

African responses to Covid-19: approaches, gaps and ways forward

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LSE Health, Department of Health Policy

Outline of the Webinar

- Introduction to AHOP

COVID-19

- What was hypothesized across Africa?
- What is currently happening?
 - What do we know?
 - What don't we know?
- Why the current Covid-19 impact?
- What does the future hold?



African
Health
Observatory



PLATFORM ON
HEALTH SYSTEMS
AND POLICIES

A regional partnership to promote
evidence-informed policy-making

What is AHOP?



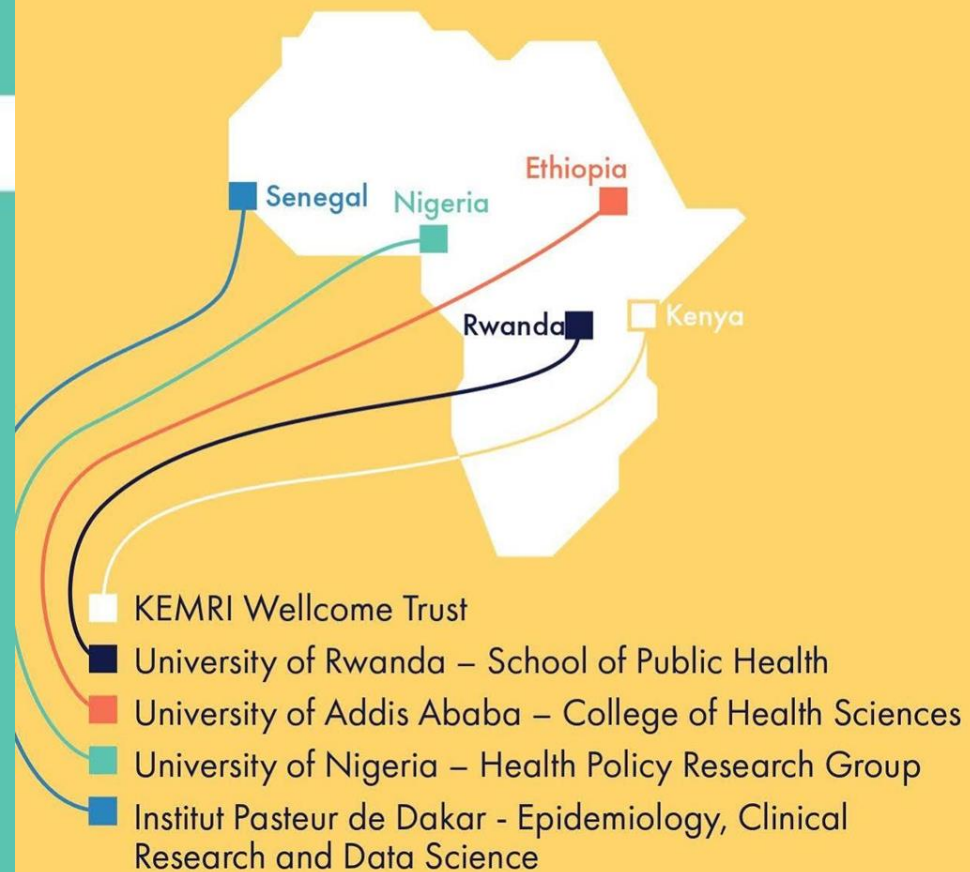
OBSERVATORY MODEL

Best practice for knowledge brokering and evidence transfer

- ✓ Rigorous analysis of health systems
- ✓ Production of timely, reliable and comparative evidence
- ✓ Dissemination of outputs that are useful and usable



REGIONAL PLATFORM



Hosted by the WHO's African Health Observatory

Research led by a growing network of National Centres

Supported by a consortium of national, regional and global technical partners

Informed by policy-maker input to Platform Steering Committee

Funded by a seed grant from the Bill & Melinda Gates Foundation

OUTPUTS



HiTs

Part of 'Health Systems in Transition' series; detailed reviews of a country's health system, reform and policy initiatives

Policy briefs

Short, tailored evidence reviews that address policy-makers' needs

Comparative and thematic studies

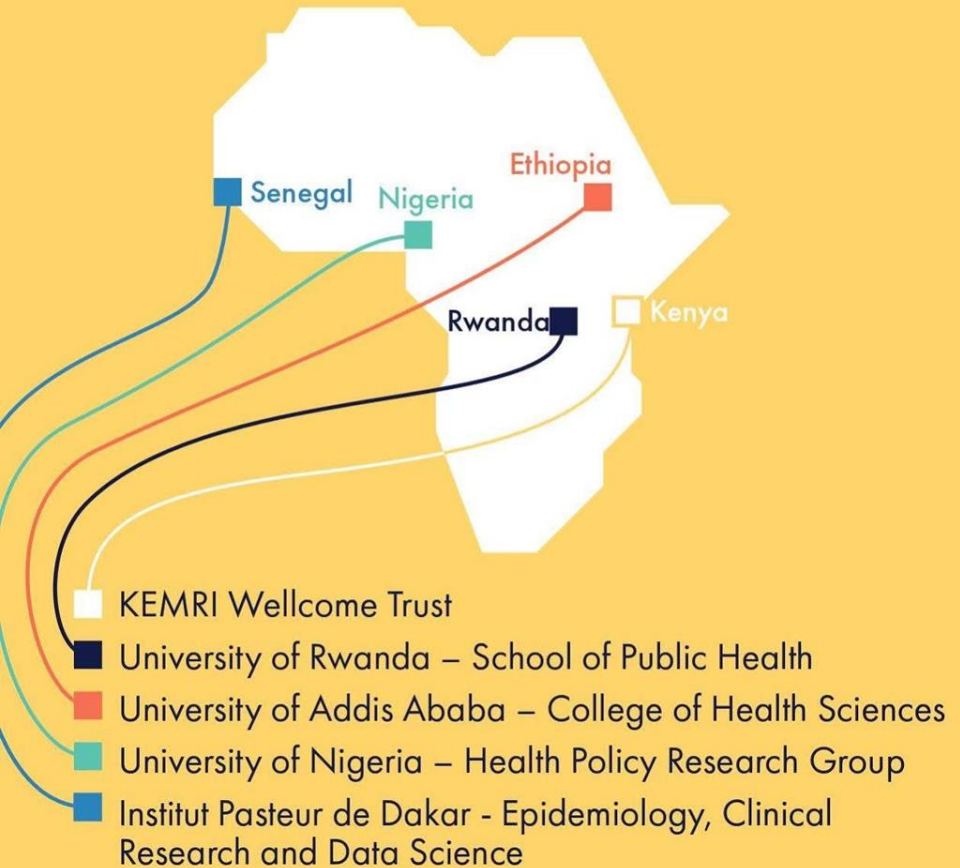
In-depth analysis of specific health systems functions or issues

Policy dialogues

Highly focused events to facilitate knowledge exchange and mutual learning among policy-makers



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ADDRESSING THE GAPS

Intended outcomes



Increased national and regional scope to produce and share health systems analysis



Increased awareness and uptake of available evidence and expertise by policy-makers

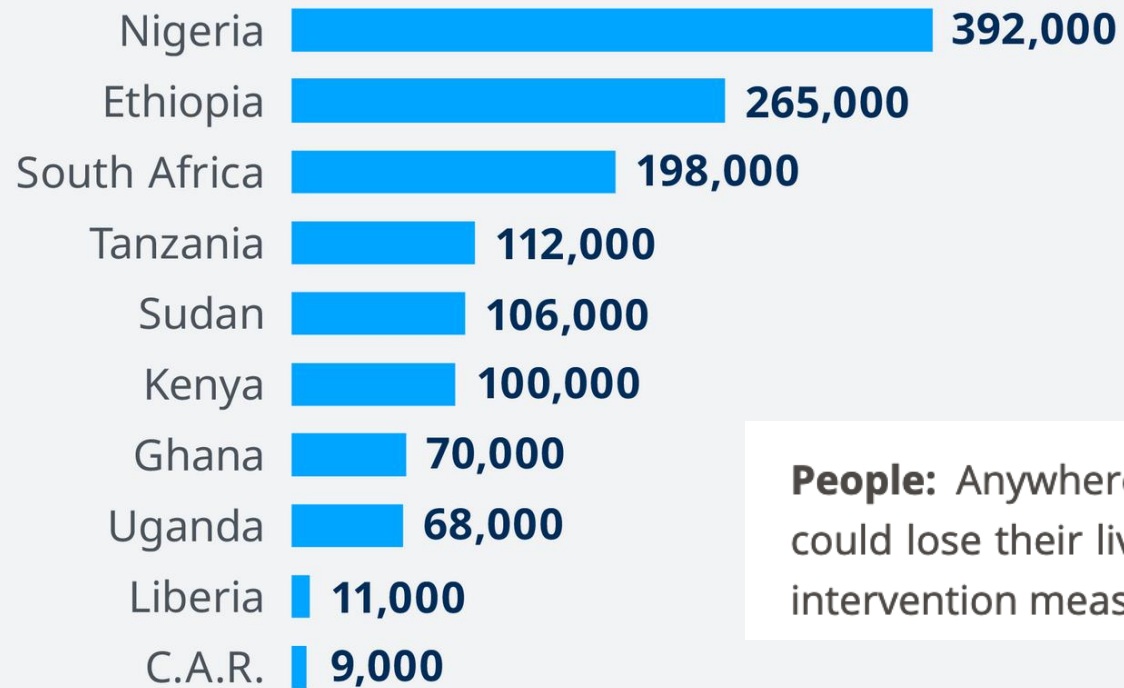
Up coming Covid-19 Outputs



Covid-19

What was hypothesised
for Africa?

