Strengthening Public Health Partnerships in India: Envisioning the Role of Law Enforcement During Public Health Emergencies

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Abstract

Unique challenges posed by complex public health emergencies have often called for institutions, responsible for restoring health, well-being, and order among affected populations, to realign their operating procedures and work in concordance with each other. To ensure optimal health, the growth of the individuals and societies, and development in a greater sense, it is essential to understand the scope of collaboration between law enforcement agencies and public health institutions during emergencies and their aftermath. To foster such partnerships, policy-level advocacy to overcome challenges posed by existing policies and legislation that limit the autonomy of the law enforcement and public health institutions for making informed decisions would be necessary. Human resources working at different levels should be sensitized about the nature and significance of the kind of collaboration, and they should be allowed to express and clarify their doubts about the same. Evidence-based standard operating procedures should be developed for different cadres of professionals, keeping harmony with the operational diversities. Critical issues such as financing the ventures, coordinating and implementing the protocols and projects, following up the cases and suspects, and examining every scenario using evidence-based scientific and legal methodologies would be crucial for the success of such collaborations.

Keywords: Disasters, India, law enforcement, outbreak, partnership, police, public health, public health emergencies

Introduction

There is an old saying-"public health is public wealth" which emerged prominently in European countries during the mid-16th century when most of the nations started to compete with each other to protect their economies in varying market conditions.[1] The rise of new nations across the globe and new classes with the societies gave validation to the discourse of how the collective wealth of health and well-being can be protected at community and state level. In many countries, numerous treaties were adopted to specify the intention of the states to protect the citizens.[2] These treaties were based on different aspects of socioeconomic events such as birth and death, production of food and other consumables, living conditions, the health of special population groups, environmental hazards like flood and drought, man-made crises like war and famine, and so on.[1,2] With evolving specialization of the working classes and administrative wings, "modern policing" emerged with a conception of protecting lawful rights of the citizens and fostering justice in unwanted situations.[3]

In contrast, "public health" was conceptualized as a domain consisting of experts from different professionals working together to investigate the determinants of health status and diseases with an approach to utilize the same to make desired changes in the health status of the target population.[3] Eminent scholars such as Johann Peter Frank, George Rosen, Auget de Montyon, and Michel Foucault discussed an overlapping field between law enforcement agencies and medical professionals.[1] They named a discipline as "medical police" dedicated to resolving the issues emaciated in the social aspects of health and well-being.[1-3] In many countries including the United Kingdom, Portugal, France, and Spain, a lot of treatises and institutional efforts have been made to advance medical policing to protect lives and prevent adverse scenario within the sociopolitical paradigms.[1] However, with changing economic

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determinants within the nations, the idea of medical police did not flourish and sustain in policies and practices, but the essence of a collaborative approach to improving the lives on the citizens was not lost entirely.

In critical situations like natural disasters or violence at individual and community level, law enforcement agencies and public health authorities have been sharing their resources and expertise to work together. This collaboration has benefited both of the institutions and the nations as a whole. Despite limited evidence of such efforts in low- and middle-income countries like India, increasing burden of population health problems and high rate of criminal activities are often reported, which collectively affect the well-being of the population and productivity of the same. To ensure optimal health, the growth of the individuals and nation, and development in a greater sense, it is essential to understand the scope of collaboration between law enforcement agencies and public health institutions during emergencies and their aftermath.

Public Health Emergencies in India

A public health emergency is defined as "an occurrence or imminent threat of an illness or health condition, caused by bioterrorism, epidemic or pandemic disease, or a novel and highly fatal infectious agent or biological toxin, that poses a substantial risk of a significant number of human facilities or incidents or permanent or long-term disability."[4] From the national perspective, numerous hazards have the potential to cause the declaration of a public health emergency, including chemical emergencies (e.g., nerve agents), radiation emergencies (e.g., nuclear leaks and explosions), bioterrorism (e.g., anthrax), natural disasters (e.g., hurricanes, floods, earthquakes, and tsunamis), infectious disease outbreaks and pandemics (e.g., severe acute respiratory syndrome or H1N1 swine flu), and mass casualties resulting from terrorist attacks.[5]

