

Review Article

Blacker than Black: Failing to Reach Slum Communities in Disease Outbreaks

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Abstract

Poor economic environments and unstable living spaces, insufficient water supply, inadequate sanitation and high population density create favourable conditions for the spread of infectious diseases. Robust community engagement and communication strategies can help to raise awareness and to develop skills and are crucial to the success of an outbreak response in densely overcrowded urban conditions. Small gains have been made in an urban context and importantly a procedure to reach slum communities in a disease outbreak has not yet emerged. The purpose of this paper is to highlight the urgent need for international agencies to cooperate to develop guidelines on how to effectively reach slum communities in disease outbreaks and to make recommendations for the next steps to resolve the present situation.

Keywords: Community engagement; Disease outbreaks; Slum communities; Civil conflict; Bottom-up

Introduction

Over the past 20 years the number of disease outbreak and health emergency responses has increased. The number of international actors involved in these responses has also dramatically increased, for example, in the 2010 earthquake in Haiti and in the 2015 outbreak of the Ebola Virus Disease (EVD), several hundred international non-governmental organizations were mobilized alongside the United Nations, the government and the private sector, greatly increasing the complexity of the situation. The growing number of such events has placed pressure on the availability of funding and on expectations to quickly control the spread of a disease [1]. At the same time, there has been a realization that the goal of reaching communities through engagement and communication strategies has not succeeded, even though they are crucial to success. In particular, the overcrowded conditions in slums can create favourable factors that promote the spread of infectious and vector borne diseases. Remarkably, a standardised procedure to reach slum communities in a disease outbreak has not yet emerged. The purpose of this paper is to highlight the urgent need for international agencies to cooperate to develop guidelines on how to reach slum communities in disease outbreaks and to make recommendations on what is necessary to resolve the situation.

In this paper an outbreak refers to an increase, often sudden, in the number of cases of a disease above the endemic level in the population within a restricted geographical area or may extend over a much broader area and may last for a prolonged period of time [2]. The UN-Habitat definition of a slum household is used as, a group of individuals living under the same roof in overcrowded conditions and in an urban area who lack easy access to safe water, adequate sanitation or protection against extreme climate conditions and eviction. UN-Habitat estimates that 1.6 billion people live in a slum and in some countries, as

much as 90% of the urban population live in slums [3]. Examples of locations that are prone to disease outbreaks and that have large slum populations include Conakry in Guinea, West Africa and Rio de Janeiro in Brazil.

Communities occupy a spatial dimension, such as a rural village or in an urban neighbourhood and a non-spatial dimension that involves relationships between people who can organise themselves for a variety of reasons including for a funeral or to address a shared concern such as gaining better access to safe drinking water [4]. Within the dimension of a community 'settings' offer a further context in which people engage in daily activities such as in schools. Communities and settings provide the opportunity to engage with people to raise awareness, to develop skills, to gain better access to services and protective equipment and to help to improve the physical environment in the control of the spread of an infectious disease [5].

Disease Outbreaks and Slum Communities

Poor economic environments and unstable living spaces, inadequate water supply and sanitation and high population density create favourable conditions for the spread of infectious diseases. Slum areas have poor health and social services and an outbreak response can be impeded by the resistance of the residents, some of whom may be illegally occupying their homes. Community resistance and non-compliant behaviour can be a disruptive feature of a disease outbreak by taking attention away from important issues, by dividing communities and by undermining the positions of the different stakeholders. In practice, this can result in a refusal to take part in vaccination, to report sick family members, to use protective equipment

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or to safely bury the dead [6]. Civil conflict can disrupt water and sanitation systems and displace large numbers of people into overcrowded and insanitary areas leading to the risk of disease transmission. It can also make disease surveillance and health care delivery difficult in an already fragile health system. In addressing a cholera outbreak in the Central African Republic the response agencies and the Ministry of Health and Sanitation activated a control command centre with taskforces covering case management, surveillance, hygiene education, risk communication and social mobilization [7]. In September 2001, yellow fever cases were confirmed in five of the ten communes in Abidjan in the Côte d'Ivoire. Urban yellow fever can spread rapidly among a dense population such as the 3.5 million people living in Abidjan. An Operations Centre was established to coordinate activities in epidemiology, the immunization campaign and vector control. Vaccines and safe injection equipment were provided through an International Coordinating Group for Emergency Vaccine Provision. Vaccines were provided. The mass campaign immunized 2.9 million people over only a ten-day period [8]. This illustrates a unique aspect of disease outbreaks, that the situation can change quickly and the speed at which activities are delivered can be a deciding factor in preventing the transmission of a disease. The 'point of entry' into a community is traditionally initiated and led by an outside agency which controls the situation, for example, by identifying the way a response is delivered such as activating a control centre. The community can become coerced into participating without the local needs or local capacities being identified. Top-down is interpreted here as when interventions are decided by the top structures, usually an outside agency, and are delivered 'down' to the community. Most agencies prefer to use pre-packaged and top-down approaches in a disease outbreak even though commentators have suggested that these tactics have had a questionable effect, potentially worsening an epidemic, and contributing to a greater social and economic burden in disease outbreaks [9].