Worst-case scenario: Predicted deaths from coronavirus if nothing is done



These figures are a prediction of future events, in a hypothetical scenario where no measures are taken to stop the virus spreading.



Source: Imperial College London, estimates are rounded

COVID-19 in Africa

Protecting Lives and Economies



People: Anywhere between 300,000 and 3.3 million African people could lose their lives as a direct result of COVID-19, depending on the intervention measures taken to stop the spread.



United Nations
Economic Commission for Africa

Hospital beds per 10,000 inhabitants



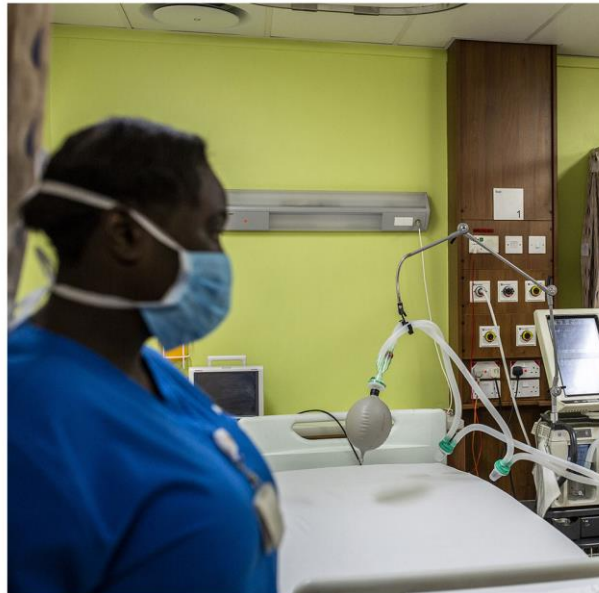
Availability of hospital beds varies significantly between countries and is a major challenge for many African nations to cope with a potential surge in COVID-19 cases.

Number of non-ICU hospital beds overall in Africa is estimated at 1.5 million.

3:50 p.m. ET, April 9, 2020

Europe has 4,000 ICU beds for every 1 million people. Parts of Africa have 5, health official says.

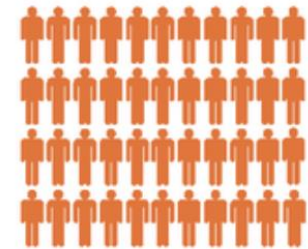
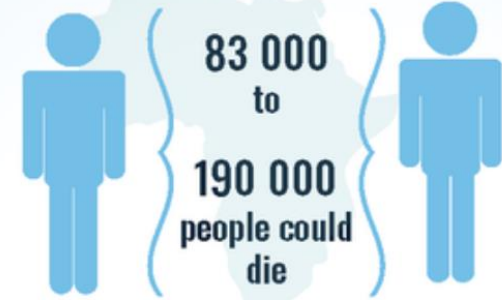
From CNN's Hande Atay Alam



A mechanical ventilator sits by a bed at the Aga Khan University Hospital in Nairobi, Kenya. Photo by Meinhardt/Bloomberg via Getty Images

WHO Projections if COVID-19 containment measures fail in Africa*

(47 WHO African Region countries)



29 million to 44 million people could be infected



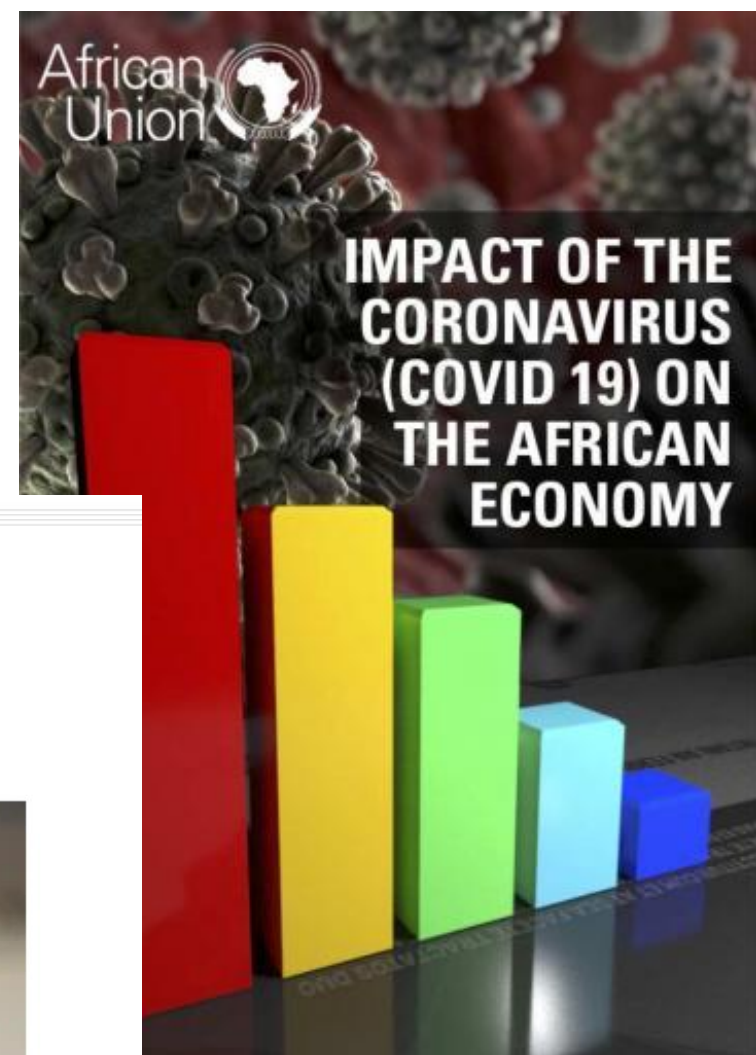
of whom 82 000 to 167 000 would be severe cases



Source: DW research, most recent available data. See github.com/dw-data/coronavirus-africa

Lockdown in Africa – is the treatment worse than the disease?

By Alexander C. R. Hammond | @AlexanderHammo



US economy

Top economist: US coronavirus response is like 'third world' country

Joseph Stiglitz attacks Donald Trump, saying US on course for second Great Depression

- [Coronavirus - latest updates](#)
- [See all our coronavirus coverage](#)

Larry Elliott

Wed 22 Apr 2020 12.37 BST



23,199



▲ Joseph Stiglitz: 'The public social safety net is not working.' Photograph: Vladimir Gerdo/Tass

Donald Trump's botched handling of the Covid-19 crisis has left the US looking like a "third world" country and on course for a second Great Depression, one of the world's leading economists has warned.



Covid-19

Current Situation?

Current Situation

- What do we know?

