

COVID-19 Pandemic: An Opportunity for Public Health Learning

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My opinion

Coronavirus disease 19 (COVID-19) pandemic is indeed the most critical global incident for many decades. It has touched almost all humans, regardless of their race, gender, age, socioeconomic status or educational level (1). Although the influence of the pandemic on our lives was variable, nobody was protected. By the time this report was written, more than 44 million were infected worldwide and more than 1,173,200 have died of the virus. Many of us lost their beloved parents, friends and relatives. Millions suffered from loneliness and fear during isolation and quarantine. Many others lost their jobs and business.

Despite all these negative aspects, the COVID-19 pandemic represents an unprecedented experience for healthcare workers (HCW) in almost all fields but especially those in public health. The pandemic represents a very tough challenge for policymakers, epidemiologists and public health specialists. Not only has it challenged our health systems' preparedness for massive public health threats, but also it has challenged our personal capabilities. It has challenged our leadership capabilities, public health knowledge and health planning and communication skills. Moreover, it has challenged our ability to work together as one team. Therefore, COVID-19 pandemic is an exceptional learning opportunity for public health workers in all countries, especially those in developing countries.

This document is intended to raise our attention to this learning opportunity by performing transparent assessment and evaluating public health workers' performance to control COVID-19 at all levels. The assessment process is very complicated and has many requirements, including access to official data and documents, reliable assessment tools and skilful evaluation team (both internal and external). However, this is of paramount importance not only to continue our fight against the virus but also to be proactive and improve our preparedness for any future public health threats. Moreover, it is an ethical obligation to keep a document that could answer the coming generations' questions about this historical incident. Although, as I believe, this evaluation process is essential for our health systems and institutions, it is also crucial for us

as individuals to learn and build our personal capacities. In the next sections, I will try to identify the areas of particular importance that need to be assessed, the questions (tools) to be answered and the lessons to be learned.

Public Health Emergency Preparedness (PHEP) is essential to respond effectively and rapidly to different public health threats. Public health departments in almost all countries have early preparedness plans. COVID-19 pandemic is an opportunity to evaluate our early preparedness in order to fill any gaps. Reports have shown that China's success in altering the course of the COVID-19 outbreak was partially due to the experience they gained from SARS in 2002 (2). So, we first need to answer an important question: what have we done to strengthen and improve our early preparedness and local epidemic response plans following any previous local epidemics or public health threats. Also, we need to know how these corrective actions were positively reflected in our response to COVID-19. Secondly, we need to decide which aspects of our current early preparedness and emergency operation plans need to be improved to deal effectively with any future threats from the present experience. Thirdly, due to the rarity of major public health threats such as COVID-19, emergency response plans are unlikely to be adequately implemented unless the public health personnel is well trained on these plans (3). Therefore we need to know how well these plans were communicated and how much training was provided to public health workers before the epidemic. Communication and training gaps identified during COVID-19 control should be documented and addressed.

The ten systematic steps of outbreak investigation are well known to all epidemiologists and public health specialists. However, a recent systematic review has shown that these steps are not usually followed and recommended to improve the systematic investigation of epidemics (4). Although it is not generally essential to go through all the steps, we have to be systematic. Therefore, we need to assess the extent to which we managed to translate our theoretical knowledge about systematic outbreak investigation into practice while dealing with the COVID-19 epidemic. We have to evaluate our surveillance systems at all levels and how they have provided timely, complete and valid

data. During such pandemics of emerging infectious diseases, flexibility is one of the essential surveillance systems' attributes. We need to assess how our surveillance systems managed to accommodate the rapid changes in our knowledge about the virus, its transmission, clinical picture and case definitions. Some countries have introduced new electronic surveillance systems during this pandemic. Therefore, it is essential to know how this has influenced the quality of the surveillance data collected during the epidemic. In other countries, it has been observed that surveillance data was collected in various departments without integration. Therefore, we have to evaluate the effect of having such parallel systems on the quality of surveillance data and the better use of human resources. We have to assess how precisely we have performed the descriptive epidemiology to characterize the rapidly growing epidemic in person, time and place. We also need to report any hypothesis that has been generated, how it has been tested and what preventive actions have been taken in response. Moreover, we need to assess how we have monitored the implementation of the interventions and how their impacts have been measured. Last but not least, we need to evaluate the quality of the epidemic investigation report and its communication plan.

The higher authorities design most of the major prevention and control plans against COVID-19 in most countries. However, COVID-19 is also an opportunity to practice public health planning at all levels to build our capacity in this field. Public health workers are commonly required to perform micro-planning and make critical decisions during such epidemics. This includes both activity planning and allocative planning. What we need to assess with this regard is whether we have followed explicitly or implicitly any of the common planning models, such as the comprehensive rationalism, mixed scanning or incrementalism models (5, 6). The degree of stakeholders' participation in planning to minimize resistance to change and facilitate implementation is another special interest area.

Achieving the goals in our fight against COVID-19 requires both good planning for epidemic control and proper implementation of the control plans. Therefore, we need to identify the aspects of our control plan that were implemented successfully and those which were poorly implemented. It's worth mentioning that by poor implementation, we mean delayed implementation, non-implementation or implementation differently from that planned. It is also important to identify the possible causes of poor implementation of any part of COVID-19 control plans. Poor implementation of

public health plans could be due to changes in policies, resistance to change from within the health service or from outside and lack of resources, including both financial resources and trained staff. Besides, plans may not be appropriately implemented if the tasks and activities are not precisely described or if the required managerial skills are lacked (5). By conducting this evaluation, public health workers will be able to recognize barriers to the implementation of future public health plans and how these barriers could be overcome. They will also learn how plans could be changed or modified if their implementation is deemed impossible.