The key issue is whether an agency wants to help to empower the community or to simply promote participation in an outbreak response that the agency is employed to deliver [10]. Bottom-up is interpreted here as approaches that assist people to identify their own needs and to communicate these 'up' to the top structures of planning and decision-making. Community-based organisations can provide an important link between government services and civil society including multi-cultural, urban communities [11]. A scoping review of interventions for vector-borne diseases in urban areas, for example, concluded that multifaceted interventions, particularly community-based interventions, have the potential to achieve wider and more sustained effects than do standard top-down, single-component interventions [12]. Community-led quarantines can be successful if the timely and reliable delivery of resources, such as food and water, are received by the person or household being detained. However, in slum areas households cannot be quarantined individually because of a lack of space and so responders try to place whole neighbourhoods under quarantine [13]. The overcrowded conditions can create resistance about issues such as latrines or water supplies being shared between quarantined and non-quarantined households. This is a fragile situation that can be further exasperated by the forceful tactics sometimes used by authorities. For example, the military was used in West

Point, Liberia to impose quarantine in August 2014. This quickly led to riots and deaths and the quarantine had to be stopped by the authorities [14].

International borders can be porous and artificially separate closely interwoven communities linked by common languages, ethnicity, cultural traditions for marriage and burial, access to churches and markets. The cross-border movement of people is inevitable and difficult to control and has been a cause of disease transmission in previous outbreaks [15]. The closing of official border crossings has prevented motor vehicle traffic but foot and bicycle traffic does not stop and may even increase in remote and rural areas. This remains a potential source of disease transmission that can be best prevented through community involvement for self-management of the movement of people. For example, engaging with village chiefs in cross-border control is critical, especially where these individuals are traditionally strong and can help to organize patrols of the boundaries of their village to keep outsiders away and to record people's movement across borders. This can be developed into a systematic community-based approach to routinely record travel histories, contacts and symptoms of illness [16].

Conclusion

Small scale interventions such as the UNMEER/ UN-Habitat project to manage activities in the urban area of Montserrado in Monrovia, Liberia have had some success because they engaged with local officials within administrative boundaries as well as using small grants to encourage community involvement with a consideration to existing by-laws [17]. Working to control the outbreak of an infectious disease in densely populated urban areas is uniquely different to working in a rural context. A disease outbreak that starts in a rural context is addressed by using established approaches for engagement and communication. However, the outbreak can quickly shift into an urban context, for example, the epidemiologists correctly predicted that the EVD would recede into the capital cities. There was no engagement and communication strategy for the slum areas in Monrovia, Freetown or Conakry and fortunately the disease did not take hold in these areas. If it had the consequences could have been disastrous for the control of the disease especially in regard to the removal of the sick or deceased, for contact tracing and for maintaining a stable and cooperative community. There is no excuse not to involve local people in a disease outbreak response; however, bottom-up approaches are not being widely implemented to enable people to take more control over their lives [18].

Small gains have been made in an urban context when the city authorities, local enforcement and communities have worked together to address a disease outbreak. However, a standardised, systematic procedure has not yet emerged and this requires urgent professional attention from the international NGOs and UN agency community. If outbreak responses continue to fail to effectively reach slum communities, this will inevitably lead to significantly higher levels of mortality. It is therefore recommended that the next steps to resolve this situation should include the following: 1) an agreement of the key stakeholders on an action plan to develop a standardised procedure for working in slum communities during a disease outbreak; 2) a review of the evidence of what works and what does not work; 3) a draft set of practice guidelines; 4) a series of

consultative meetings to finalise the guidelines; 4) to publish and distribute the guidelines.

It is hoped that this paper will help to remind international agencies of the need to cooperate to develop guidelines on how to effectively reach and work with slum communities in disease outbreaks.

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Conflicts of Interest

The author declares no conflict of interest.

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