solutions for the identified problems. Various stakeholders were identified those included AWWs, ASHAs, ANMs, members of self-help groups, teachers, adolescents, local political leaders, *Gram Sevaks*, BLOs, medical officers and other volunteers. A comprehensive model which we later termed as the "Water Wheel Model," was developed involving maximum stakeholders possible to deliver health education to the community and increase the awareness among people.

Figure 2
Illustration of the Water Wheel Model

A water wheel which is used in the traditional irrigation method, pumps out available water from the source to the agricultural fields by its continuous rotation. Analogically, dissemination of the available health-related information *(*water source*)* towards the community *(*agricultural fields*)* by various stakeholders *(*the pedals in the water wheel*)*, is the concept behind the above stated model. Various platforms for training and providing health education were also identified which consisted of Anganwadi Health Committee, self-help group meetings, meetings with workers of MGNREGA, VHSNC, Kishore Samooh, meetings with frontline health workers.

Supportive supervision was provided for active surveillance activity carried out by the state government. Surveillance teams along with ASHAs and AWWs visited every house in the selected area. Suspected cases were identified and accordingly advised. For the community, guidelines were circulated by door-to-door campaigns, mike announcements on rickshaw, street plays and also through social media. Another innovation was Participatory Learning and Action in containment zones including religious leaders, political leaders and the local administration. This helped in raising awareness of the people and encouraging them to follow the guidelines that resulted in drop in the number of COVID-19 cases in the area.

After the release of an SOP dated 8 September 2020 by the Ministry of Health and Family Welfare for voluntary reopening of schools, it was felt as a normative need to assess the readiness of the schools to reopen in a conducive and safe atmosphere to accept students. Rural and urban public schools were assessed for safety and readiness using CDC's Readiness and Planning Tool. The guidance document was not directly applicable for Indian schools, which created a need for development of an indigenous checklist. An indigenous checklist that could serve as a guiding document both for assessment and implementation of mitigation measures was developed, with three domains, viz., (i) Procedural Readiness, (ii) Supplies, Sanitation and Infrastructure-related and (iii) Education and Training.

The deficits identified through the assessment were highlighted during the training and awareness sessions conducted for the teachers. The idea behind choosing teachers as the bridging link in dissemination of proper and adequate information for awareness was emphasized in the session (Figure 3).

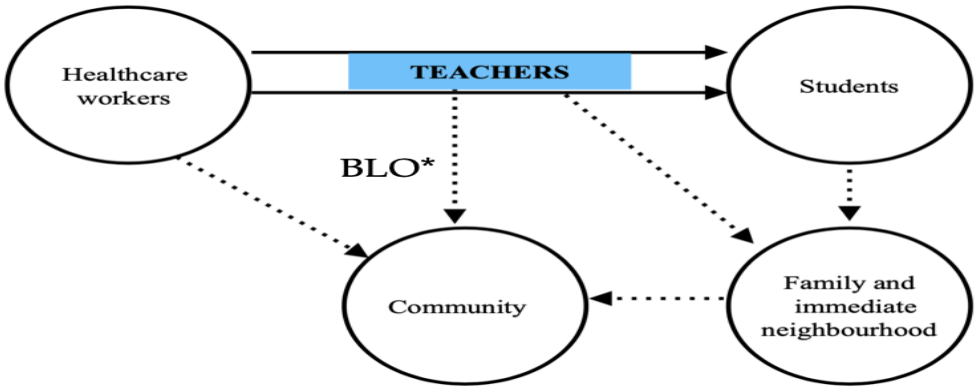


Figure 3
Teachers as Bridging Link in Disseminating the Right Information to Generate Awareness in the Community. **BLO - Booth Level Officers*

The implementation of the mitigation measures in the school was overviewed and found that the teachers were skilled and confident in handling the work better. The information discussed in the session and the IEC materials provided were shared among students through electronic media and prints were given to the teachers who were present during the training session. IEC materials related to the prevention of COVID-19 were displayed at various places in the school. Re-arrangement of infrastructure with physical distancing norms was discussed.The experience gained in the field can be comprehensively summarized into three operational steps which will help in implementation of the same practice in any Indian school, making them conducive and safe for reopening. These three steps are:

- Problem identification using the "Readiness checklist."
- Obtain baseline information and innovative measures, if any.
- Implement rectifying measures by supportive supervision.

Discussion

Leadership has been described as the behaviour of an individual when directing the activities of a group towards a shared goal. The key aspects of the leadership role involve influencing group activities and coping with change.[6] Effective leadership with a partnership-driven solidarity response to the pandemic is the requisite not only at the individual or organizational level but also at the national level and even between all countries for achieving victory in challenging the pandemic. All countries across the globe have played their active role through adhering to International Health Regulations, maintaining travel restrictions, developing treatment, vaccines and other preventive measures through research, showing solidarity and providing financial, technical and logistic support to other countries.[7]

Health care professionals and their organizations can play a critical role in alleviating health problems of a country through informed leadership. They are also vital in education and training of all levels of health care professionals.[8] All such collateral, multidisciplinary leadership should ideally be in a dynamic state of cooperation, working collectively as a 'whole system' and striving towards a common purpose. Systems thinking and widespread leadership has been seen to be essential at all levels within the healthcare system, for safe and effective patient care throughout this pandemic.[9]

