

Evidence-Based Public Health in COVID-19 Pandemic Affected Humanitarian Settings: A Call for Rapid Evidence-Based Response

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Abstract

The COVID-19 pandemic highlights the importance of updating global evidence-based guidance to address context-specific and emerging needs in humanitarian settings. This review discusses the role of evidence-based public health practice in addressing the impact of the COVID-19 pandemic in humanitarian settings.

Keywords: *COVID-19 Pandemic; Evidence-Based Public Health; Humanitarian; Evidence-Based Response*

Introduction

As the COVID-19 pandemic continues to spread around the world, its adverse effects are increasingly evident in individuals affected by humanitarian emergencies. Overcrowding, limited access to preventive and preventive health services, poor water, sanitation, and hygiene services, poor governance, distrust of officials, and increasing stigma and discrimination are among the many risk factors that make the prevention and management of COVID-19 particularly challenging in such settings [1]. These include conflict-affected countries such as South Sudan, Yemen, and Syria, refugee settings in Bangladesh and Lebanon, as well as internally displaced persons in Ethiopia and the Democratic Republic of Congo. The direct and indirect effects of COVID-19 and the response to controlling its spread in these environments are currently under-documented and researched [2-4].

Purpose of the Study

The purpose of this study is to review the critical literature on the role of evidence-based public health practice in mitigating the impact of the COVID-19 epidemic in humanitarian settings.

Methods

A literature search was performed in PubMed, Google Scholar, and Semantic Scholar using the following keywords: "Coronavirus", "COVID-19", and "SARS CoV 2", "evidence-based public health", "evidence-based response", "public health emergency", humanitarian settings", and "humanitarian crisis". The studies included in the review were: (1) peer-reviewed articles published in the English language; (2) papers discussing the role of evidence-based public health practice to reduce the impact of COVID-19 in humanitarian settings and (1) papers describing the evidence-based responses to the COVID-19 pandemic. Studies involving other diseases, letters, and unpublished works were excluded.

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Results and Discussion

What is evidence-based public health?

Evidence-Based Public Health (EBPH) is the process of integrating science-based interventions with community priorities to improve the health of the population [5]. EBPH places a high priority on the perspective of community members. This focus can be viewed as a population-centered approach to public health, with the perspectives of the affected population at the forefront of decision-making regarding public health interventions. The term science-based includes many disciplines other than epidemiology that provide a scientific basis for public health, including sociology, psychology, toxicology, molecular biology, anthropology, nutrition, engineering, economics, political science, and more. Science-based is a deliberately broad term that includes quantitative and qualitative approaches to data collection that affect public health practice.

EBPH practice is the development, implementation, and evaluation of effective programs and approaches in public health through the systematic use of data and information systems and the application of scientific reasoning principles, including the proper use of behavioral theory and program planning models. EBPH is based on the principles of good practice, integrating good professional judgment with appropriate, systematic research. There is a strong recognition of identifying evidence of the impact of various policies and programs on public health, translating that evidence into recommendations, and the extent to which that evidence can be used in public health practice. As with clinical intervention, planning to address population-based health issues usually takes place in the context of limited resources. Therefore, decision-makers should invest in proven, low-cost solutions. Evidence of the effectiveness of interventions such as programs, practices, or policies can be used to provide advice for selecting specific action or to justify the allocation of funds and other resources.

