

# What are the Indirect Health Effects of the COVID-19 Pandemic in Kenya

Policy Brief - April 2021



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## KEY MESSAGES

- We observed a significant reduction (24.67%) of in-patient utilization during the COVID-19 advent-month in March 2020 that may be attributed to COVID-19 and its mitigation measures. The observed negative effects are thought to be transient leading to a bounce back.
- There was a significant increase in the number of sexual violence cases per out-patient department visit from March 2020 due to COVID-19 and its mitigation measures in Kenya.
- COVID-19 did not affect the financing of essential health services and domestic supply chains. However, COVID-19 affected the international supply chain for health commodities
- COVID-19 also affected access to health infrastructure, service provision and patient access to healthcare services.

## INTRODUCTION

The COVID-19 pandemic has spread to almost all countries and territories worldwide, infecting millions of individuals and causing many deaths. In responding to this, the government of Kenya adopted several strategies (Table 1). Although these measures were aimed at flattening the epidemiological curve by slowing down the transmission of the virus, avert morbidity and mortality due to COVID-19 and preserving the health system's capacity, they could have resulted into unintended and undesired health, social, and economic effects. We assess the indirect health effects that can be attributed to COVID-19 and its mitigation measures in Kenya. We employed a mixed-methods approach, combining the analysis of secondary quantitative data obtained from the Kenya Health Information System database (from January 2019 to November 2020) and a qualitative inquiry involving key informant interviews and document reviews.

**Table 1: Timings and Duration of Mitigation strategies in Kenya**

Mitigation strategy	Mitigation strategy	Duration
Physical distancing	14-day mandatory self-quarantine for all travelers coming into Kenya.	March 2020
	Ban on all gatherings (including but not limited to political, social gatherings).	March 2020
	Phased re-opening of congregational and in-person worship according to set guidelines.	July 2020
	Recommended working from home (except for employees in essential services). State and public officers with pre-existing conditions working from home.	March 2020 - Ongoing
	Restaurants remain open but a ban on opening of bars (Initially only take-aways in restaurants but lifted after 30 days)	March 2020-Ongoing
	Informal businesses remain open adhering to social distancing measures	March 2020
	1.5 meters social distancing	April 2020 - Ongoing
Sanitation	Provision of soap, water and hand sanitizers in public areas	March 2020 - Ongoing
	Wearing of face masks in public areas Hand and cough hygiene	April 2020 – On going
Movement restrictions	Suspension of travel for all persons coming into Kenya from any country with reported COVID (except for Kenyan citizen and those with residence permits)	March 2020
	Cessation of movement into and out of Nairobi, Mombasa and Mandera (except for movement of food supplies and other cargo)	April 2020 – July 2020
	Cessation of movement into and out of Kilifi and Kwale (except for movement of food supplies and other cargo)	April 2020 – June 2020
	Cessation of movement into and out of Old town in Mombasa and Eastleigh in Nairobi	May 2020 -July 2020
	Cessation of movement persons and vehicles across the Kenya-Somalia and Tanzania International borders except for cargo vehicles.	May 2020
	Resumption of local air travel under strict guidelines and protocols	15 <sup>th</sup> July 2020
	Resumption of international air travel under strict guidelines and protocols	1 <sup>st</sup> August 2020
Education	Closure of all learning institutions	March 2020 - Ongoing
Curfew	Nationwide curfew	March 2020-ongoing
Economics	State interventions to cushion Kenyans from economic shocks (tax refunds, rebates, waivers and cash transfers)	March 2020
	Launch of a National Hygiene Programme that would create jobs for the youth working in 23 informal settlements in across 7 counties	April 2020
	Allocation KES 5 billion towards local manufacture of basic medical equipment and supplies for local use and export largely by the Jua kali sector	April 2020
	Economic stimulus amounting to KES 53.7 Billion (Infrastructure, Education, Health, Small, Medium Enterprises, Agriculture, Tourism, Environment, Manufacturing)	May 2020
Workforce	Additional funds for the recruitment of additional health workers	March 2020
	Development of medical insurance package for health care workers	April 2020
Testing	Testing and contact tracing	March 2020 - Ongoing
	Mandatory COVID-19 testing for truck drivers. Only those with negative tests allowed into the country.	May 2020

## Key findings

### Impact on Outpatient and Inpatient Utilisation

Both outpatient and inpatient (indicated by bed occupancy rate) utilisation decreased in March 2020 (Table 2). The reduction in bed occupancy rate was, however, significant (24.67% [95% CI: -36.15 to -13.19; p-value<0.001]) and associated with the advent of COVID-19 and its mitigation measures. Trends after March 2020 indicated a further decline in outpatient utilisation whereas bed occupancy rate increased, although these were not significant.

