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COVID-19 and Health System Resilience:  
Some Reflections on Africa

Edwine Barasa

16/12/2020

# What is Resilience

- Health systems are resilient when they have **reduced vulnerability** to crisis by being **better prepared for**, and **effectively respond**, to crisis, while at the same time **maintaining the delivery of core healthcare** services



<http://ijhpm.com>

Int J Health Policy Manag 2018, x(x), 1–13

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**IJHPM**  
International Journal of Health Policy and Management

Systematic Review

# What Is Resilience and How Can It Be Nurtured? A Systematic Review of Empirical Literature on Organizational Resilience



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# From lit review: Factors affecting Resilience

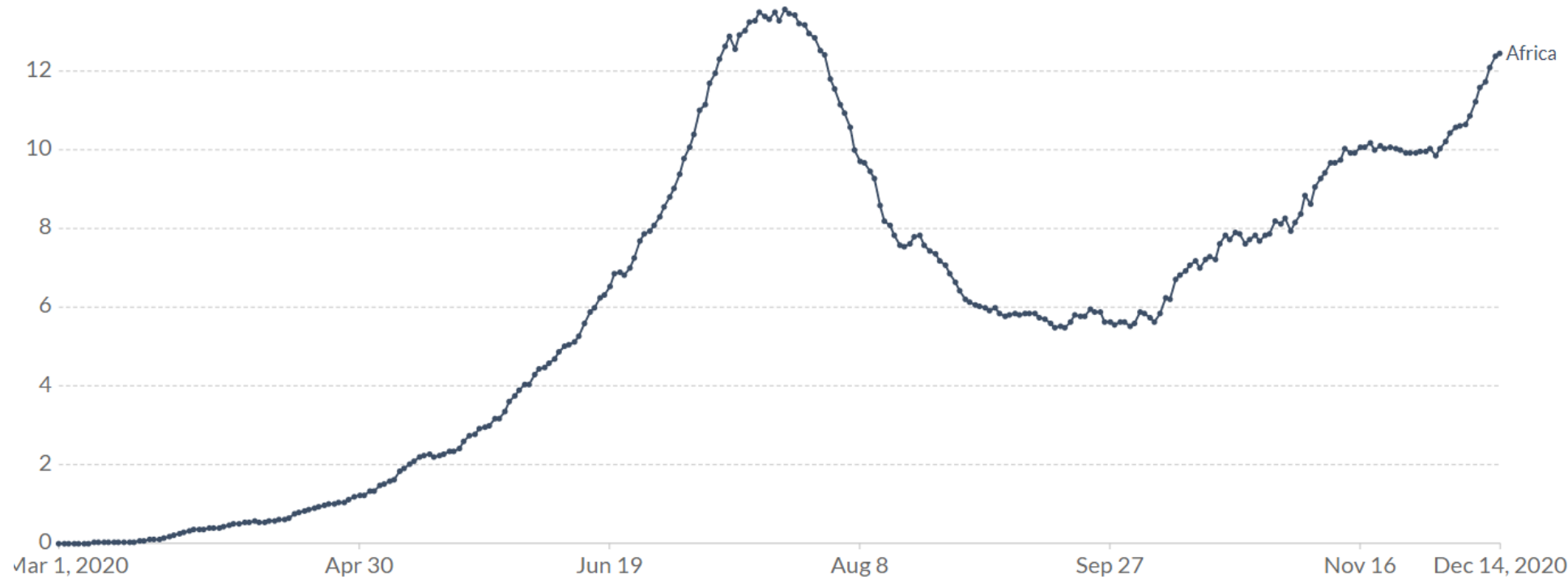
- **Preparedness and planning**
    - Think epidemic preparedness plans
  - **Material resources**
    - Think Financing, hospitals, labs
  - **Information management**
    - Think surveillance, information flows, analytics
  - **Collateral pathways and redundancy**
    - Think alternative supply chains, private/public/community health systems/telemedicine
- 
- **Governance processes**
    - Think coordination of response, decision making structures
  - **Leadership practices**
  - **Human capital**
    - Think HRH numbers, skills, distribution, motivation, tooling
  - **Social networks and collaboration**
    - Think: International/ national/ regional/ local/public/private/community

# Daily new confirmed COVID-19 cases per million people

Shown is the rolling 7-day average. The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing.



LINEAR LOG



Source: Johns Hopkins University CSSE COVID-19 Data - Last updated 16 December, 06:07 (London time)

