
POLICY BRIEF

Improving the Effectiveness of Kenya's COVID-19 Control Measures: Lessons from a Rapid Systematic Review

KEY MESSAGES

Problem: Although government is implementing various COVID-19 control measures, there is still a sharp rise in the number of infections. This suggests that there is non-compliance and non-adherence to the mitigation measures being implemented.

What we did: A rapid systematic review that synthesized evidence on community control measures for respiratory infections in LMICs to identify lessons for addressing the non-compliance and non-adherence challenge.

What we found and recommend:

- Government is on the **right track** in controlling COVID-19 spread – evidence shows face-masking, hand-hygiene, and social-distancing are effective in controlling spread
- But, government must now focus on **enabling adherence and compliance** to the control measures – it should provide free preventive materials (face-masks, install public hand-washing stations, provide hand sanitizers) and meet basic needs of those most in need
- Sustain and intensify ongoing public health campaigns in order to **change public perceptions** on the benefits of face masks, hand hygiene and social distancing. This is because people's perceptions are key to increasing adherence and compliance.
- **Local research** from the Kenyan context is needed to inform how to improve the effectiveness of ongoing interventions

INTRODUCTION

Coronavirus 2019 disease (COVID-19) is an emerging severe respiratory disease that is caused by a novel coronavirus and was first detected in December 2019 in Wuhan, China. COVID-19 was declared a pandemic on March 11, 2020 and has affected countries in all continents. With the growing number of cases and deaths attributable to coronavirus, many countries continue to experience critical challenges in preventing disease transmission, providing community-wide mass-testing, providing clinical care, and ensuring recovery. In the absence of a cure or vaccine for COVID-19, identifying control measures that effectively prevent the spread of the virus is critical. Currently, countries are implementing non-pharmaceutical interventions recommended by the World Health Organization (WHO) and other experts as best practices for reducing the spread of the disease including physical/social distancing measures, hand hygiene (including washing and sanitizing), and wearing of face masks while in public places. These strategies are likely to remain integral to disease mitigation until an effective vaccine is available or population immunity is sufficient to slow transmission [1].

Implementation of these measures in low and middle-income countries (LMICs) like Kenya faces challenges due to conditions of vulnerability peculiar to LMICs. For example, for people living in

overcrowded households/slums, households without running water, implementation of interventions such as social distancing and hand washing may be challenging [2]. There is therefore need for adaptation of the various COVID-19 control measures to different settings, as the situation varies across contexts.

Kenya, like most countries globally, is implementing various measures to prevent community transmission of COVID-19. Some of the measures include social distancing practices, hand hygiene, mandatory use of face masks in public places, dusk to dawn curfew, closure of schools and any social and religious gathering places, cessation of movement in and out of COVID-19 hot spot cities and international travel ban, isolation of infected and exposed individual/s, and more recently the implementation of mass testing of all citizens. Despite the various COVID-19 mitigation measures that have been put in place, there is still a sharp rise in the number of cases reported daily. With majority of cases (about 60%) in Kenya said to be asymptomatic [3], the challenge of infection transmission is even bigger, as these cases cannot be recognized unless they seek medical attention right on the onset of symptoms. The adoption of the control measures has been noted as a challenge in Kenya, as various people do not practice social distancing especially in places like markets, at bus

¹Makoni M. Africa prepares for coronavirus. *Lancet* (London, England). 2020;395(10223):483. doi:10.1016/S0140-6736(20)30355-X

²Ezeh A, Oyebo O, Satterthwaite D, et al. The history, geography, and sociology of slums and the health problems of people who live in slums. *Lancet*. 2017;389(10068):547-558. doi:10.1016/S0140-6736(16)31650-6

³Nation Concern as cases of Covid-19 patients without symptoms rise _ Daily Nation. LINK AND YEAR [3].

stations; there is also a lot of mishandling and inappropriate use of masks. This calls for greater need for maximizing the effectiveness of implementation of community measures in order to curb the rapid spread of the disease and reduce the negative impact that the disease is having on individuals and communities.

The information in this policy brief is based on a rapid systematic review that was conducted to synthesize evidence on COVID-19 control measures at community level in LMICs in order to inform the improvement of Kenya's COVID-19 prevention and control efforts. The synthesis drew lessons from responses to previous epidemics with respect to community control measures, which are useful in informing community strategies to curb the spread of COVID-19 in Kenya. The analysis also looked at the barriers to, and enablers of, community measures in control of COVID-19 pandemic. This rapid review followed the Cochrane provisional rapid review methods recommendations [6].

SUMMARY OF FINDINGS

Effectiveness of COVID-19 Control Measures

Evidence from the review highlights the effectiveness of the use of face masks, good hand hygiene, and social distancing in limiting the spread of viruses. The risk of contracting SARS and Influenza for those wearing masks was reduced in 5 studies that were reviewed. On hand hygiene practices, a reduced risk of contracting SARS and Influenza was seen in 6 studies that were summarized. Two studies that looked at combined intervention (face mask and hand hygiene) also showed its effectiveness in controlling the transmission of Influenza. Nine studies on social distancing demonstrated the importance of physical distance in reducing the transmission of the disease. While accurate assessment or evaluation of various epidemic control measures to inform the handling of COVID-19 is important, the study recommends further studies that focus on the effectiveness of the control measures specifically on COVID-19, so as to maximize the effectiveness of prevention measures. In addition to highlighting the effectiveness of the control measures, the study also proposes local studies to measure compliance on the COVID-19 measures.