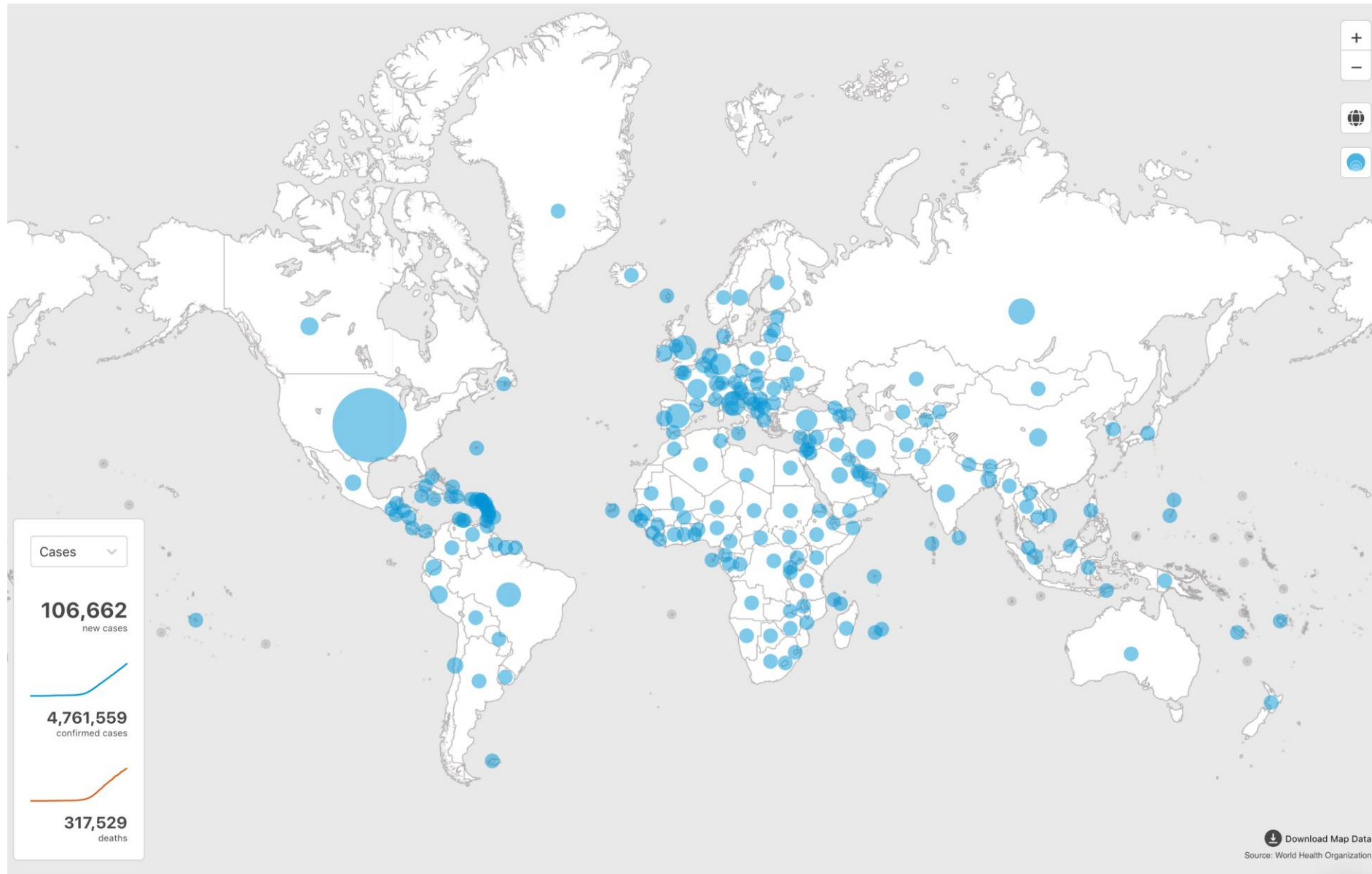


WHO Coronavirus Disease (COVID-19) Dashboard

Data last updated: 2020/5/20, 10:21am CEST

Overview

Explorer



Globally, as of 10:21am CEST, 20 May 2020, there have been 4,761,559 confirmed cases of COVID-19, including 317,529 deaths, reported to WHO.



Case Comparison

WHO Regions

Americas



2,105,670

confirmed cases

Europe



1,909,592

confirmed cases

Eastern Mediterranean



359,084

confirmed cases

Western Pacific



169,955

confirmed cases

South-East Asia



150,590

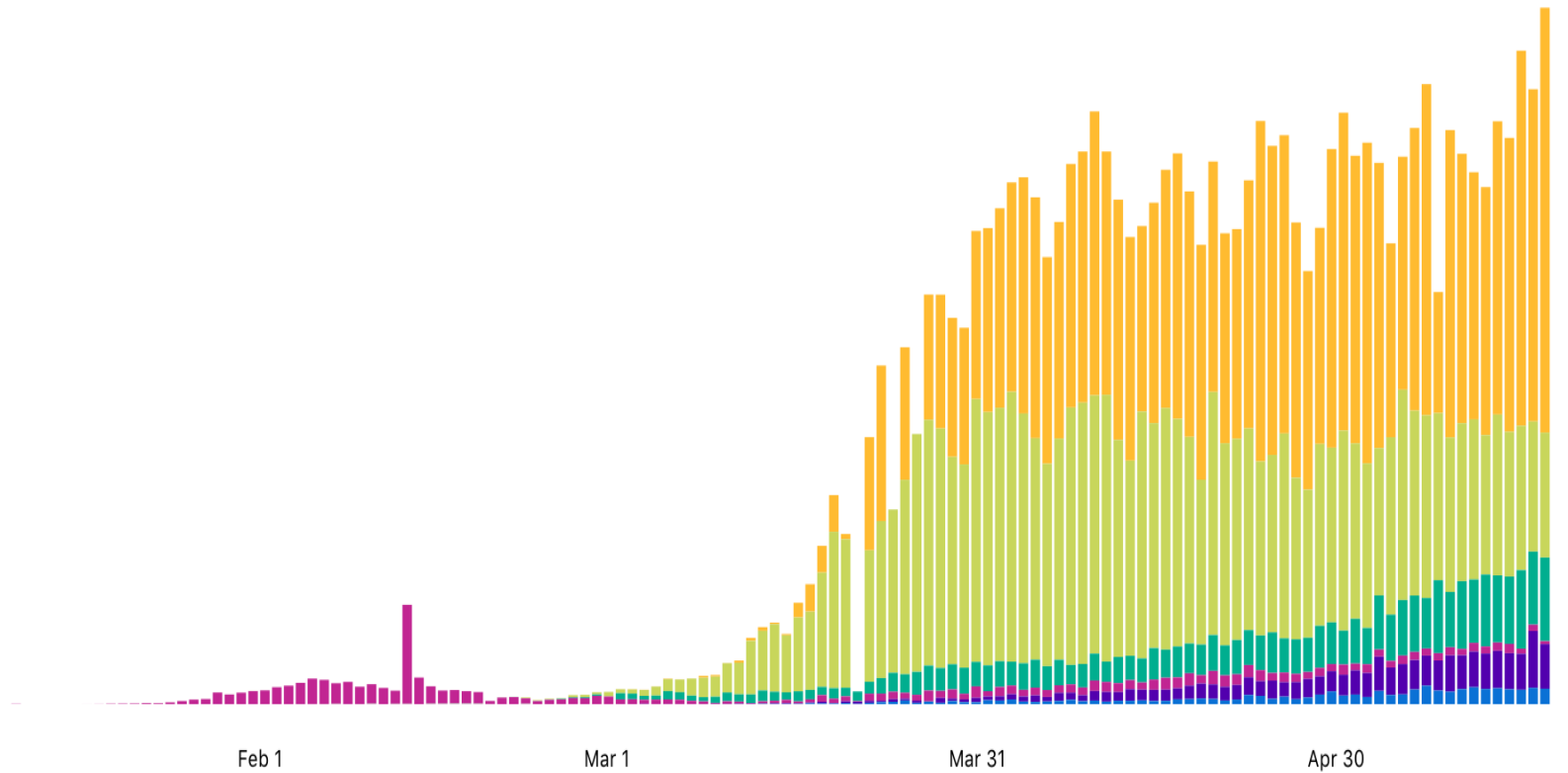
confirmed cases

Africa



65,956

confirmed cases



Source: World Health Organization

Situation as of
5/20/2020 5:00:00 a.m.



World Health Organization
REGIONAL OFFICE FOR Africa
MOBILE VERSION

Indicators for the WHO African Region

Confirmed cases /African continent



WHO African region over Afr...

Last 24 hours

2,140

New confirmed case(s)

26,075

Recoveries (cumulative)

1,827

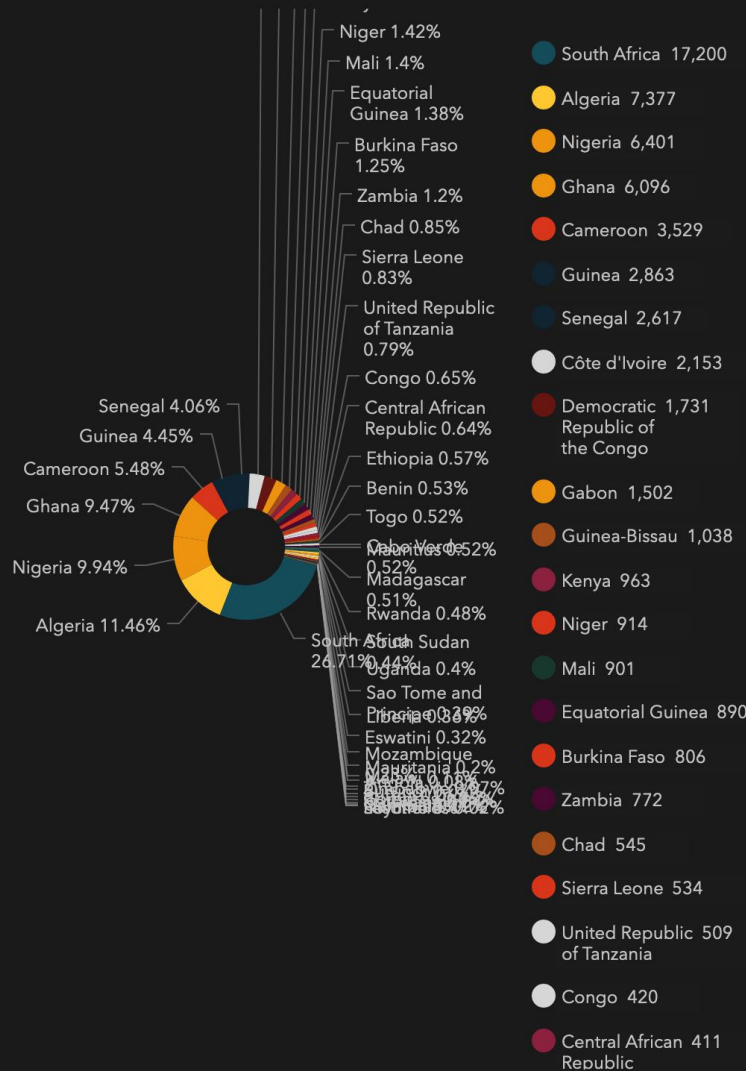
Cumulative deaths

36,189

Active cases (cumulative)