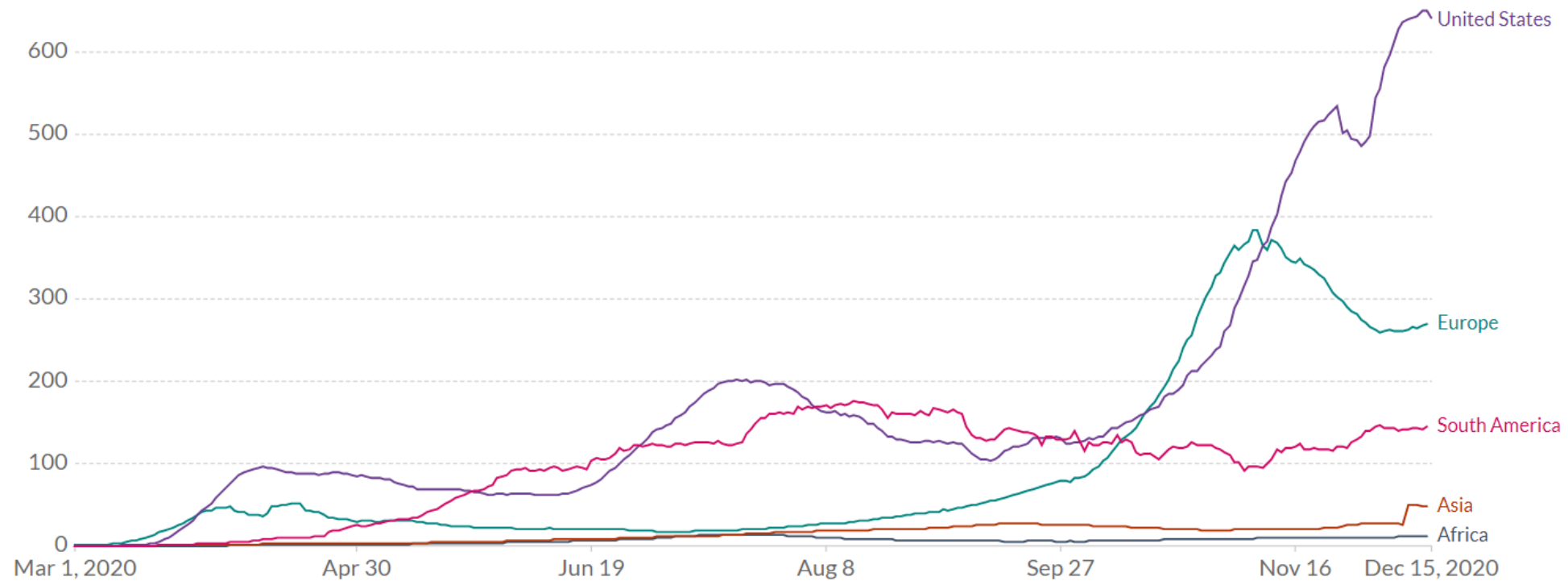
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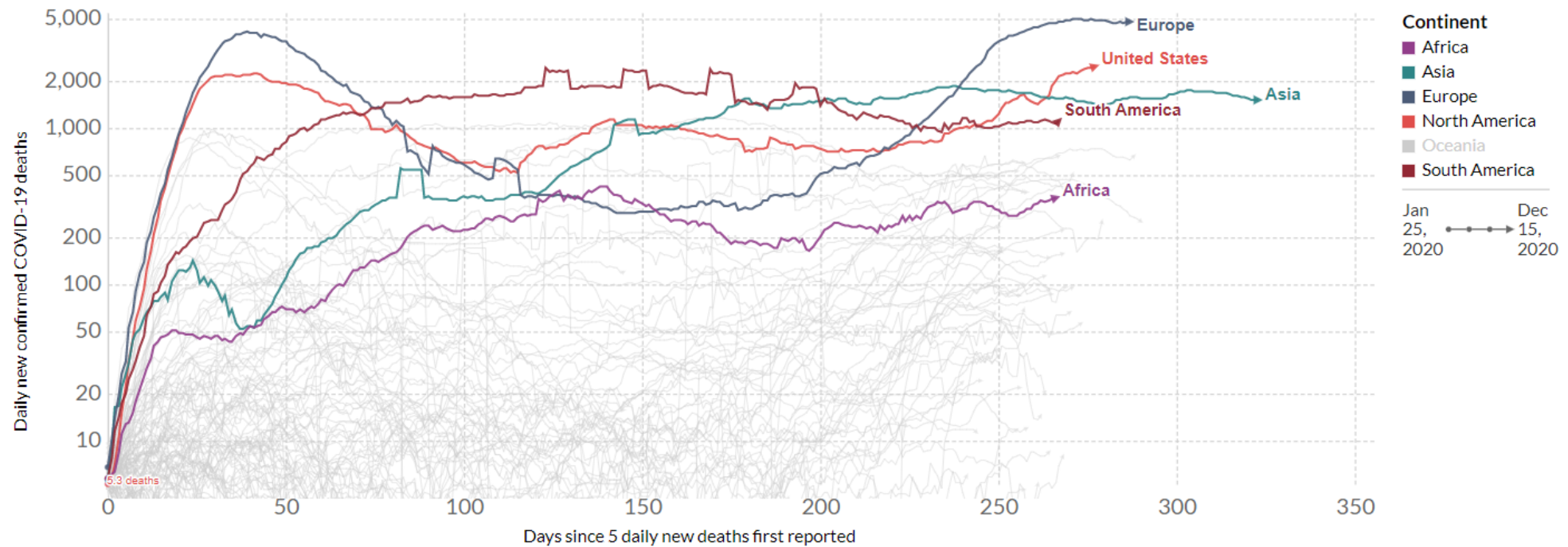
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# Daily new confirmed COVID-19 deaths

Shown is the rolling 7-day average. Limited testing and challenges in the attribution of the cause of death means that the number of confirmed deaths may not be an accurate count of the true number of deaths from COVID-19.