### Impact on Maternal Health Services

The number of health facility deliveries and four ANC visits coverage were used as indicators for the utilisation of maternity health services. Although no significant changes were observed in March 2020, our findings highlight an increase in the utilisation of these services during the advent of COVID-19 and its mitigation measures in Kenya. Unlike the number of health facility deliveries, coverage with 4 ANC visits increased significantly after March 2020 (Table 2).

### Impact on Childhood Vaccinations

No significant changes in DPT3 (Diphtheria, Pertussis, Tetanus) coverage although its coverage seemed to increase before, during and after March 2020. On the other hand, trends in Measles vaccination coverage highlighted a significant decrease of -1.58 [95% CI: -2.55 to -0.60; p-value=0.003] before March 2020 but a significant increase of 24.80 [95% CI: 12.38 to 37.22; p-value=0.001] after March 2020 (Table 2).

### Impact on Sexual Violence Cases

Although a declining trend in the number of sexual violence cases per OPD visit were observed before March 2020, the number increased in March 2020 (both not significant). A significant increasing trend was observed after March 2020 where the number of these cases increased by a factor of 0.15 [95% CI: 0.07 to 0.22; p-value=0.001].

### Impact on Funding of Essential Health Services

Findings from in-depth interviews with participants from the Ministry of Health and key disease programmes indicated no significant effect on

the funding for essential health services in Kenya. Funding from domestic sources were not affected. However, donor funding for some programs such as the Malaria program was reallocated and re-prioritised to fund the COVID-19 response. These reallocations did not affect service delivery as they were obtained from savings.

### Impact on Supply Chain for Essential Health Commodities

It was reported that local supply chains for essential health commodities were not affected as the government had established measures to facilitate the procurement and distribution of these commodities. For instance, the distribution of these commodities was exempted from the movement restrictions imposed as part of the country's response to COVID-19. However, global supply chains were disrupted because of the closure of international borders, air travel and lockdowns in source countries.

The MOH employed several strategies to mitigate the negative impacts of supply chain disruptions. First, they leveraged on a network of development partners to supply commodities whose supply had been disrupted. Second, they rationalized and redistributed existing supply of commodities. Third, they adopted active monitoring using supply chain information systems and virtual platforms such as social media to ensure that stocks levels were adequate at any given time.

### Impact on Infrastructure

Country response to COVID-19 affected the availability of healthcare infrastructure for essential health services as, for instance, some facilities that were used to deliver essential services were designated as COVID-19 isolation facilities, and some laboratory infrastructure was assigned to provide diagnostic services for COVID-19.

Several measures were adopted to mitigate the negative impacts of COVID-19 on healthcare infrastructure. First, patients were transferred to alternative facilities. Second, some care services were transitioned from, for instance, direct observation of TB patients to home-based care. Third, patients were prescribed alternative tests in place of testing platforms, such as molecular testing platforms, that had been taken up by COVID-19.