64,388 cumulated cases in the WHO African Region

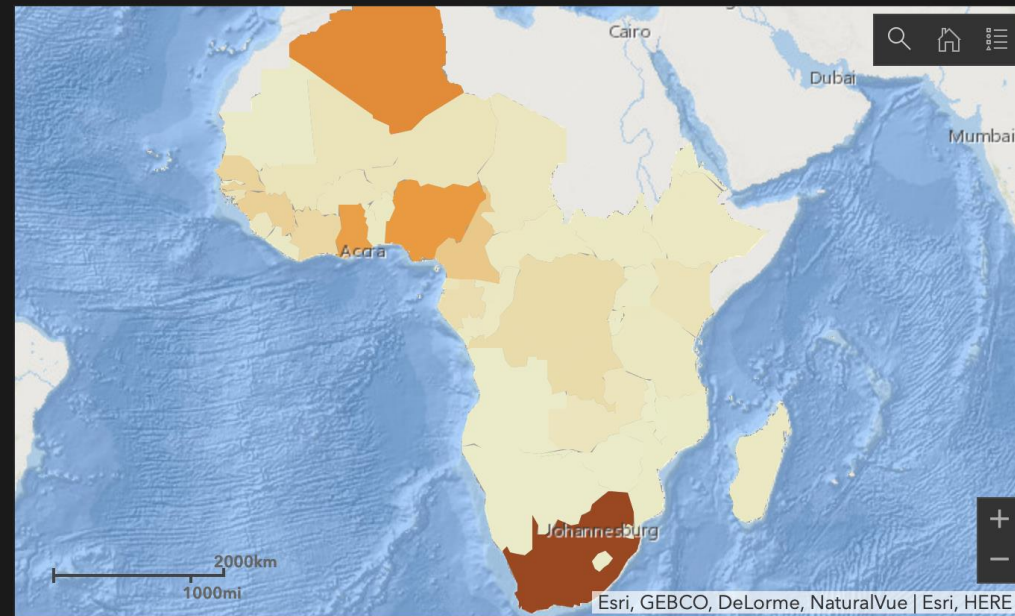
Confirmed cases (WHO African Region)



Click on any portion for details

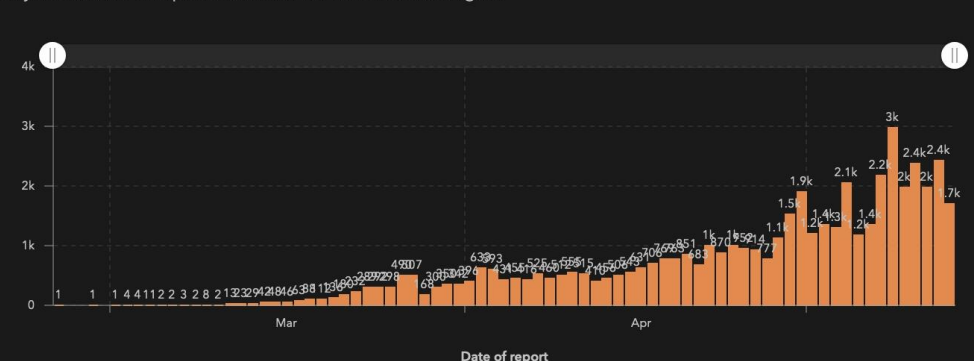
Confirmed cases (WHO African Region)