Zoom to selection  Hide countries < 1 million people

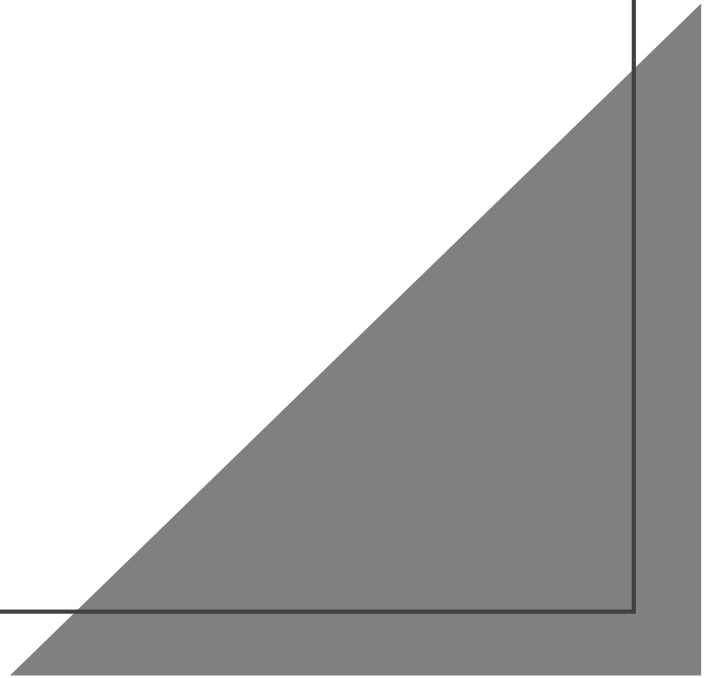


Source: Johns Hopkins University CSSE COVID-19 Data - Last updated 16 December, 06:07 (London time), Our World In Data

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# Pandemic in Africa characterized by

- Higher cases of **asymptomatic** infections
- Lower cases of **severity and hospitalization**
- Lower **cases of deaths**
  - Young population? other