The magnitude, determinants, and impacts of these public health emergencies vary from place to place and time to time. Earlier in India, several incidences of the outbreak of diseases [Table 1] have drawn the attention of national and global institutions which can be used as examples to illustrate the severity of such emergencies in this context. These episodes of public health emergencies necessitate immediate medical support; however, the public health professionals would also adopt additional approaches to identify the sources, mechanisms, and modes of transmission of the outbreak and devise appropriate strategies to stop the outbreak and prevent future incidences. Even if the fatality due to some natural disasters might be comparatively lower, the quality of living of those affected is often compromised to a large extent; which eventually leads to poor health outcomes. Being a geographically diverse country, India has experienced numerous natural disasters in the past. A list of notable natural disasters in India is presented in Table 2. In addition to these disasters and outbreaks as described earlier,

Table 1: Notable public health emergencies in India resulting from disease outbreaks

Name and description of the outbreak	Year of occurrence	Number of deaths
H1N1 seasonal influenza outbreaks[6] Most of India affected. Maharashtra, Gujarat, and Rajasthan being affected the worst. Only Sikkim and Lakshadweep spared	2009	981
	2010	1763
	2011	75
	2012	405
	2013	699
	2014	218
	2015	2990
	2016	265
	2017	2270
	2018	1103
	2019 (as on March 10, 2019)	605
Nipah virus disease outbreak Latest in Kerala[7]	2018 (as on July 17, 2018)	17

Sources: Sources cited with respective disease outbreaks quoted

global crises like the outbreak of newer diseases or conditions can affect the population health in India due to population dynamics. Moreover, the entire world is moving toward a digital revolution where patient data and much confidential information can be manipulated, breaching the medical and legal boundaries, which can result in varying problems in coming days.[17]

The Need for Collaboration

All the aforementioned public health emergencies may result in closure of public gathering places (such as shopping malls, places of worship, and movie theaters), the dismissal of students from local schools, and the overcrowding of medical facilities and other points of distribution of medication and vaccines that may be specially created for the purpose.[18] Moreover, law enforcement agencies will be expected not only to maintain public order but also to assist public health officials in ensuring compliance with state or local public health orders. Law enforcement representatives will have to work with officials from other community agencies as well, to ensure that their pandemic communication plans complement and support each other. All stakeholders should be informed ahead of time about the risks posed by such a pandemic, how to prepare for one, and how law enforcement's role will change as the situation unfolds.[19] Essentially, all these emergencies would require strategies such as community mobilization, isolation of the cases and/or places, maintenance of logistic support, ensuring the security of the materials and other resources, exploring possible foul play behind the outbreak, and so on. In the context of India, law enforcement agencies can play a critical role to accomplish these goals and facilitate the fundamental strategies to be implemented and thereby the well-being of the population to be achieved.[20] Further, it is necessary to compare different aspects of public health and law enforcement agencies to determine future discourse of how these institutions can contribute individually

and collectively. A comparative analysis of the same (discussed in greater detail by Bulter *et al*.[21]) is presented in Table 3.

This comparison shows differences between public health authorities and law enforcement agencies; however, it also enumerates the strengths of both kind of institutions which can complement each other during emergencies. For instance, a collaborative information system can minimize the time of interagency reporting and serve as a decision support system.[22] Moreover, critically examined pieces of evidence can lead to ensuring justice, and scientific analysis and documentation of the same would add value to improve the knowledge,

Table 2: List of notable natural disasters in India (from 2004 to 2018)

Name of the disaster	Year of occurrence	Location (s)	Losses (mortality, morbidity, economic loss)
Tsunami[8]	2004	Coastline of Tamil Nadu, Kerala, Andhra Pradesh, Pondicherry, and Andaman and Nicobar Islands of India	Over 10,749 deaths 5640 people missing 2.79 million people affected 11,827 hectares of crops damaged 300,000 fisher folk lost their livelihood
Maharashtra floods[8]	2005	Maharashtra state	Over 1094 deaths 167 injured 54 missing
Cycle nisha[8]	2008	Tamil Nadu	Around 204 deaths
Kosi flood[8]	2008	North Bihar	Over 527 deaths 19,323 livestock perished 223,000 houses damaged 3.3 million lives affected
Krishna floods[8]	2009	Andhra Pradesh	Around 300 deaths
Drought[8]	2009	252 districts in 10 states	20 farmers committed suicide 10 million tonnes lesser crops were harvested
Cloudburst[8]	2010	Leh, Ladakh in J and K	Around 257 deaths
Sikkim earthquake[8]	2011	North Eastern India with the epicenter near Nepal border and Sikkim	Around 97 deaths
Odisha floods[8]	2011	19 districts of Odisha	Around 45 deaths
Cyclone Nilam[8]	2011	Tamil Nadu	Around 65 deaths
Landslides and flood[8]	2013	Uttarakhand and Himachal Pradesh	Over 4094 deaths
Andhra floods[8]	2013	Andhra Pradesh	Around 53 deaths
Cyclone Hudhud[9]	2014	Andhra Pradesh, Uttar Pradesh	Around 46 deaths
Jammu and Kashmir floods[10]	2014	Jammu and Kashmir	Over 300 deaths
Heatwave[11]	2015	Andhra Pradesh	Around 1369 deaths
Tamil Nadu floods[12]	2015	Tamil Nadu	Over 340 deaths
Heatwave[13]	2016	Rajasthan	Over 1600 deaths 330 million affected
Bihar floods[14]	2017	Bihar	Over 514 deaths 171,64 lakh lives affected
Kerala floods[15]	2018	Kerala	Over 483 deaths
Dust storms[16]	2018	Rajasthan, Uttar Pradesh	Over 100 deaths