47 countries over 47 affected in the WHO African Region



Cases Deaths and CFR Days since the last reported case

Daily distribution of reported cases in the WHO African Region



Click on any bar(s) for filtered details



Daily reported cases

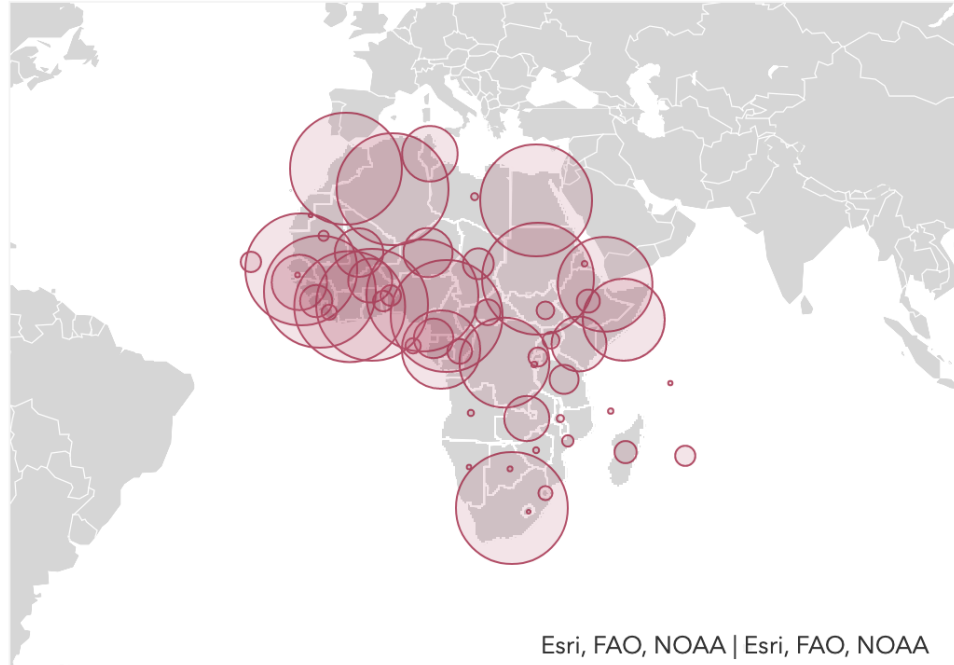


Last Updated: 20 May 2020

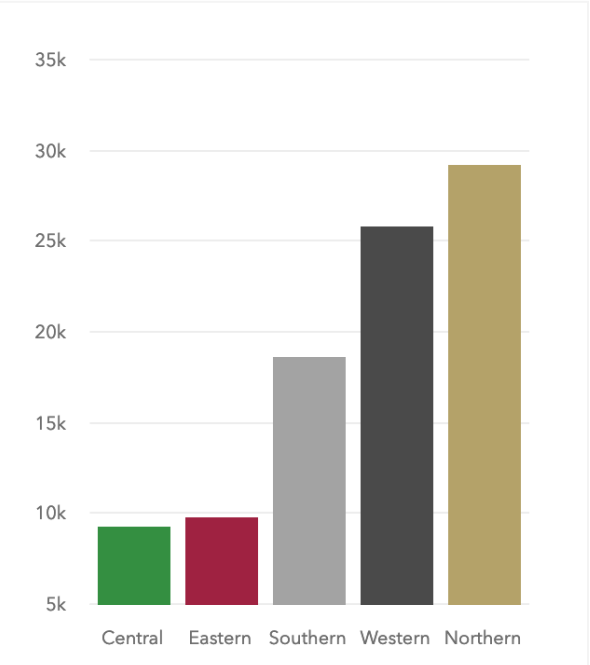
Cases
92,348

Deaths
2,912

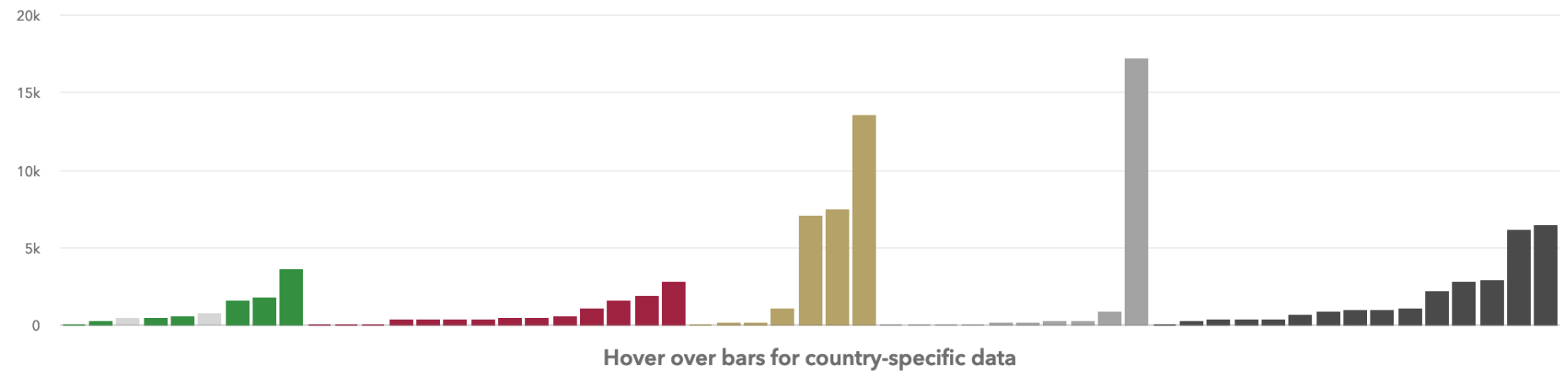
Recoveries
36,117



Map of Cumulative Cases | Map Legend | Citation



Cases by Region



Cases by Country | Deaths by Country | Recoveries by Country



Region

All



Last Updated: 20 May 2020

Cases

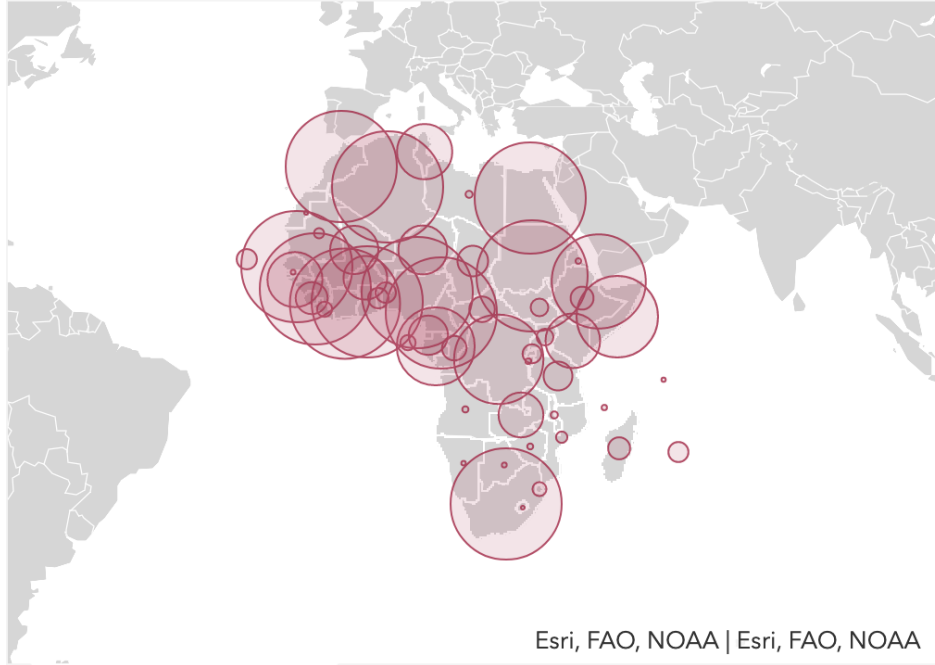
92,348

Deaths

2,912

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36,117

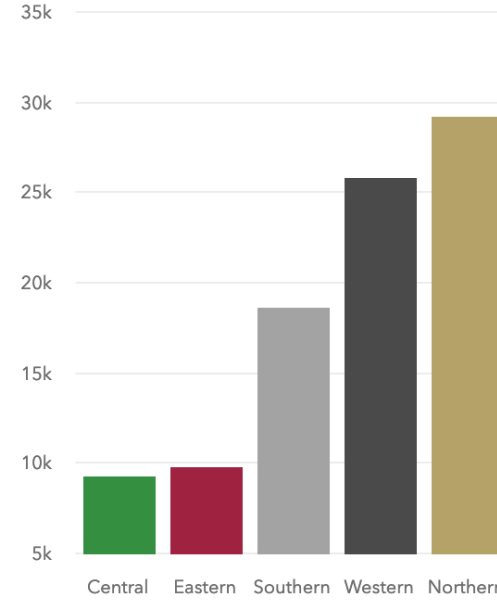


Esri, FAO, NOAA | Esri, FAO, NOAA

Map of Cumulative Cases

Map Legend

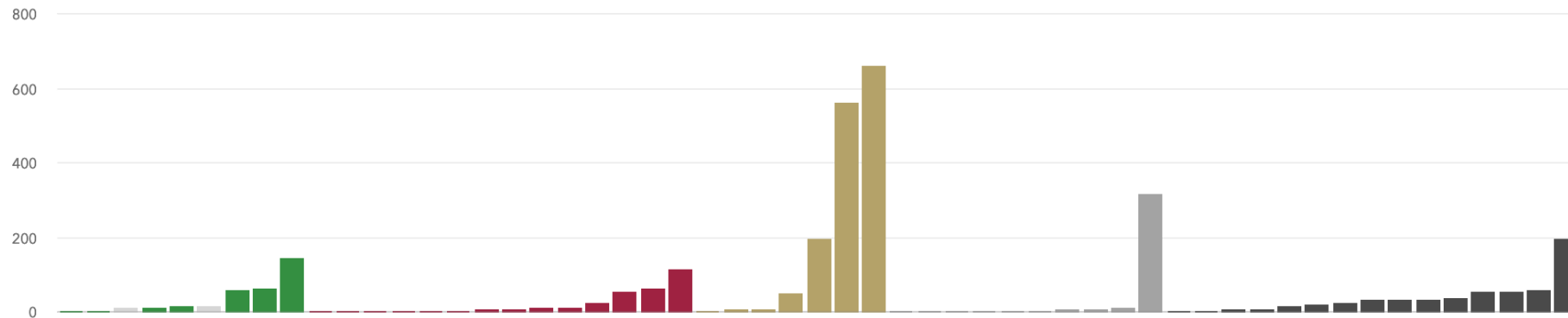
Citation



Central Eastern Southern Western Northern



Cases by Region



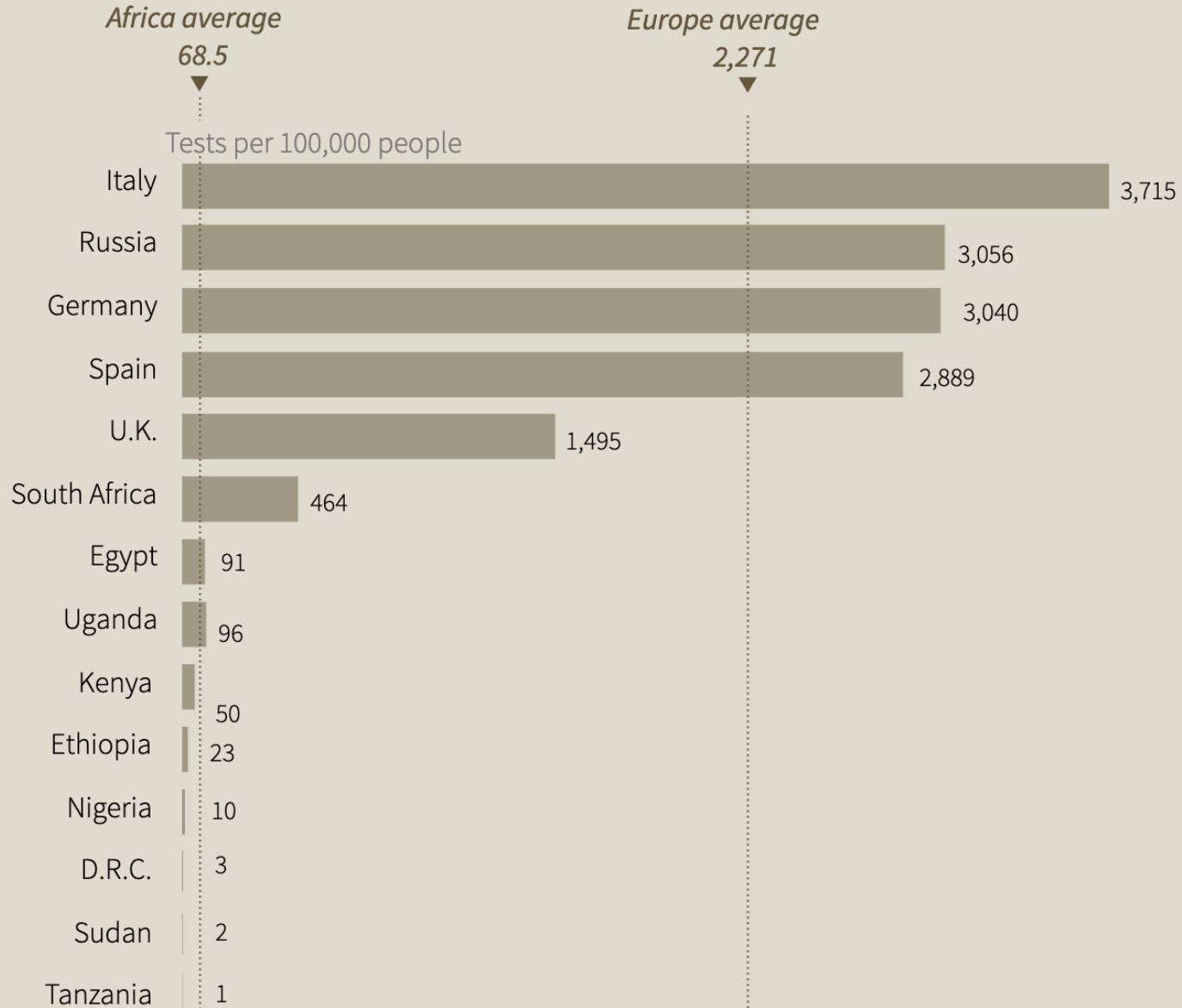
Hover over bars for country-specific data