# Government response in Africa: A Range of Measures

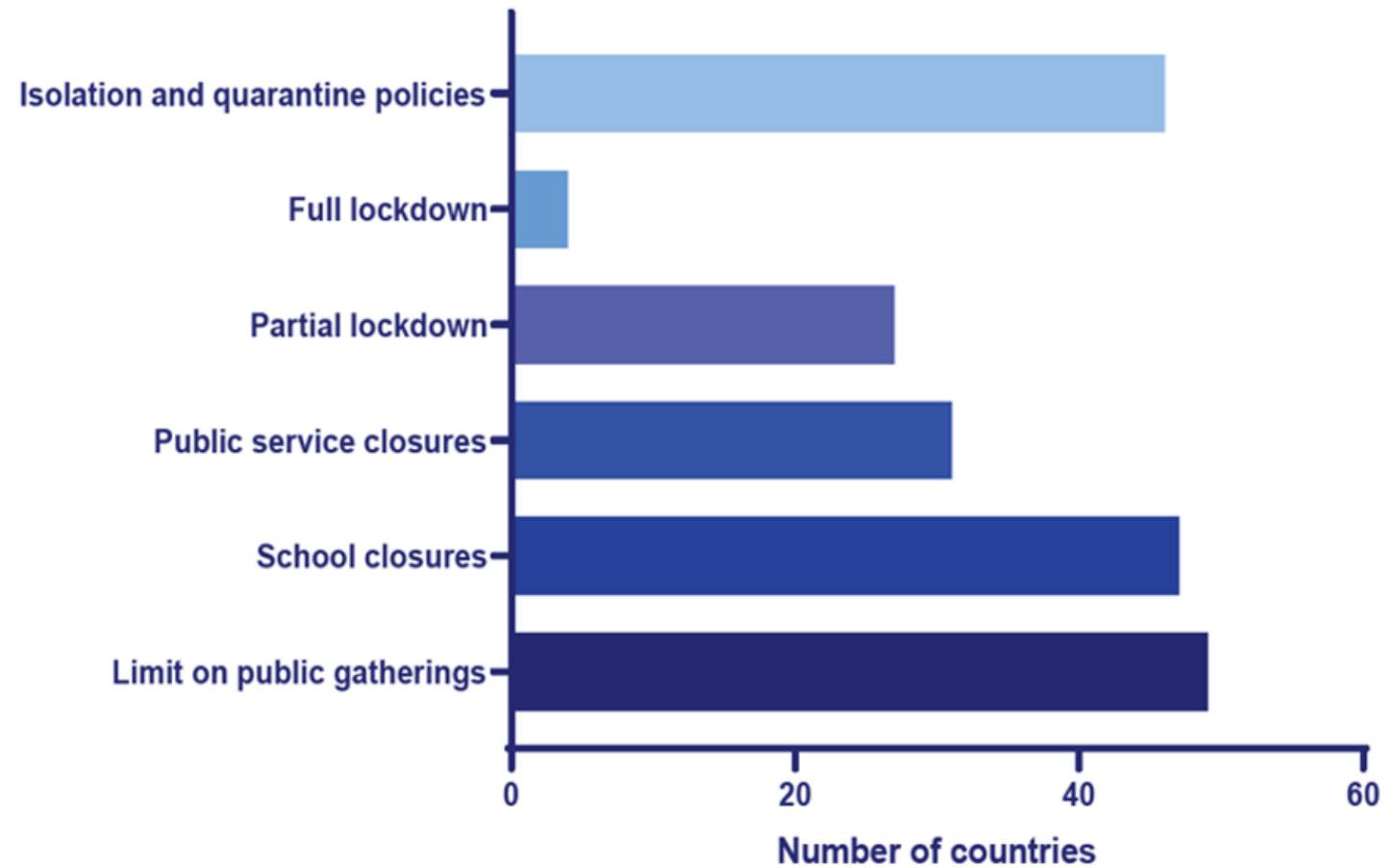


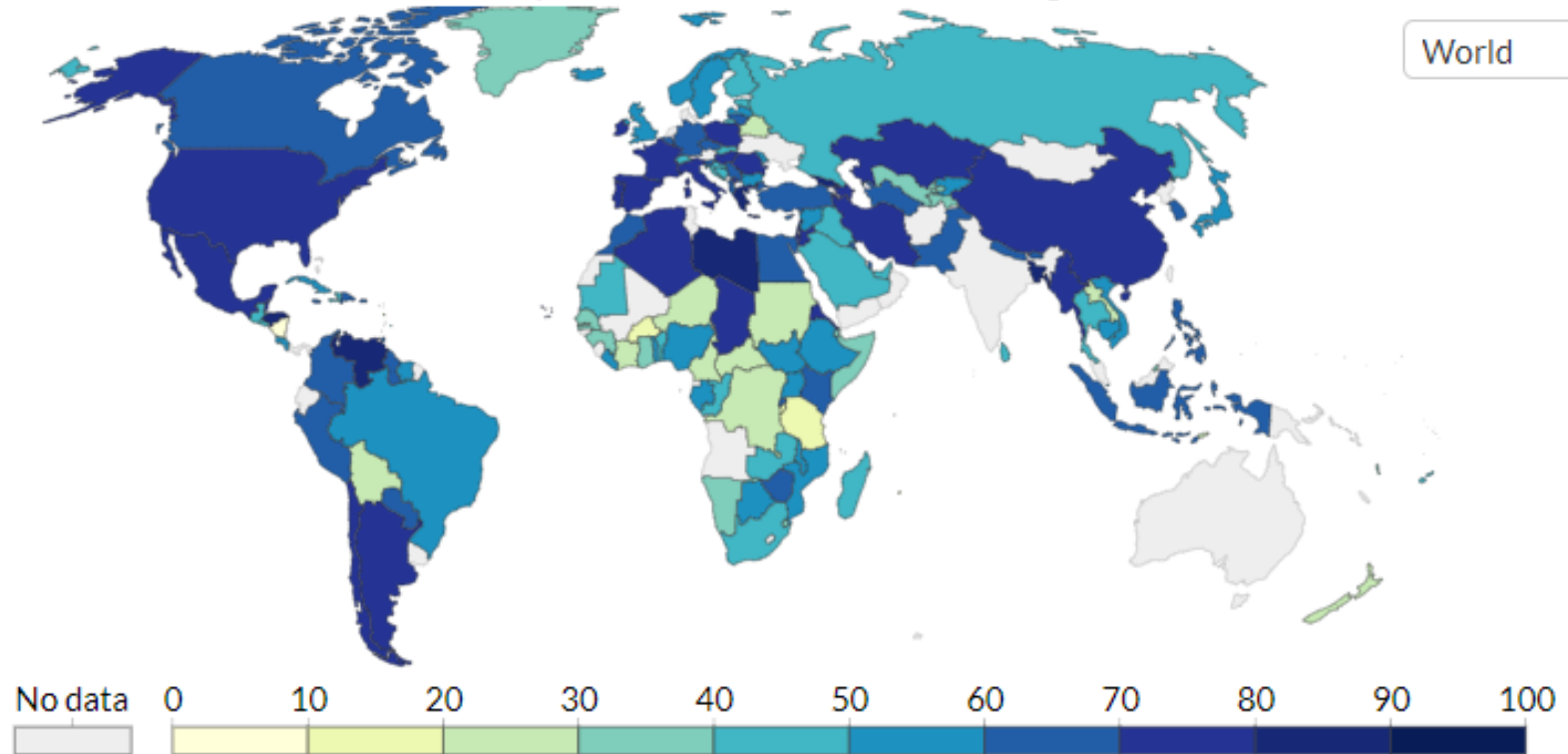
Figure 1: Physical distancing measures implemented in Africa

# Strong public health response

## COVID-19: Government Response Stringency Index, Dec 14, 2020

This is a composite measure based on nine response indicators including school closures, workplace closures, and travel bans, rescaled to a value from 0 to 100 (100 = strictest). If policies vary at the subnational level, the index is shown as the response level of the strictest sub-region.

Our World  
in Data



Source: Hale, Webster, Petherick, Phillips, and Kira (2020). Oxford COVID-19 Government Response Tracker - Last updated 15

# Strong public health response

**Coronavirus: South Africa prepares for three-week lockdown**

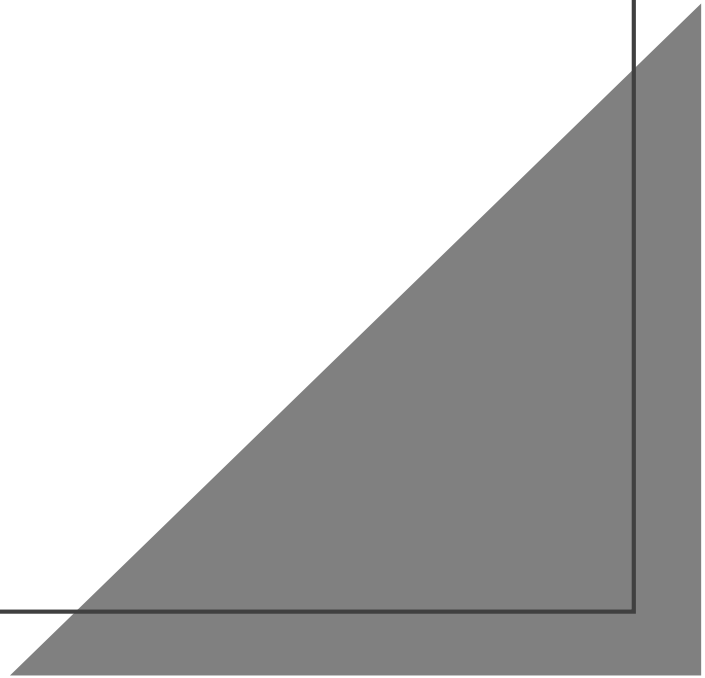
At midnight on 26 March South Africa will become the latest country to go into lockdown against the coronavirus.