Different local bodies and teams are commonly created as a part of our local response to the COVID-19 epidemic. Each of these teams will have its own scope, responsibility and field of work; however, none of these teams could work independently. For example, the contact tracing teams are dependent on the surveillance teams and so on. Therefore, it is essential to evaluate the communication plan between COVID-19 control teams and how this plan has been implemented. We have to assess how surveillance data have been shared. In addition to this internal communication, we have to assess the risk communication plan. The WHO defines risk communication as "the exchange of real-time information, advice and opinions between experts and people facing threats to their health, economic or social well-being" (7). We need to assess our risk communication plan, its implementation and its impact. How have we managed to deal with the rapid change in recommendations? COVID-19 pandemic has been associated with the revolutionary use of information technology and mobile applications. So, we have to assess how this cost-effective technology has been used to reach the most at-risk population. Also importantly, we need to assess the other communication channels that have been used to deliver preventive messages to the marginalized groups in the community. Finally, we need to know whether we have been able to identify and deal with rumours and misinformation.

Teamwork is the key to success during such epidemics. Dealing with emergency situations as a team is unlikely to succeed unless we have competent and skilful leaders at different levels. In addition to innate leadership characteristics such as honesty, ethics, loyalty, creativity, commitment and responsibility, great leaders should demonstrate some learned skills that enable them to lead well. These learned skills include critical thinking, delegation, motivation, coaching, negotiation, courage and

decision making (8). COVID-19 is an opportunity for team leaders at all levels to demonstrate their leadership capacities and skills. It is also an opportunity for them to learn and practice these skills under stressful situations, which might be quiet challenging. The assessment of our leader's performance and leadership capacity is important and will help us design leadership capacity building programs.

Community participation has a vital role in our response to COVID-19 as it increases compliance with preventive instructions such as lockdown and provides support through volunteering. Community volunteers also offer innovative ideas, identify barriers and their solutions and help us identify the special needs of particular groups in the community (9). Many community members and aid groups have volunteered in many countries and expressed their desire to participate in our response to COVID-19. Therefore, we need to assess how successfully we have planned for and mobilized the community to participate. Secondly, we need to evaluate how aid groups and volunteers' participation was positively invested in COVID-19 control. Finally, we have to assess whether this opportunity has been exploited to build a robust partnership with active community members that could be used for any future health promotion programs.

Since the beginning of the COVID-19 pandemic, vast numbers of research papers have been published worldwide. These researches have been done by researchers from different disciplines. This multidisciplinary research activity is vital to investigate and mitigate the infection's physical, mental and social complications (10, 11). Looking at the role of the academic community in shaping public health policies and prioritizing decisions about COVID-19 worldwide, we have to assess the role of our local academic community in this regard. How many local studies on COVID-19 have been conducted? To what extent have these studies influenced our local public health plans and decisions? We also need to assess our role as public health leaders in encouraging and directing the local research community to the local needs and priorities.

Finally, documentation of all plans, activities, decisions and incidents during our response to the COVID-19 pandemic is essential. Public Health documents are necessary for the monitoring and evaluation of the response and its impact. They represent essential references to be used in the future to respond to any similar threats. These documents are also an important source of data for future researches. The documents must include the meeting's agenda and

recommendations, response plans, decisions, monitoring and evaluation reports and case reports. We have to assess how perfectly documents are designed and stored. It is also important to specify the persons and places where all records are collected and stored to facilitate quick access to COVID-19 response data.

References

1. Rose-Redwood R, Kitchin R, Apostolopoulou E, Rickards L, Blackman T, Crampton J, et al. Geographies of the COVID-19 pandemic. *Dialogues in Human Geography*. 2020;2043820620936050.
2. AITakarli NS. China Response to the COVID-19 Outbreak: A Model for Epidemic Preparedness and Management. *Dubai Medical Journal*. 2020.
3. Biddinger PD, Savoia E, Massin-Short SB, Preston J, Stoto MA. Public Health Emergency Preparedness Exercises: Lessons Learned. *Public Health Reports*. 2010;125(5_suppl):100-6.
4. Kurup KK, John D, Ponnaiah M, George T. Use of systematic epidemiological methods in outbreak investigations from India, 2008–2016: A systematic review. *Clinical Epidemiology and Global Health*. 2019;7(4):648-53.
5. Health service development and planning 2017 [2/07/2020]. Available from: <https://www.healthknowledge.org.uk/public-health-textbook/organisation-management/5d-theory-process-strategy-development/health-service-development-planning>.
6. Green A. *An Introduction to Health Planning in Developing Countries*. edition s, editor: Oxford University Press; 2006. 239-57 p.
7. World Health Organization General information on risk communication [July 3, 2020]. Available from: <https://www.who.int/risk-communication/background/en/>.
8. Kurec A. Follow the Leader: Developing Great Leadership Skills. *Critical Values*. 2016;9(4):24-7.
9. Marston C, Renedo A, Miles S. Community participation is crucial in a pandemic. *The Lancet* 2020;395(10238):1676-8
10. Holmes EA, O'Connor RC, Perry VH, Tracey I, Wessely S, Arseneault L, et al. Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science. *The Lancet Psychiatry*. 2020;7(6):547-60.
11. Orton L, Lloyd-Williams F, Taylor-Robinson D,

O'Flaherty M, Capewell S. The use of research evidence in public health decision making processes: systematic review. PloS one. 2011;6(7):e21704

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