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Role of Public Health in Pandemics

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ABSTRACT

While all sectors of society are involved in preparedness and response, public health plays a significant role in pandemics. Yet the work of public health is invisible and largely unrecognized by society. It may be due to the fixation on front liners and not having a sight of larger perspective. But the current pandemic sheds light on the need to support public heath activities such as disease surveillance, epidemiology, laboratory capacity, all-hazards preparedness and response; policy development and support; communications; community partnership development; and organizational competencies.

Keywords: *Pandemic; Public health; Role.*

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INTRODUCTION

Plagues (sicknesses that influence explicit populaces inside known geological territories) and pandemics (which cause contamination among individuals in all pieces of the world) have created in corresponding with the development of people. Viral respiratory diseases, for example, flu have intermittently caused overall pandemics. Once humans began to live in close proximity to their fellow man the lack of good personal hygiene and sanitation ultimately led to the emergence of communicable diseases. For decades, public health have directed the containment of emerging pandemics -- perhaps most notably -- the worldwide eradication of smallpox starting in the early to mid-1960s.[1] From influenza to smallpox, the establishment of systematic reporting systems and prompt action based on results have enabled public health to lead the charge in containing emerging pandemics.

PUBLIC HEALTH IN PANDEMICS

Pandemics are large-scale outbreaks of communicable disease which will greatly increase morbidity and mortality over a good geographical region and cause significant economic, social, and political disruption.[2] These trends likely will continue and can intensify. Significant policy attention has focused on the necessity to spot and limit emerging outbreaks which may cause pandemics and to expand and sustain investment to create preparedness and health capacity.[3]

Public health plays a critical role in working with health and non-health sectors responsible for preparing for and responding to emergencies, yet have limited resources and competing priorities in delivering community health protection and promotion programs. While emergencies tend to raise awareness about the significance of being prepared, public health agency readiness activities operate largely in the background until an event occurs. Public Health focus on early detection and treatment (known as screening) and therapies (chemoprophylaxis) for disease prevention. In a public health approach, we consider everyone and examine what keeps people healthy.[4] Social and economic determinants of health are much more strongly related to health outcomes than biologic factors. Many challenges exist worldwide that increase the danger that outbreaks will occur and spread rapidly, including increased risk of infectious pathogens "spilling over" from animals to human, development of antimicrobial resistance, the spread of infectious diseases through global travel and trade, acts of bioterrorism, weak public health infrastructures.

HOW DOES PUBLIC HEALTH STOP POTENTIAL PANDEMICS FROM SPREADING?

Public health focuses on systems that job hand-in-hand to assist countries detect and contain public health threats.

- Surveillance systems to rapidly detect and report cases
- Laboratory networks to accurately identify the explanation for illness
- A trained workforce to spot, track, and contain outbreaks
- Emergency management systems to coordinate an efficient response

It should also be ready to:

- Provide reliable information on the risk, severity, and progression of a pandemic and the effectiveness of interventions used during a pandemic;
- Prioritize and continue the provision of health-care during a pandemic;
- Enact steps to reduce the spread of disease in the community and in health-care facilities; and
- Protect and support health-care workers during a pandemic.

Professionals employed by public health departments are also on the front lines of the pandemic, working to protect communities from exposure to this relentless virus. Activating and mobilizing emergency preparedness plans during local emergency or outbreak response. Serving as communicable disease experts.[5] During disease outbreaks, epidemiological experts conduct investigations, contract tracing, monitor suspected cases, enforce isolation and quarantine protocols and set up mass clinics. Assisting and connecting vulnerable or under resourced individuals to life- sustaining resources like housing, nutritious meals, utilities and health or mental health services. They also serve as a lynchpin for community partnerships with hospitals, clinicians, colleges, schools, businesses, community based organizations and volunteer groups. Upholding state and local laws.

Public Health law grants authority to local health officials to respond to disease threats. Keeping community members informed by answering questions, providing up-to-date information about the outbreak and the local community impact, and recommendations for how best to protect your family from exposure.[6] Application of public health measures will, to some extent, reduce the quantity of individuals who are infected, need medical aid, and die during an epidemic. they're going to probably also reduce the numbers full of severe epidemics. By lowering and maybe delaying the height of an epidemic curve.[7] The measures could also mitigate the secondary consequences of pandemics that result when many of us fall sick without delay, i.e. the impact of mass absenteeism on key functions like delivering healthcare and maintaining food supplies, fuel distribution, and utilities, etc. Public health measures may even delay the height of the epidemic curve of an epidemic until nearer the time an epidemic vaccine starts to become available, thereby possibly also reducing the fullnumbers affected. Also, theoretically, they'll delay the heightuntil influenza transmission declines naturally within the summer months.

With interventions:

- Delay and flatten epidemic peak
- Reduce peak burden on healthcare systems and a threat to other essential systems through high levels of absenteeism
- Somewhat reduce the full number of cases
- Buy a bit time

While we can't predict exactly when or where the subsequent epidemic or pandemic will begin, evidence suggests the likelihood of pandemics is often there, that the greatest value of obligations may ultimately be the development within the way countries manage everyday public-health issues.

WAYS FORWARD

Public health is vital to society's well-being, and it must be safeguarded against the whims of partisan politics. Despite the fact that many parts of public health are inherently political, its success is dependent on wide bipartisan support and dedication. Lastly to handle today's challenges, proper independent national institutions and governance models will be required to protect the quality and integrity of science and public health.

CONFLICT OF INTEREST

None

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