**Tanzania's Layered Covid Denialism**  
by ELLA S. DUNCAN on SEPTEMBER 11, 2020

**Kenya extends COVID curfew for two months but reduces hours**

# Africa's response characterised by

- **Timeliness** – measures imposed early in the pandemic
  - Airport screening
  - Physical distancing restrictions
  - Closure of borders etc
- Lessons learnt from **other epidemics** – e.g. Ebola
- **Relatively strict measures** but varied across countries



# Inadequate health system response

<b>Africa</b>	<b>Tests/1m population</b>	<b>Asia</b>	<b>Tests/1m population</b>	<b>Tests/1m population</b>	<b>Europe</b>
Mauritius	227,593	UAE	1,892,153	Denmark	1,5009,020
Botswana	296,171	Bahrain	1,281,800	UK	712,544
Madagascar	3,447	Afghanistan	4,443	Ukraine	117,522
Niger	2,204	Yemen	578	Albania	77,215

# Inadequate health system response

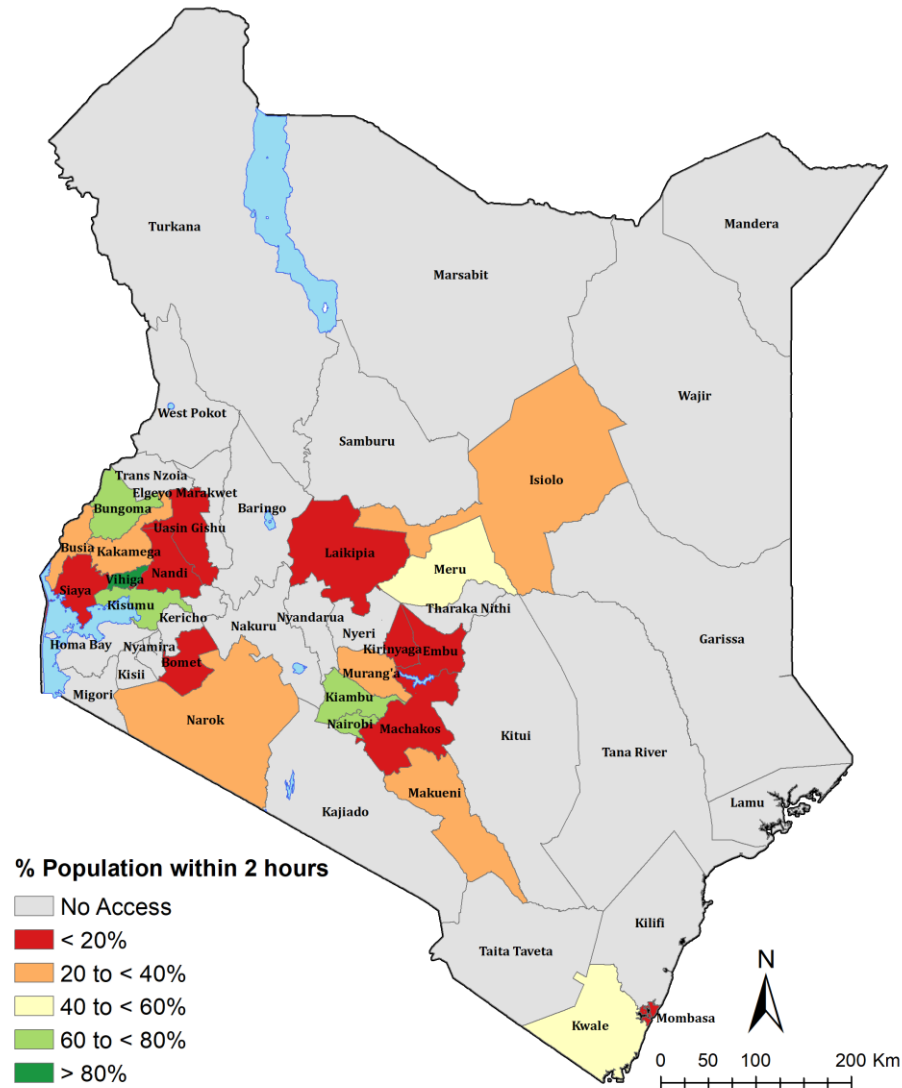
UNDER PRESSURE

## **Lack of oxygen leaves patients in Africa gasping for air**

HEALTH NEWS 18 AOÛT 2020 / 5:50 PM / UPDATED IL Y A 4 MOIS

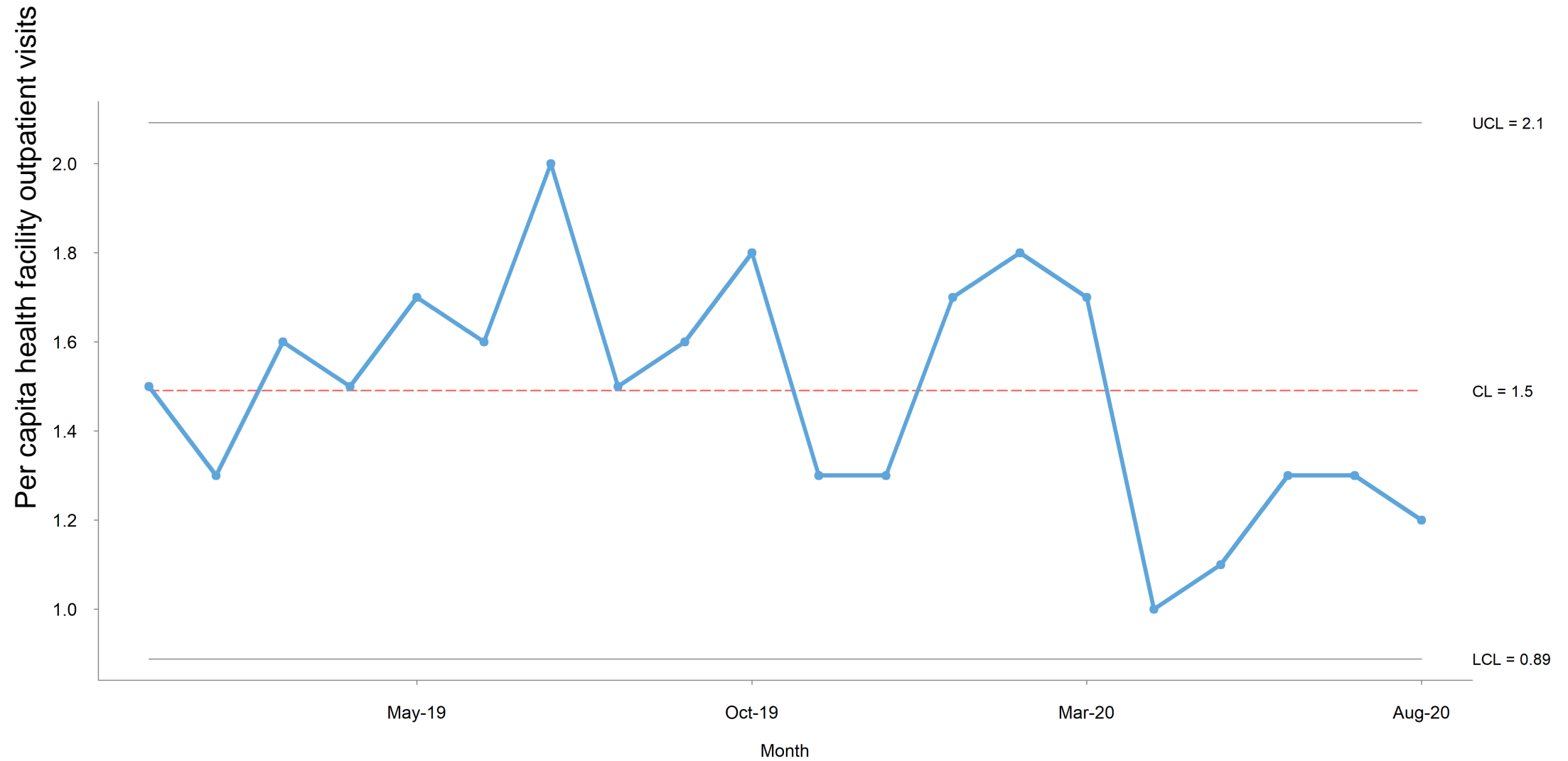
**Dozens of Kenyan doctors strike over lack of PPE, delayed pay**

# Inadequate health system response



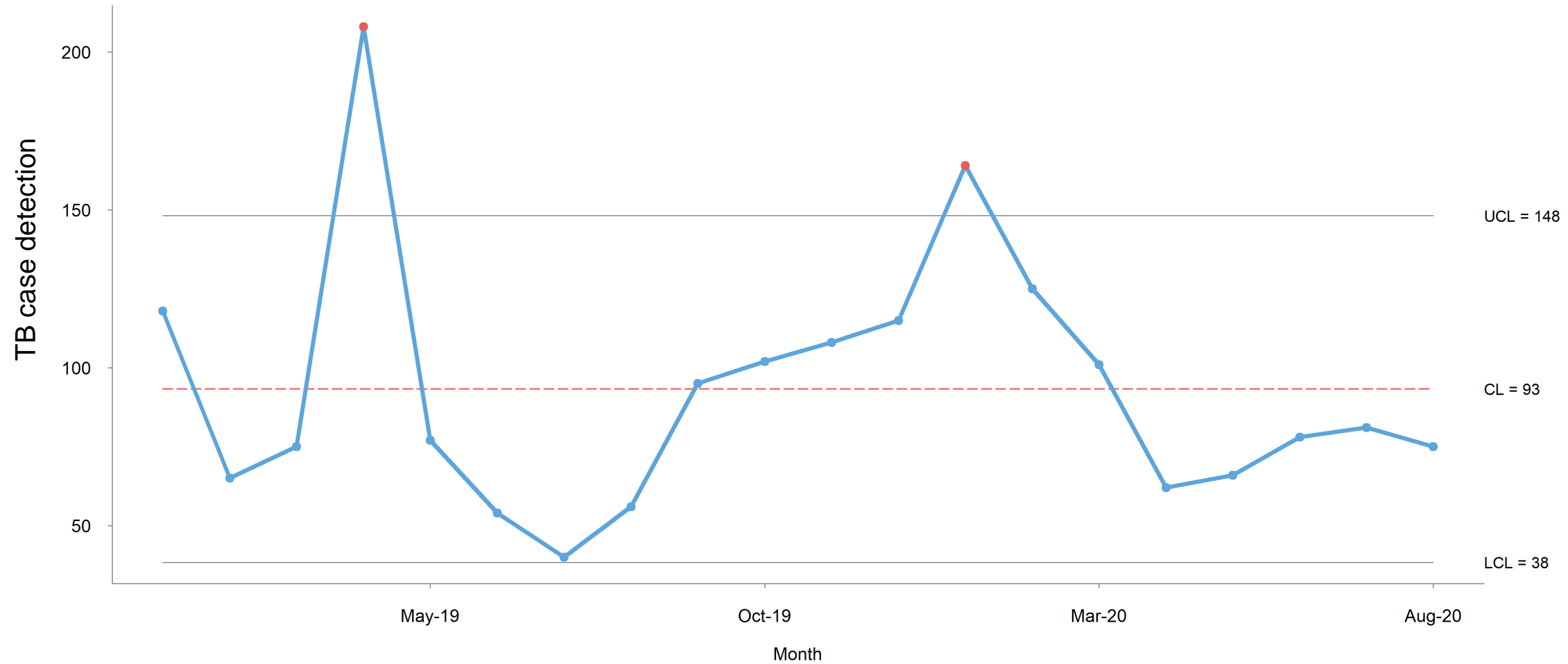
- 537 ICU's/256 Ventilators
- Only 22% of Kenya's population lives within 2 hours of a facility with an ICU available,