**Table 2: Findings from quantitative analysis – Interrupted Time Series Analysis**

Indicator	Pre-event trend		Step change		Post-event trend (relative to pre-event trend)		Post-event Trend	
	Change [95% CI]	P-value	Change [95% CI]	P-value	Change [95% CI]	P-value	Change [95% CI]	P-value
OPD utilisation rate	0.01 [-0.02 to 0.03]	0.543	-0.30 [-0.73 to 0.14]	0.173	-0.02 [-0.09 to 0.04]	0.490	-0.01 [-0.08 to 0.05]	0.613
Bed occupancy Rate (%)	0.86 [-0.15 to 1.86]	0.090	-24.67 [-36.15 to -13.19]	<b>&lt;0.001</b>	-0.54 [-1.68 to 0.60]	0.334	0.32 [-0.37 to 1.00]	0.345
Number of Deliveries in health facilities	-82 [-854 to 691]	0.827	6,002 [-213 to 12,218]	0.058	-206 [-1,398 to 986]	0.721	-288 [-1,220 to 646]	0.527
Four ANC coverage Visits	-0.07 [-0.62 to 0.49]	0.807	0.15 [-5.10 to 5.39]	0.954	1.17 [0.10 to 2.24]	<b>0.034</b>	1.10 [0.29 to 1.92]	<b>0.01</b>
Measles Vaccination coverage (%)	-1.58 [-2.55 to -0.60]	<b>0.003</b>	24.80 [12.38 to 37.22]	<b>0.001</b>	1.16 [-0.90 to 3.23]	0.253	-0.41 [-2.08 to 1.25]	0.609
DPT 3 Coverage (%)	0.16 [-0.48 to 0.80]	0.609	3.14 [-4.87 to 11.15]	0.422	0.53 [-0.60 to 1.67]	0.340	0.69 [-0.21 to 1.59]	0.125
Number of sexual violence cases per OPD visits	-0.01 [-0.02 to 0.00]	0.064	0.02 [-0.19 to 0.23]	0.816	0.16 [0.08 to 0.23]	<b>&lt;0.001</b>	0.15 [0.07 to 0.22]	<b>0.001</b>

### Impact on Health Workforce

First, health workers feared getting infected with COVID-19 as personal protective equipment (PPE) was inadequate. Consequently, healthcare workers in lower level facilities referred patients with COVID-19 symptoms to higher levels, thus, increasing the workload for health workers at these facilities. Second, some healthcare workers such as laboratory officers were redeployed to focus on COVID-19. Third, healthcare workers had to extend their working hours as fewer patients could be attended to at any given time.

Mitigation measures to these impacts included: 1) purchase of PPEs, 2) training of healthcare workers, 3) development of protocols to guide healthcare workers while working during the pandemic, and 4) the MOH implemented mental health programs to address health worker burnouts.

### Impact on Service Delivery

Overall, service delivery across most programmes was disrupted by either being delayed, postponed, cancelled or restructured. For instance, HPV

vaccination has been disrupted because a key delivery platform, schools, was shut down as part of the COVID-19 mitigation measures. Besides, the postponement of elective surgeries had a negative impact on cancer patients who required surgery.

Adopted mitigation measures included: 1) use of virtual platforms to plan for delayed activities, 2) revision of drug collection schedules to longer periods, 3) facilitation of healthcare workers with letters to authorize them to travel anytime, anywhere, and 4) arrangements for home delivery of medicines where collection from facilities was not possible.

### Impact on Patient Access

First, there was a decline in the number of patients that visited health facilities because of movement restrictions and the fear of getting infected with COVID-19. Second, COVID-19 related movement restrictions prevented patients from accessing specialized cancer services that are not available locally such as bone marrow transplants. Third, vulnerable populations such as the elderly and

people with chronic conditions faced a higher risk of contracting COVID-19 while visiting health facilities. The ministry of health adopted several mitigation measures. First, the use of community health workers to deliver services to individuals in their homes. Second, caregivers were allowed to collect medication on behalf of their vulnerable (elderly or people with chronic conditions) people. Third, catch-up vaccination activities were conducted. Fourth, telemedicine was encouraged to enable consultations using virtual platforms.

## RECOMMENDATIONS

- There is a need to enhance and sustain measures to mitigate against indirect health effects of COVID-19.
- There is a need to enhance awareness but also responsiveness to households and individuals to address sexual violence cases.
- While short measures to hedge against international supply chains include pre-planning, longer term measures will include formulating strategies to improve self reliance through for instance promoting local manufacture of health commodities.

## ACKNOWLEDGMENTS

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*Edwine Barasa, Jacob Kazungu, Stacey Orangi, Evelyn Kabia, Morris Ogero, and Kadondi Kasera. Assessing the Indirect Health Effects of the COVID-19 Pandemic in Kenya. GGD Working Paper. <https://www.cgdev.org/publication/assessing-indirect-health-effects-covid-19-pandemic-kenya>*

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