EBPH to inform COVID-19 treatment decisions

COVID-19 is an infectious disease caused by the newly discovered coronavirus, acute respiratory syndrome coronavirus 2 (SARS-CoV-2) [6]. Although COVID-19 is primarily a respiratory infection, increasing data show the potential for systemic involvement in patients with the disease, including cardiovascular, neurological, and dermatological manifestations [7]. The pathophysiological course of COVID-19 is proposed to include three distinct stages [8]. In the early stages of infection, the SARS-CoV-2 virus enters the epithelial cells in the nasal cavity and multiplies in the upper lung with or without lung involvement [6,8,9]. The second stage is characterized by localized pulmonary inflammation and the development of viral pneumonia with or without hypoxia. In minority patients, the disease enters the third stage, manifesting as an additional pulmonary systemic hyper-inflammatory syndrome with high levels of pro-inflammatory cytokines and potential thrombotic complications [6,8,10]. The growing awareness of the pathogens involved in COVID-19 highlighted the importance of selecting and implementing appropriate treatments for the stage of the disease [8,10]. Since its inception, global efforts to validate effective therapeutic interventions for COVID-19 have resulted in the identification of numerous potential candidates and the launch of thousands of clinical trials of different therapies [11,12].

Moreover, several clinical trials are currently underway to assess the effects of various potential therapies for COVID-19. The large amount of data generated from these studies should be quickly interpreted so that emergency and critical care practitioners have the information to make appropriate treatment decisions and, if effective treatments are available, to be implemented rapidly in clinical practice. Furthermore, getting a quick answer to the question of whether a particular intervention is effective may help researchers involved in many ongoing clinical trials shift their focus and focus to more promising options. Since many emergencies and critical care clinicians are currently using compassionate-use exemptions or off-label prescription-based therapies to treat patients with COVID-19, it is important for them to have access to the latest research evidence to inform their treatment decisions.

To address this evidence gap, international and local EBPH partnerships are needed between researchers, educators, physicians, public health professionals, and policymakers to provide the latest evidence on the best treatment options available for COVID-19. This

information enables frontline healthcare providers to navigate relevant data floods, ensuring that COVID-19 treatment is based on the best available knowledge at the individual and population levels. However, until clinicians evaluate the validity and clinical applicability of research results, evidence alone is not sufficient to make appropriate treatment decisions. Therefore, emergency and critical care clinicians should have an understanding of evidence-based practice such as formulating clinical questions, searching evidence, critically evaluating evidence, and applying in practice.

The use of evidence in COVID-19 pandemic affected humanitarian settings

It is important to study the evidence-utilization processes in COVID-19 pandemic-affected humanitarian settings for several reasons. First, SARS-COV-2 is a new virus and the level of infection is unprecedented, with much of its initial effects on both health outcomes and society being unknown. This unknown nature of the COVID-19 pandemic implies that the current evidence-based guidance to respond to COVID-19 is limited. Without a strong evidence-based, but urgently needed response, it was initially unclear what humanitarians would think about designing and optimizing the program and what exactly needed to be done [13,14].

Second, the lack of context-specific evidence on COVID-19 has opened the door for information initiatives to compile and curate existing knowledge from the past epidemic and to examine emerging evidence and guidelines for quality and relevance. An example of this is the partnership for evidence-based responses to COVID-19 (PERC) [15]. PERC is a consortium of global public health organizations and private sector organizations that support evidence-based efforts to reduce the impact of COVID-19 on African Union (AU) member states. PERC collects social, economic, epidemiological, and demographic data from member countries to assist in determining the acceptance, effectiveness, and impact of public health and social action for COVID-19. PERC was created in March 2020 to provide real-time information and guidance to African Union member states on reducing the impact of COVID-19 on the continent.

The need for evidence-based action to address the public health crisis is well established [16-18]. More recently, however, the COVID-19 epidemic has highlighted the importance of updating global evidence-based guidance to address context-specific and emerging needs in humanitarian settings [19]. For public health and humanitarian agencies to respond effectively to such complex crises, access to the latest evidence-based guidelines outlining what interventions should be recommended and which adaptations may be effective in specific contexts or circumstances is essential [13,14,20]. EBPH is a proven solution to increase the effectiveness, efficiency, and accountability of public health and humanitarian interventions by steering resources towards interventions that prove to be effective, while at the same time providing space for innovative development and evaluation of new strategies.