# Indirect health effects: Outpatient visits per capita

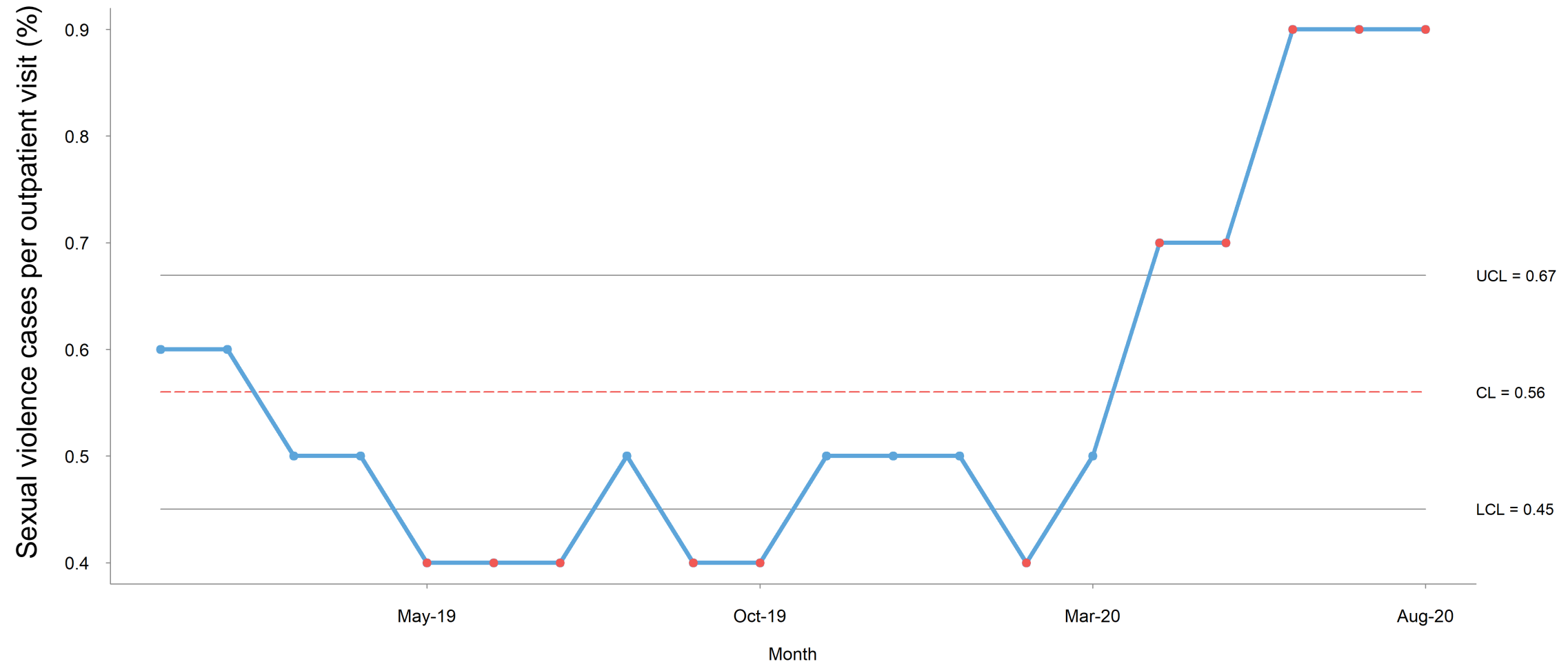




# Indirect health effects: TB case detection



# Socio-economic effects: Sexual violence cases



# Socio-economic impacts: Economic Impacts

- 50% of the existing jobs could be lost in Africa due to COVID-19 (*Oxfam 2020*)
- People working in the informal sector and small and medium enterprises (SMEs) are the most vulnerable
- Out of an estimated 49 million people who will be pushed into extreme poverty in 2020 due to the COVID-19 pandemic, 23 million will be from SSA (*Mahler et al 2020*)

# Mitigating Socio-economic impacts

- Solidarity funds
- Safety net programs
- Reduced taxation
- Cash transfers to the vulnerable
- Food distribution
- Temporary employment program for youths rendered jobless
- Subsidies and soft loans to SME's and farmers

# Strong regional coordination and leadership from Africa CDC

- Information sharing and coordination
- Development and dissemination of guidance for response
- Mobilizing resources and coordinating pooled procurement of laboratory reagents



**Dr. John N. Nkengasong, MSc, PhD**

Director of the Africa Centres for Disease Control and Prevention (Addis Ababa, Ethiopia)



# Additional Reflections

# 1) Whole of Society Resilience vs Health (*care*) System Resilience: Tear down arbitrary boundaries

## Within the health sector:

- **Public** vs **Private** – Engage and integrate private sector in policy, planning and implementation
- **Curative** facility based care vs **preventive/promotive** care (public health care)
- **Facility based** care vs **Community Health Care**
- **Research systems** vs **Health systems**