Cases by Country

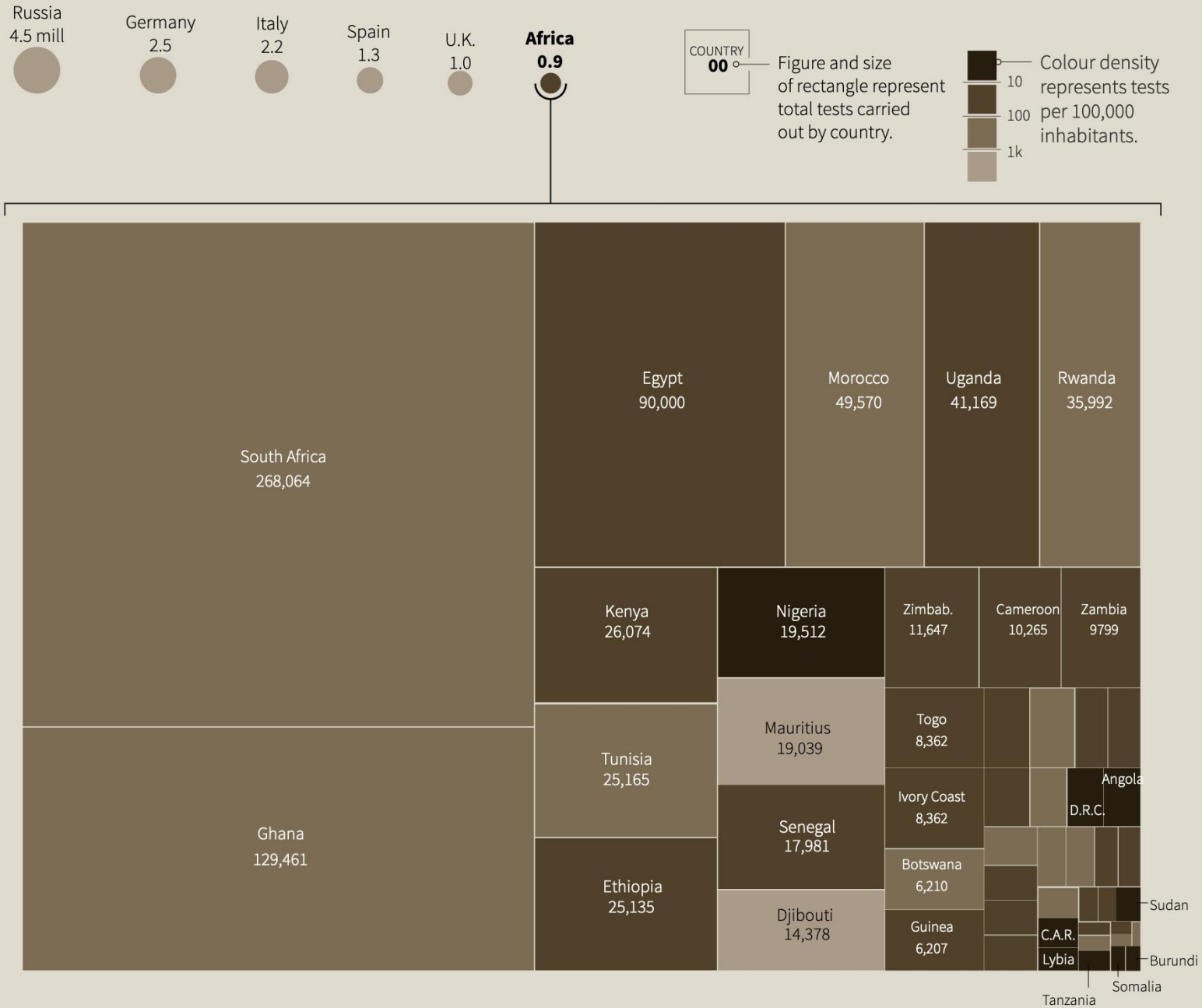
Deaths by Country

Recoveries by Country

Testing: How African countries compare with the world



Total tests carried out



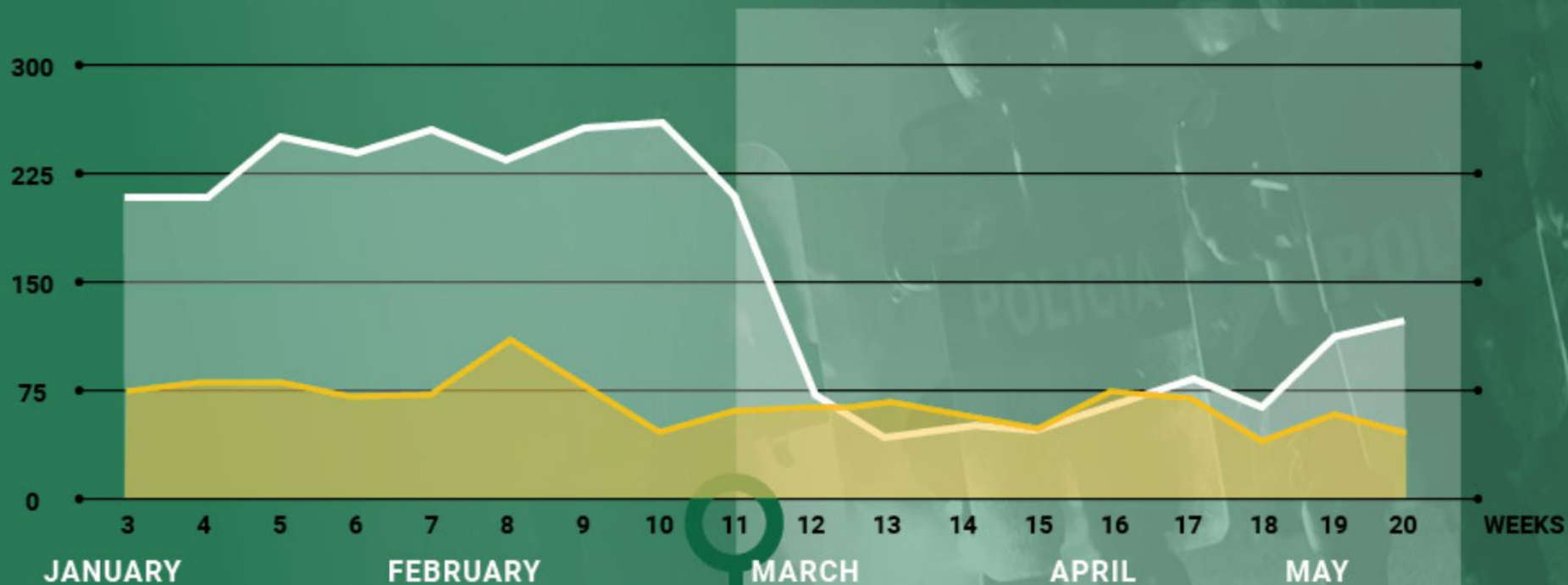
Source: Africa CDC

20
MAY
2020

PROTESTS & RIOTS

Examining the correlation between the spread of COVID-19 and protest & riot events

- Protests
- Riots



11 March
WHO declares
COVID-19 a pandemic

Current Situation

- What don't we know?



Impact on marginalised populations



#COVID19

Leaving No-One behind in the Disability-Inclusive Response

- “I don’t have any information on how to prevent contagion from COVID-19. No one told me for instance that I have to sanitize my cane, I have to rely on my own common sense and knowledge. Plus, I don’t have a sanitizer nor masks”, AK, blind woman, Kenya.

NEWS / KENYA

Stigma, fears of quarantine hinder Kenya's COVID-19 fight

COVID-19 testing ramps up across worst-affected parts of Kenya, but many are worried they will be forced into quarantine.

by Catherine Sol [f](#) [t](#)



COVID-19 outbreak

Kenyans Confined at Quarantine Facilities See It as Sentence

By Mohammed Yusuf

April 23, 2020 10:41 AM



A person sits in a room in one of the quarantine facilities in Nairobi on April 22, 2020.

'Prison break': Kenyans under quarantine at KMTC escape

Wednesday, April 23, 2020

[t](#) [f](#) [in](#) [e](#) [m](#)



The entrance to the Kenyan Medical Training College in Nairobi. A number of people quarantined at the institution escaped on April 22, 2020. FILE PHOTO | NATION MEDIA GROUP

Despite the concerns around the spread of the coronavirus, the greatest enemy is not the virus itself, but "fears, rumours and stigma". Dr. Tedros, WHO DG

Six killed by Kenyan police enforcing coronavirus curfew: HRW

HRW condemns 'brutality' during curfew enforcement; police say they have dealt with officers who 'misbehaved'.

22 Apr 2020 [f](#) [t](#)



Kenya's night-time curfew came into effect on March 27 [Simon Maina/AFP]



Ugandan police officers and members of a paramilitary force patrol during a curfew in Kampala, April 29.

Juny Sadurni / Getty Images

Funding gaps

- The Kenya Medical Research Institute (Kemri) is so broke that it cannot replenish Covid-19 testing materials, protective gear and the much-needed reagents.