Sources: Sources cited with respective disasters quoted

Table 3: Comparison between law enforcement and public health authorities

Characteristics	Law enforcement agencies	Public health
Process of recognizing a notifiable event	News report, announcement by the attacker, etc.	Self-reporting, surveillance systems, medical records
Data collection	Intelligence reports, examining the scenes and pieces of evidence, questioning the witnesses and suspects	Generating hypothesis, "shoe-leather epidemiology"
Confirmatory approach	Organization of collected pieces of evidence	Different epidemiological studies
Validation of data	Arresting the culprit and subsequent legal procedures	Peer review by subject matter experts
Goal of pursuing the investigation	Preventing future attacks	Disease prevention and control
Operational challenges	Large number of incidents make it challenging to identify and prioritize the cases	Difficulties in differentiating between natural diseases and outbreaks or unusual events

Source: Butler *et al*.

policy-making, and practices about similar emergencies in the future. Last but not least, collaborative approaches can bring strengths on the same platform; therefore, minimize the weaknesses by sharing the strengths during complex humanitarian emergencies in India.

The Way Forward

Despite promising evidence in many developed countries, a collaboration between law enforcement agencies and public health authorities can be challenged by existing policies and legislation which might not provide adequate autonomy to the institutions or the officials for making informed decisions.[21] Crises like this should be addressed by advocating at the policy level showing the magnitude of such public health emergencies. Another challenge would be sharing the resources and optimizing the operational aspects of such collaborations. Human resources working at different levels should be sensitized about the nature and significance of that kind of collaboration, and they should be allowed to express and clarify their doubts about the same.[21,23] Understanding the responsibilities of partnering agencies can foster empathy and cooperation among the team members.

Furthermore, maintaining the quality of services and minimizing delays or errors should be a priority. Therefore, evidence-based standard operating procedures (SOPs) should be developed for different cadres of professionals, keeping harmony with the operational diversities.[24] These SOPs should be designed based on the context-specific data focusing on the preparedness toward the emergencies. Moreover, different kind of emergencies should be evaluated thoroughly to make the SOPs resilient to emerging problems. More importantly, timely monitoring and learning exercises can promote accountability at individual and institutional levels and facilitate future improvisation initiatives. Furthermore, the health of those working together to make lives better requires cautious attention.[21] People from both institutions should understand the medical and legal aspects of an emergency and protect themselves from potential harms. For instance, if we consider a pandemic flu outbreak as a potential scenario, the pandemic will affect how the local law enforcement agencies operate. It is predicted by some experts that the percentage of employees affected in some way during a flu pandemic (e.g., exposed, infected, or unable to work because of responsibilities toward sick family members) will range from 10% to 40%, and as a result, departments will lose staff members.[25] Agencies will need to activate their internal emergency operations' plans, prioritizing and shifting resources to the most critical operations. Calls for service will likely increase dramatically; however, with fewer officers available to work, response time will suffer, and services will be reduced. Problems like this are often ignored which results in mortalities and morbidities that could be prevented with timely interventions.

Conclusion

Effective and efficient collaboration is the key to optimize the usage of resources as well as competencies and achieve the mutual goals and objectives of law enforcement and public health.[21,23] Global evidence suggests to strengthen the bonds between two agencies and engage in building the capacities for emergencies before they strike the lives of millions.[1,21] Critical issues such as financing the ventures, coordinating and implementing the protocols and projects, following up the cases and suspects, and examining every scenario using evidence-based scientific and legal methodologies are crucial for the success of such collaborations.[26] Last but not the least, strong leadership with a shared vision can initiate and sustain such collaborations between law enforcement and public health-yielding greater impacts on population health, through managing public health emergencies in India.

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Conflicts of interest

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