# 1) Whole of Society Resilience vs Health (*care*) System Resilience: Tear down arbitrary boundaries

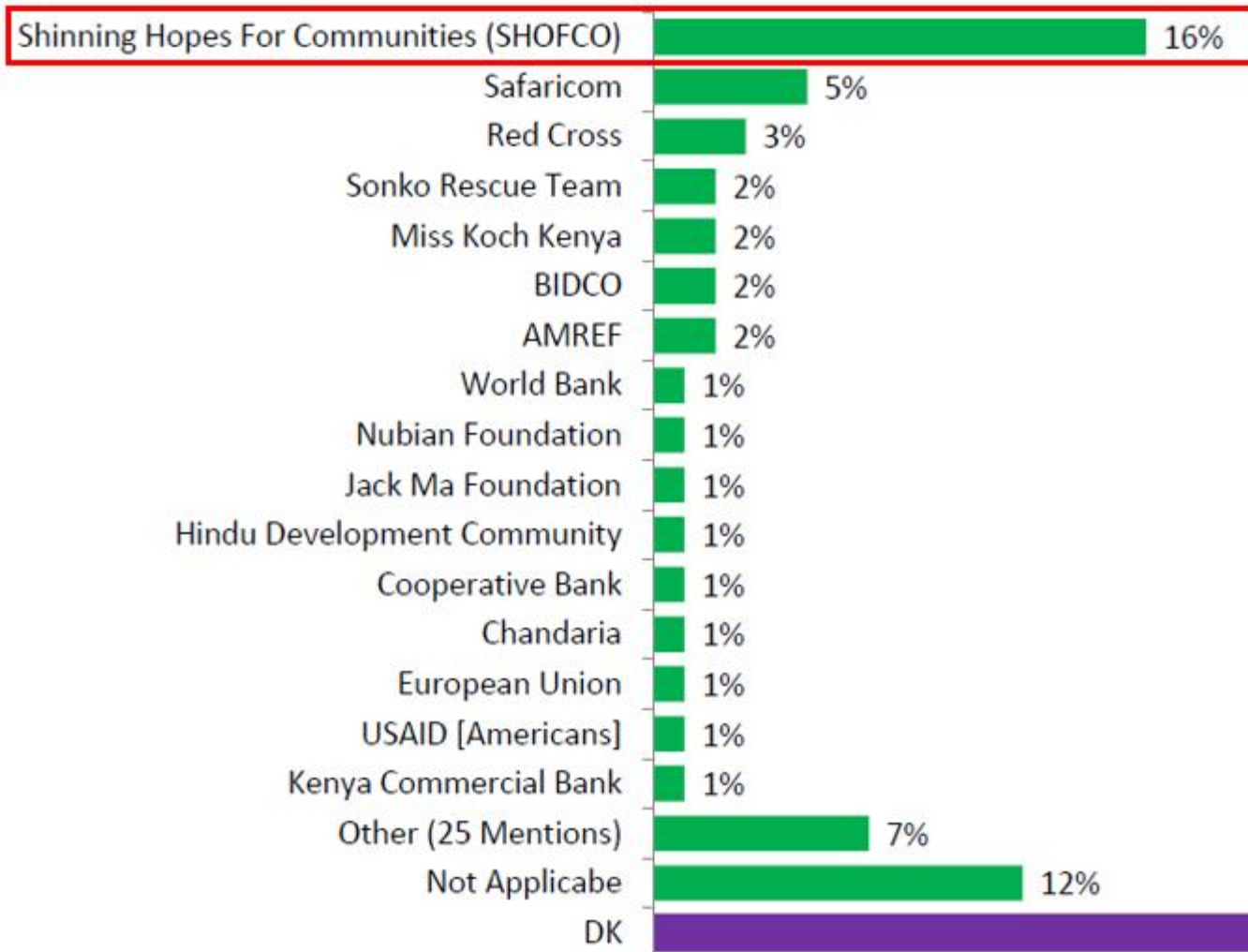
## Beyond the health sector:

- **Multi-sectorial approaches** – Health, transport, security, education, housing, urban planning, social protection etc
- **Social Determinants of Health:** Informal settlements, homelessness, poverty, water and sanitation, disability, gendered effects, the elderly etc
- **Community resilience:** Recognizing, supporting, leveraging on bottom-up community responses



# 1) Whole of Society Resilience vs Health (*care*) System Resilience: **Tear down arbitrary boundaries**

Awareness of Private Sector/Non-Governmental Organizations That Have Made Donations to the Needy



TIFA (2020) survey in Low Income areas in Nairobi

## 2) Cognitive Capacity: What Sources of Knowledge are recognized? How do we make sense of our problems

- What Voices are heard? Who (Consciously or sub-consciously) determines LMIC priorities?
- **Example** – Why are LMICs talking more about ventilators/ICUs and less about essential interventions such as oxygen|Health workers etc
- **Example** - Physical distancing measures without taking into consideration the potential health and social economic impacts

### Nyandarua shelves theatre project to set up Sh10m ICU

As the coronavirus spreads to counties, the spotlight shifts to preparedness in health facilities across Kenya. The *Nation*, in the County Focus series, reveals the situation in the regions

BY WAIKWA MAINA  
[waikwamaina@yahoo.com](mailto:waikwamaina@yahoo.com)



### 3) Beyond Hardware: Leadership, Governance etc

#### Global Health Security Index

Rank	Country	Index Score ▼
1	<a href="#">United States</a>	83.5
2	<a href="#">United Kingdom</a>	77.9
3	<a href="#">Netherlands</a>	75.6
4	<a href="#">Australia</a>	75.5
5	<a href="#">Canada</a>	75.3
6	<a href="#">Thailand</a>	73.2
7	<a href="#">Sweden</a>	72.1
8	<a href="#">Denmark</a>	70.4
9	<a href="#">South Korea</a>	70.2
10	<a href="#">Finland</a>	68.7



Thank you