Sustaining Social Distancing and Mass Quarantine in the COVID-19 Era: Lessons Learned

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Introduction

A new decade often begins with new life, new relationships and new purposes. Unfortunately, the start of this decade has been anything but, thanks to the rather unprecedented global crisis that has rapidly taken over our lives. COVID-19 – which seemed to be just a flu-like infection spreading modestly in mainland China – has suddenly became a pandemic that has crashed economies and broken health systems worldwide.

Containing disease spread is less about treatment and vaccines, and more about the capacity of systems, communities and individuals to actually prevent the spread of the disease. Social distancing and mass quarantine are two such essential strategies for containing the spread of COVID-19. Social distancing works by reducing the number of individuals exposed to the infection. Mass quarantine means more people staying home, which means fewer people would contract the disease and, in turn, fewer people would infect others. Social distancing allows more time for health services organizations to prepare for the increase in healthcare utilization expected from the infection or for experts to develop vaccines or find alternative treatments.

Social Distancing: Increasing Efficacy

We conducted a systematic review on how communities, individuals, healthcare providers and media have responded to the five major 21st-century infections that affected multiple regions:

- severe acute respiratory syndrome (SARS),
- influenza A/H1N1,
- Middle East respiratory syndrome (MERS),
- Ebola virus disease (EVD) and
- Zika virus

Based on initial reflections from our findings, we recommend two considerations in order to make the community-based containment intervention, social distancing, even more effective:

1. Social distancing needs to be rapid and aggressive; otherwise, it will have diminishing returns.

We know that large segments of populations worldwide will not adhere to social distancing or mass quarantine measures. The proportion of individuals who do not adhere to social distancing

Originally published in the Longwoods e-letter on April 21, 2020 (https://www.longwoods.com/content/26203/sustaining-social-distancing-and-mass-quarantine-in-the-covid-19-era-lessons-learned).

increases when strategies are implemented passively and slowly, or when they are not enforced adequately. For example, Lau and colleagues (2010) found that among Hong Kong residents, nearly a quarter of the population did not indicate an intention to avoid going out and visit crowded places or hospitals during the H1N1 outbreak. Similarly, Leggat and associates (2010) found that only one-third of Australians indicated that they would cancel their travel plans because of a fever or cough during the influenza pandemic.

The discussion about individual and community compliance with social distancing is very important considering that the effectiveness of, acceptability of and commitment to social distancing decreases over time, particularly as outbreaks worsen (Cowling et al. 2010). In these cases, social distancing has diminishing returns for containing the spread of disease. To maximize the benefits, social distancing and/or mass quarantine should be introduced aggressively and rapidly to allow sufficient time for health services organizations and professionals to adequately prepare themselves to deal with the rising number of cases.

2. Social distancing is a mental, emotional and psychological exercise. Social distancing is a mental and emotional exercise for individuals, families and communities because it disrupts almost every aspect of life. In a study, respondents in a rural Indian city indicated that the anxiety and tension from acquiring H1N1 were more troubling than its physical symptoms (Sundaram et al. 2014). The actions of governing bodies, healthcare professionals and community-based organizations toward managing the disruption will inevitably contribute to the effectiveness of social distancing.

We know that certain groups will not follow government requests to stay home. The problem, however, does not lie with awareness; community knowledge of infection regarding treatments and modes of transmission increases rapidly and organically throughout a pandemic (Adongo et al. 2016). The problem lies in how severe each group views the infection to be for their health – the psychological aspect dominating the eventual outcome of social distancing.

A low-risk perception reduces the frequency of preventive behaviours: citizens in Sierra Leone with low-risk perception believed that a fever was not indicative of EVD; low-risk perception was associated with lower uptake of social distancing and behaviours such as wearing masks and hand washing among Saudi citizens during the H1N1 pandemic; and Singaporean residents with lower anxiety toward SARS were less likely to practise cautious behaviours to protect themselves (Balkhy et al. 2010; Vijaya et al. 2013; Yamanis et al. 2016).

A higher level of individual concern appears to be associated with a higher uptake of social distancing and personal hygiene behaviours. The corollary is that increasing individual and community concern for an infection can increase adherence to social distancing and good hygiene practices.

Fear needs to be managed by promoting risk perceptions that lead to healthy behaviours.

Social Distancing: Fear-Based Tactics Reduce Efficacy

While there are different ways to increase individuals' level of concern, fear-mongering is not one of them. Fear-based communication strategies only go so far, as they have the tendency to spread miscommunication, skepticism and misconceptions (Abramowitz et al. 2017). Fear can develop quickly depending on how governments and media communicate information about the disease; fear can affect the effectiveness of social distancing and other preventive measures, as well as cause unintended impacts on populations.

Fear-based communication strategies also engender mistrust within communities toward authorities and healthcare providers; mistrust might have long-term effects in reducing adherence to social distancing, mass quarantine and vaccination or treatment procedures (Blair et al. 2017). For example, one study found the following impacts that fear had on residents in West Africa: fear encouraged certain behaviours among the general population that accelerated the spread of EVD, prevented EVD treatment from reaching citizens who needed it, and reduced availability and accessibility of medical services for non-EVD-related conditions (Shultz et al. 2016).

Fear needs to be managed by promoting risk perceptions that lead to healthy behaviours. Health authorities, and particularly the media, need to recognize that only raising fear may actually encourage counterproductive behaviours that reduce the impact of community containment strategies. Fear can play an important role in increasing community risk perceptions of a disease, but adopting it as the predominant and only strategy to motivate individuals to practise healthy behaviours may have adverse downstream effects on adherence to social distancing.

Conclusion

Pandemic response is heavily dependent on the response mechanisms of our systems, communities and individuals. Implementation of social distancing measures needs to be rapid and aggressive, otherwise they will have diminishing returns. At the same time, health authorities must play an important role in bringing awareness to their communities about risk perception and preventing miscommunication, misinformation and misrepresentation – without succumbing to fear-mongering.

COVID-19 is not the first nor will it be the last pandemic, epidemic or outbreak we face. We can take pride in the fact that communities worldwide have amassed a wealth of knowledge and a compendium of strategies that can contain the

spread of infectious diseases effectively. We are reviewing the literature to provide health authorities and healthcare providers with evidence-based approaches to overcome this situation together. HQ

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