Being intimately engaged with the community and providing services at all the levels of prevention, the experts of Community Medicine and Public Health can lead the way in policy-making and strategy formulation. The Joint Statement by the IAPSM, IPHA and IAE had focused on engagement of expert technocrats in the various related areas that is epidemiology, public health, preventive medicine and social scientists to bolster the Government efforts in combating the present pandemic of COVID-19.[10]

An important lesson that emerged during the mammoth pandemic of COVID-19 is distributing leadership. Addressing the challenges and overcoming a complex crisis of such an unprecedented scale, requires a team rather than the leaders acting alone. This calls for a collective leadership, tapping the potential of everyone in the team. While the top leaders can play a decisive role being involved in policy-making, the team can formulate efficient roadmaps for achieving the goals and responding to the crisis. Such a way of distributing and sharing the leadership responsibility will result in ownership and create motivated teams, improve decision making, and enhance commitment to realize the common goal.[11] Such a role of collective

leadership has been excellently played by team IAPSM with its able top-level leaders, efficient mid-level professionals and a huge strength of committed young members across the country.

Early in the pandemic in March 2020, a clustering of cases of pneumonia amongst doctors and paramedical staff suspected to be due to COVID-19 were reported in a city of Rajasthan. Immediate public health actions were taken by a team led by the district administration and public health and medical professionals with guidance from central and state-level experts. Such exemplary leadership, along with a dedicated team and community support paved the way to overcome the challenge with meticulous planning and its execution which can become a model for the rest of the country.[12] IAPSM Members of the Department of Community Medicine of Medical Colleges across the country have been exhibiting their leadership skills in this pandemic. Community Medicine Department of a Medical College with Dedicated COVID Hospital in Delhi has documented its best practices during the first phase of the pandemic. The Faculty Members and Residents of the department have been in the forefront of various activities providing managerial, clinical as well as community care through policy making, surveillance activities, preventive strategies, immunization, primary care, capacity building and awareness generation. In addition, they all generated evidence-based strategies which in turn, contributed to achieving the objective of containing the situation at the national level.[13] A Medical College in North India has also documented the work done by the College and contribution of the Department of Community Medicine and School of Public Health through a multi-disciplinary model, in jointly striving to provide the best of services in all areas of surveillance and preventive activities, provision of care and management, advisory role and conducting research.[14]

Health system strengthening has been a focal point, and this aspect has been delved into by the leaders of IAPSM.[15] Primary healthcare facility preparedness for outpatient service provision during the COVID-19 pandemic was assessed,[16] scope of utilization of telemedicine,[17] setting up of control room for COVID-19,[18] online counselling services for promotion and preservation of mental health,[19] assessment of herd immunity through seroprevalence surveys for policy making regarding vaccination programme[20-22] have been delved into. Health problems associated with COVID-19 has also been a thrust area for which mathematical model-based forecasting of COVID-19 and Tuberculosis was done,[23] threat of tobacco use,[24,25] and challenges faced by the deaf and hearing impaired due to wearing masks[26] were assessed.

Development of human resources for health is essential for improving the health system and delivery of its services. Professional organizations can play an important role in the process. Of the various options suggested for this, one is development of public-private partnership model for which professional organizations can be key stakeholders in implementation.[27] IAPSM has fulfilled this role by way of linkage between public and private organizations through its Members holding responsible positions and being competent team members in such organizations, contributing to human resource development and guiding the way.

Conclusion

Indian Association of Preventive and Social Medicine is a professional organization that has set an exemplary precednts in leading the battle against COVID-19 in the country, being in the forefront of advisory, service delivery, capacity building and research goals at all levels from international, national, state, district, organization, to the most peripheral community-level. This has been possible because the organization is comprised of a closely interconnected, highly-skilled group of professionals with able top-

level leaders, efficient mid-level professionals and a huge strength of committed young members who are committed to achieve the highest level of health for the country.

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जन स्वास्थ्य प्रबंधन एवं नेतृत्व पर राष्ट्रीय स्वास्थ्य मिशन के अंतर्गत कार्यक्रम प्रबंधकों की क्षमता निर्माण : अनुभव एवं आगे की राह

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सारांश

कोविड–19 नोवेल कोरोना वायरस के कारण होने वाली बीमारी है जिसके कारण विश्व भर में तबाही की स्थिति है तथा भारत भी इससे बहुत अधिक प्रभावित हुआ है। भारतीय निवारक एवं सामाजिक चिकित्सा संघ (आईएपीएसएम) एक व्यावसायिक संगठन है जिसने इस नाजुक दौर में देश के नेतृत्व में एक अनुकरणीय भूमिका निभाई है। कुशल एवं सक्षम सदस्यों के प्रभावी नेतृत्व में, आईएपीएसएम अंतरराष्ट्रीय, राष्ट्रीय, राज्य, जिला, संगठन से लेकर सबसे परिधीय समुदाय के सभी स्तरों तक सभी स्तरों पर सलाहकार, सेवा वितरण, क्षमता निर्माण और अनुसंधान में अग्रणी रहा है। यह इसलिए संभव हो पाया है क्योंकि यह संगठन व्यावसायिकों के एक करीबी, उच्च–कुशल समूह से बना है, जो कोविड-19 महामारी पर विजय प्राप्त करने की परिकल्पना एवं मिशन को साकार करने के लिए प्रतिबद्ध है, तथा इस तरह देश में स्वास्थ्य के उच्चतम स्तर को प्राप्त कर रहे हैं।

मुख्य शब्दः नेतृत्व, आईएपीएसएम, कोविड-19, महामारी, क्षमता निर्माण।

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