Conclusion

To achieve highlighted response priorities, governments, public health organizations, humanitarian actors, policymakers, researchers, physicians, and other stakeholders should work collaboratively to support the implementation of the EBPH practice to reduce the impact of COVID-19 on crisis-affected populations.

Conflict of Interests

None.

Bibliography

1. Truelove S., *et al.* "The potential impact of COVID-19 in refugee camps in Bangladesh and beyond: a modeling study". *PLoS Medicine* 17.6 (2020): e1003144.
2. Alemi Q., *et al.* "Refugees and COVID-19: achieving a comprehensive public health response". *Bulletin of the World Health Organization* 98.8 (2020): 510-510A.

3. Alawa J., *et al.* "Addressing COVID-19 in humanitarian settings: a call to action". *Conflict and Health* 14 (2020): 64.
4. Blanchet K., *et al.* "Protecting essential health services in low-income and middle-income countries and humanitarian settings while responding to the COVID-19 pandemic". *BMJ Global Health* 5.10 (2020): e003675.
5. Brownson RC., *et al.* "Evidence-based public health". New York: Oxford University Press (2003).
6. Wiersinga WJ., *et al.* "Pathophysiology, transmission, diagnosis, and treatment of coronavirus disease 2019 (COVID-19): a review". *Journal of the American Medical Association* 324.8 (2020): 782-793.
7. Gavriatopoulou M., *et al.* "Organ-specific manifestations of COVID-19 infection". *Clinical and Experimental Medicine* 20.4 (2020): 493-506.
8. Siddiqi HK and Mehra MR. "COVID-19 illness in native and immunosuppressed states: a clinical-therapeutic staging proposal". *Journal of Heart and Lung Transplantation* 39.5 (2020): 405-407.
9. Hoffmann M., *et al.* "SARS-CoV-2 cell entry depends on ACE2 and TMPRSS2 and is blocked by a clinically proven protease inhibitor". *Cell* 181.2 (2020): 271-280.e278.
10. Inciardi RM., *et al.* "Coronavirus 2019 disease (COVID-19), systemic inflammation, and cardiovascular disease". *Journal of the American Heart Association* 9.16 (2020): e017756.
11. Gudadappanavar AM and Benni J. "An evidence-based systematic review on emerging therapeutic and preventive strategies to treat novel coronavirus (SARS-CoV-2) during an outbreak scenario". *Journal of Basic and Clinical Physiology and Pharmacology* 31.6 (2020).
12. Juul S., *et al.* "Interventions for treatment of COVID-19: Second edition of a living systematic review with meta-analyses and trial sequential analyses (The LIVING Project)". *PLoS ONE* 16.3 (2021): e0248132.
13. Odium A., *et al.* "Use of COVID-19 evidence in humanitarian settings: the need for dynamic guidance adapted to changing humanitarian crisis contexts". *Conflict and Health* 15.1 (2021): 83.
14. Singh NS., *et al.* "COVID-19 in humanitarian settings: documenting and sharing context-specific programmatic experiences". *Conflict and Health* 14.1 (2020): 79.
15. Partnership for Evidence-Based Response to COVID-19 (PERC).
16. Banatvala N., *et al.* "Public health and humanitarian interventions: developing the evidence base". *British Medical Journal* 321.7253 (2000): 101-105.
17. Smith J., *et al.* "A systematic literature review of the quality of evidence for injury and rehabilitation interventions in humanitarian crises". *International Journal of Public Health* 60.7 (2015): 865-872.
18. Blanchet K., *et al.* "Evidence on public health interventions in humanitarian crises". *The Lancet* 390 (2017): 2287-2296.
19. UHC2030 Fragile Settings Technical Working Group. COVID-19 and fragile settings (2020).
20. Ramalingam B., *et al.* "Responding to COVID-19. Guidance for humanitarian agencies". ALNAP Rapid Learning Review London: ODI/ALNAP (2020).

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