Adherence to COVID-19 Control Measures

Besides the challenges on adherence to control measures such as living in crowded households and lack of running water, other common factors that have been shown to affect people's adherence is their knowledge about the disease and its perceived risks and benefits of the control measures [4]. In a number of LMICs, communities have been shown to lack knowledge and guidelines on proper use of face masks,

which has resulted in mishandling and inappropriate use of masks. Either individuals are not aware of the guidelines, do not understand the specific steps to follow, or they are not convinced of the need to practice these behaviors. This points to the need for continuous sharing of information to increase the public's awareness about the pandemic, its risks and prevention measures, which has been shown to be effective in improving adherence. One proposed measure for improving adherence would be incorporating simple public health measures into structured programmes such as the national education programme, so as to increase their effectiveness in controlling the transmission of respiratory infections [5].

In cases where non-adherence is resulting from unavailability of preventive health products such as masks, lack of water and hygiene materials, the government needs to intervene to provide the recommended preventive products/materials, at no extra costs, where possible. This can help ensure improved uptake. In addition, there is need for government to implement strict measures to enforce compliance in order to increase adherence to the community-level control measures. The review highlights the importance of strictly adhering to social distancing, hand hygiene and facemasks to mitigate the spread of COVID-19.

Combining control measures is most effective

Evidence suggests that social and physical distancing are more effective when combined with other public health measures like face masking and good hand hygiene, in ensuring effectiveness of the interventions. The combined face mask and hand hygiene intervention showed effectiveness in controlling the transmission of Influenza compared to the control group where only one intervention was administered. Another study also showed that following the combined effect of wearing of a mask and hand hygiene, the risk of contracting Influenza was reduced.

Community adaptation of COVID-19 Control Measures

Community adaptation of COVID-19 Control Measures
A part of this synthesis, we examined local literature to document how communities are mitigating the contextual challenges noted earlier in regard to recommended COVID-19 control measures. Some of the adaptations identified include:

- Installing hand-washing stations using locally available material in areas where water is a challenge
- Erection of hand-washing stations in public spaces in communities
- Contact-free hand sanitizer dispenser in communities in order to promote hand hygiene and reduce surface contact

⁴Garrity C, Garlehner G, Kamel C, King VJ, Nussbaumer-Streit B, Stevens A, Hamel C, Affengruber L. Cochrane Rapid Reviews. Interim Guidance from the Cochrane Rapid Reviews Methods Group. March 2020

⁵A. Bish, S. Michie Demographic and attitudinal determinants of protective behaviours during a pandemic: a review Br J Health Psychol, 15 (4) (2010), pp. 797-824, 10.1348/135910710X485826 View Record in ScopusGoogle Scholar

⁶A. Bish, S. Michie Demographic and attitudinal determinants of protective behaviours during a pandemic: a review Br J Health Psychol, 15 (4) (2010), pp. 797-824, 10.1348/135910710X485826 View Record in ScopusGoogle Scholar

⁷Rural population (% of total population) - Kenya | Data. https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS?end=2018&locations=KE&most_recent_value_desc=false&start=1960&view=chart

- Availability of locally manufactured masks, which are cheaper
- Distribution of soap in poor communities
- Digging of wells for reliable water provision in communities without running water
- In some communities, hand-washing stations in public spaces are also serving as educational centers where volunteers share information on the importance of hand hygiene in combating COVID-19 pandemic.

Studies continue to highlight the need to understand the local context and recognizing that some settings are particularly vulnerable to COVID-19 and will require more extensive modifications. Settings such as slums and conflict areas already have existing challenges that have now been compounded by COVID-19.



Children washing hands in a community owned running water tap. Photo: Beyond Water/Flickr

⁸Jefferson T, Foxlee R, Del Mar C, et al. Physical interventions to interrupt or reduce the spread of respiratory viruses: Systematic review. *Bmj*. 2008;336(7635):77-80. doi:10.1136/bmj.39393.510347.BE

1. Provide support that people and communities need to adhere to, and comply with, control measures

The government is on the right track in controlling COVID-19 spread because it is implementing control measures that have been to be effective in LMIC settings. However, the government must act urgently to remove the barriers that hindering people and communities from adhering and complying with the control measures. Therefore, the government needs to consider providing free preventive materials such as masks, sanitizers, water and soap to people and communities in need. Measures such as digging of wells for reliable water provision in communities where water is a problem and providing hand washing stations in public spaces that also serve as educational centers are some of the measures that should be scaled to more needy communities to improve adherence. Provision of food supplies to needy households and communities will also improve adherence and compliance.

2. Sustain and intensify public health campaigns to increase awareness needed to shift the current non-supportive perceptions of the public towards the control measures

The study points to the need to improve the public's awareness about the pandemic, its' risks and prevention measures, as this has been shown to be effective in improving adherence to preventive measures. Also, important is the need for the public to be taught on correct use of face masks, and the importance of consistent use of face masks while in public spaces.

3. Commission local research to generate evidence need to improve effectiveness of COVID-19 control measures

Assessment and evaluation of various epidemic control measures to inform the handling of COVID-19 has been highlighted as important in informing control measures. The study thus recommends the need for local studies that focus on the effectiveness of the control measures specifically on COVID-19 so as to maximize the effectiveness of prevention measures. The review points to the importance of information collected locally in guiding decisions on what measures to adopt and how to implement them.

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