Daily nation, May 13, 2020

Kemri is dead broke amid Covid-19 fight

WEDNESDAY MAY 13 2020



A researcher prepares reagents for testing the samples for the Covid-19 coronavirus at the laboratory of Kenya Medical Research Institute (Kemri) on April 23, 2020. PHOTO | BRIAN ONGORO | AFP

Other issues

❑ Disruption of routine services, including chronic care

- *“... a 70 years old woman diagnosed with ovarian cancer had been worked up for laparotomy and radical excision of the cancer by a senior gynecologist a few weeks prior to March 12, 2020. However, with the report of the first 2 cases and the ensuing response by the hospital, the gynecologist transferred the patient to a junior consultant for her management, but the patient is yet to have her surgery after over six weeks since she was cleared for surgery” Surgeon, teaching hospital.*

2. High informality raises challenges:

- Tracing and supporting contacts (>80% informal sector)
- Implementation of social assistance



Covid-19

Why the impact so far?



Demographics

In sub-Saharan Africa

3% of the population are ≥ 65 years old

43% < 15 years old

European Union

20% of the population are ≥ 65 years or older

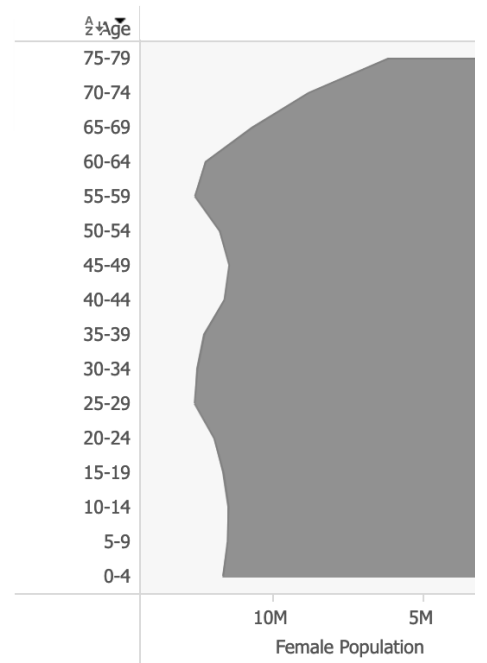
17% are < 15 years

Source: United Nations, Department of Economic and Social Affairs, Population Division (2013). World Population Prospects: The 2012 Revision.

population pyramid

Select Year: 2020

Select Region: Northern America

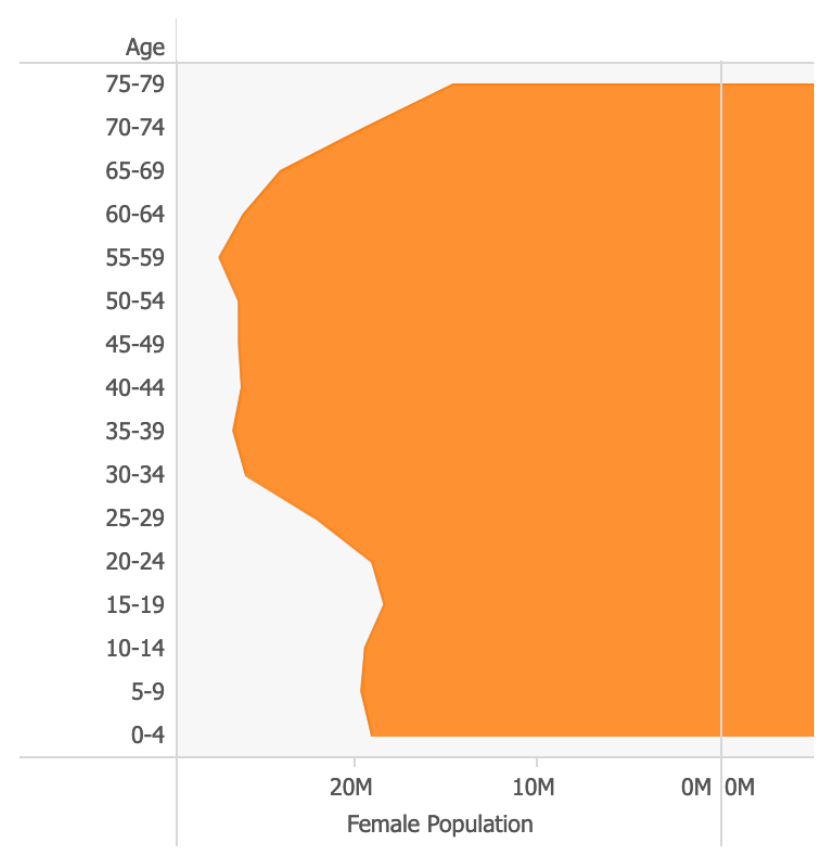


Region
 Northern America

population pyramid

Select Year: 2020

Select Region: Europe



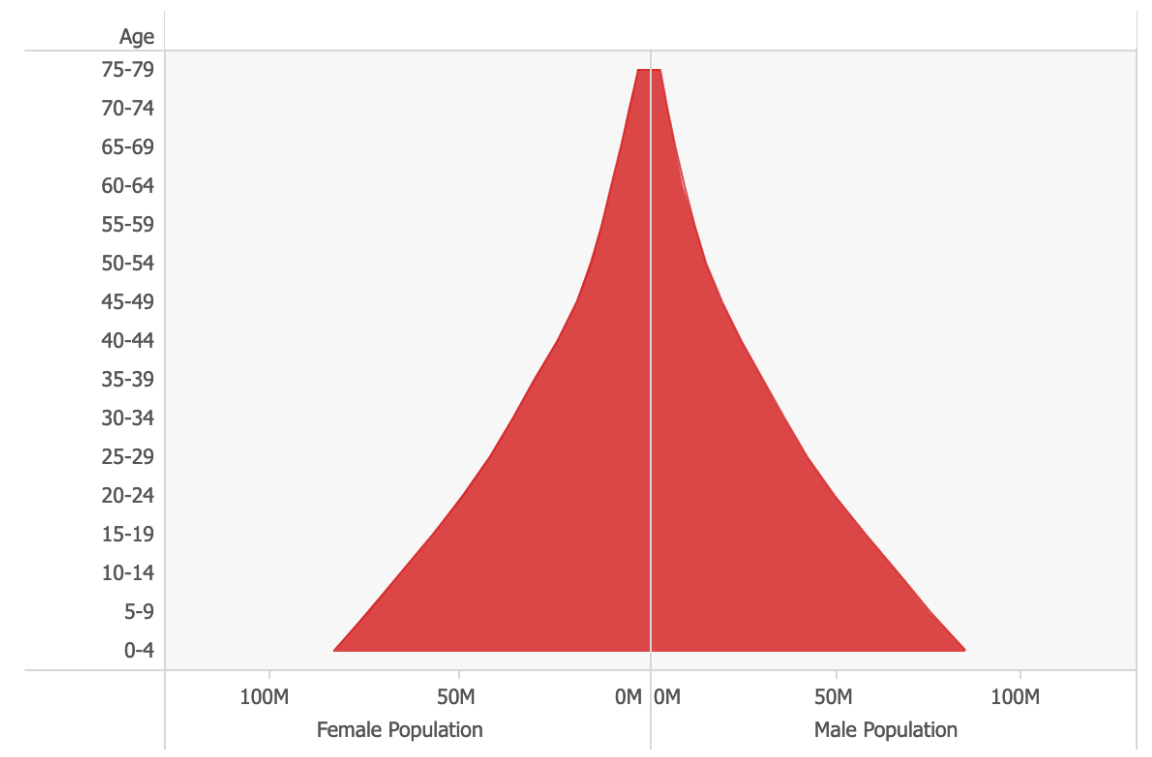
Region
 Europe

Source: United Nations, Department of Economic and Social Affairs, Population Division (2013). World Population Prospects: The 2012 Revision.

population pyramid

Select Year: 2020

Select Region: Sub-Saharan Africa



Region
 Sub-Saharan Africa

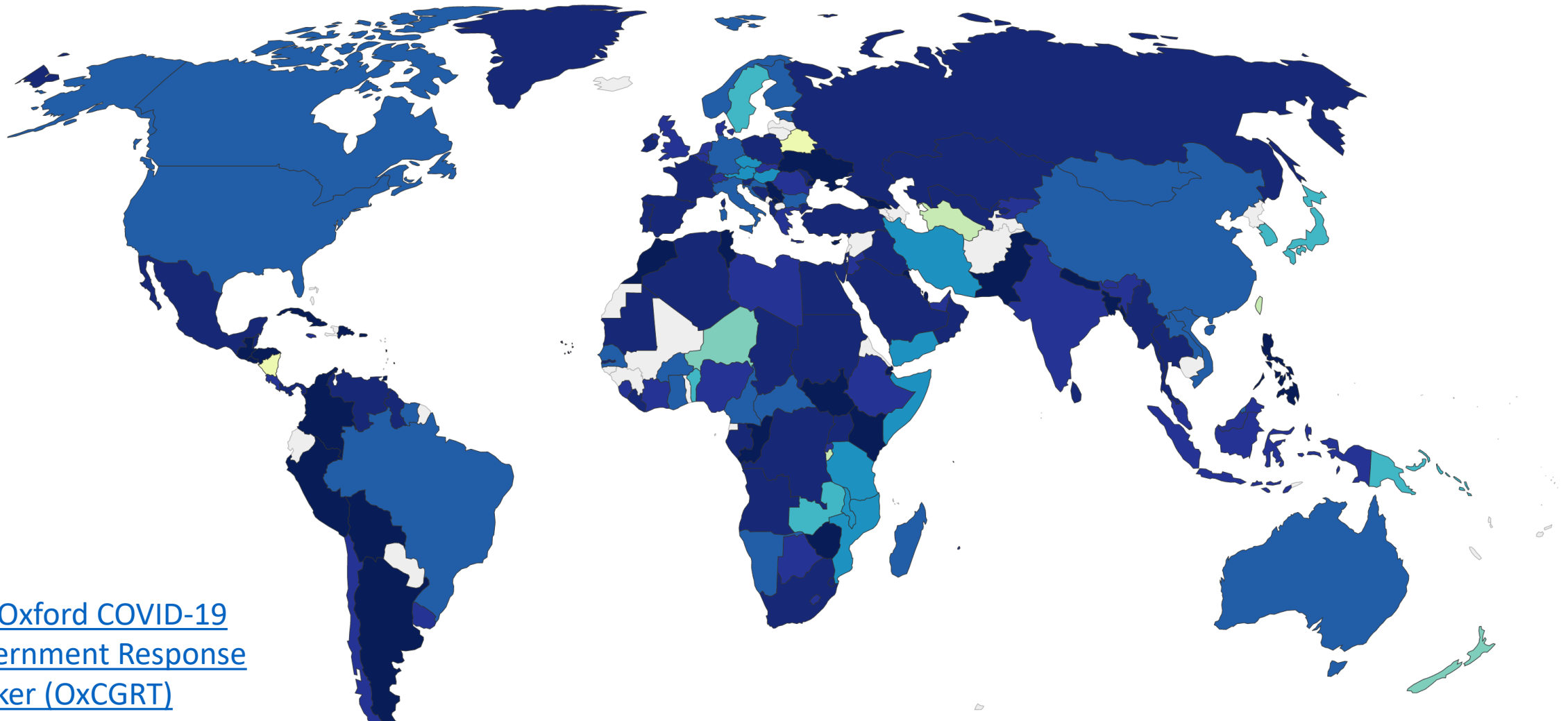
Swift introduction of containment measures?

- Most African countries implemented lockdowns far earlier than high-income countries.
- By the end of April at least 42 African countries had done so; 38 of these were in place for at least 21 days.

COVID-19: Government Response Stringency Index, May 15, 2020

The Government Response Stringency Index 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 response).

This index simply records the number and strictness of government policies, and should not be interpreted as 'scoring' the appropriateness or effectiveness of a country's response.



Health System Resilience

Principles of Health Systems Resilience in the Context of COVID-19 Response

Three key processes of resilience

Three resilience processes are usefully distinguished: ***absorption***, ***adaptation*** and ***transformation***. Suitable preparation will allow a health system to ***absorb*** some shocks without major change or redistribution of resources. With greater demands, the system needs to ***adapt*** through reallocation of resources and changes to policies and procedures. Greater or prolonged demands may require innovation to ***transform*** a health system's service offer or way of working.

1. Develop flexible pathways for medical supplies
2. Prioritise a list of essential health services.
3. Build trust with local communities
4. Foster good communication at all system levels
5. Support, recognise and encourage staff
6. Facilitate rapid resource flow to front line providers and greater flexibility in its use
7. Ensure agile tracking of health information.
8. Cultivate effective partnerships and networks

The 'Ebola Legacy'?



African countries that faced Ebola outbreaks use lessons to fight COVID-19, experts say

Uganda has redirected resources for tracing Ebola cases toward coronavirus patients, but not all countries are as well prepared.



— Staff members of the Health Ministry perform a COVID-19 test at a private residence in Goma, Democratic Republic of the Congo, on March 31, 2020. Alexis Huguet / AFP - Getty Images

Other suggestions?

- Covid-19 is there we are just not testing and identifying it?
 - Excess mortality data to support this?
- Transport links ?
- Protection of other vaccines on the EPI schedule ?
- Very few people who are obese, although the numbers are rising?
- We do not know as yet.....



Covid-19

Evidence & Insights
from Ethiopia



COVID-19 in Ethiopia: A big escape or a long wait?



Authors

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¹School of Medicine, Addis Ababa University

²School of Public Health, Addis Ababa University

Contents

 Introduction

 Method

 Results

 Discussions

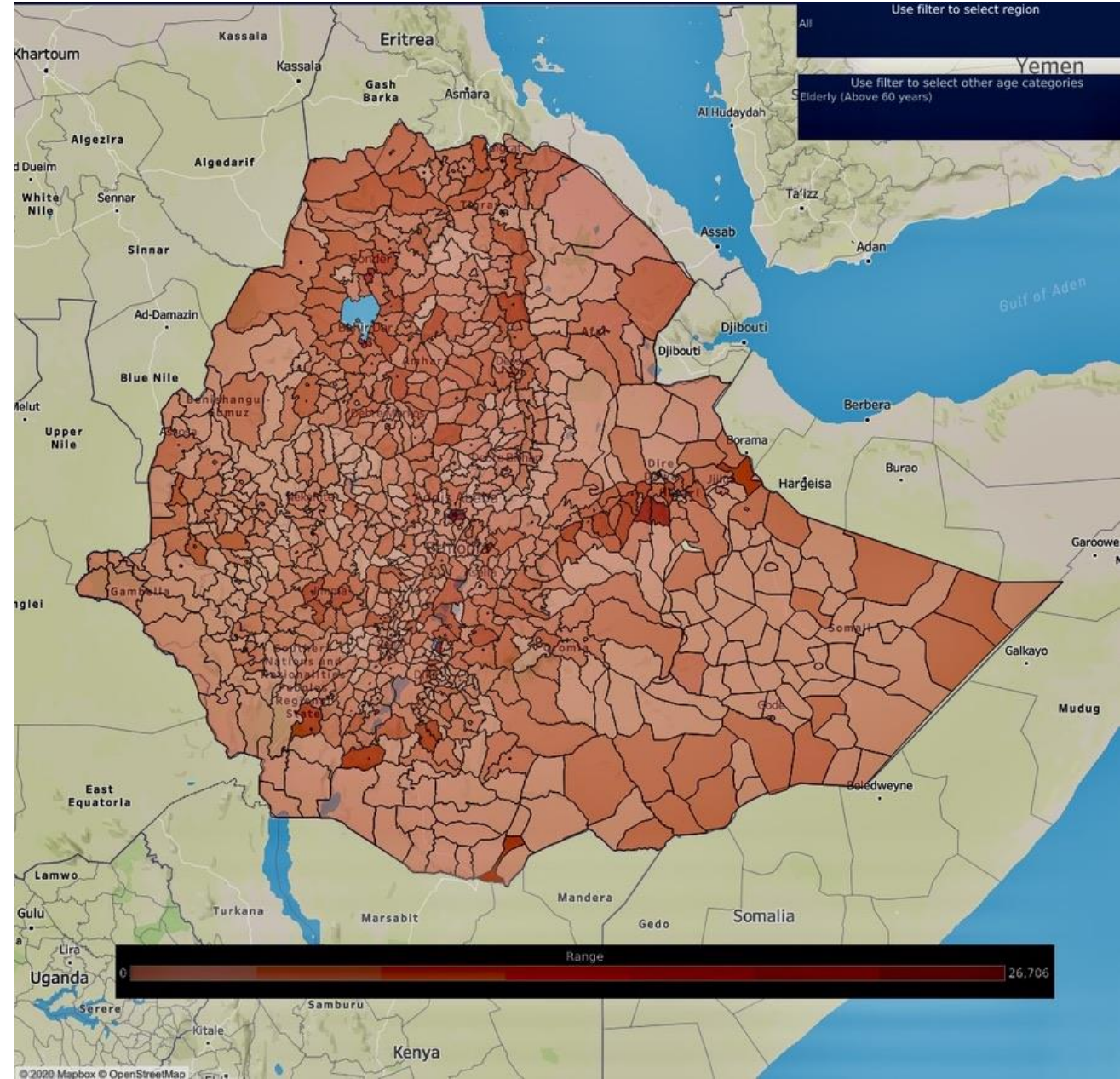
 Recommendations

More than **110 million**
population

Among **13** top priority African
countries

35 times a week flight to China

has one of the **lowest** confirmed
cases



Method

Focused Group Discussion

- Clinical
- Public Health
- Health System Leadership
- Policy

Narrative analysis
of the evidence

Panel discussion
with a larger
group

Findings of brainstorming

Testing related issues	Immunity and low susceptibility	Public health Measures	Time in the phase's of Pandemic
Self and institutional reporting	High infectious disease rate providing protection	?early intervention	10 th week
Disclosure	Environment	Quarantine	Pre growth phase
Contact tracing	Age, Urban/rural ratio	Isolation	
Prolonged incubation period and asymptomatic shedding	Social determinants: culture, diet, pets	Banning mass gathering	
Testing Capacity	Immunizations, Hygiene hypothesis	Border Closure	
Narrow case definition	Genetic diversity	School closure	
Specimen Collection/transportation	Cross immunity with other virus	Health education and campaigns	
Training and Experience	Prevalence of Comorbidities		
Standardization for local use	Travel and Movement rate		
Low adjuvant investigations	General naiveté for modern medicine		

Testing Related Issues



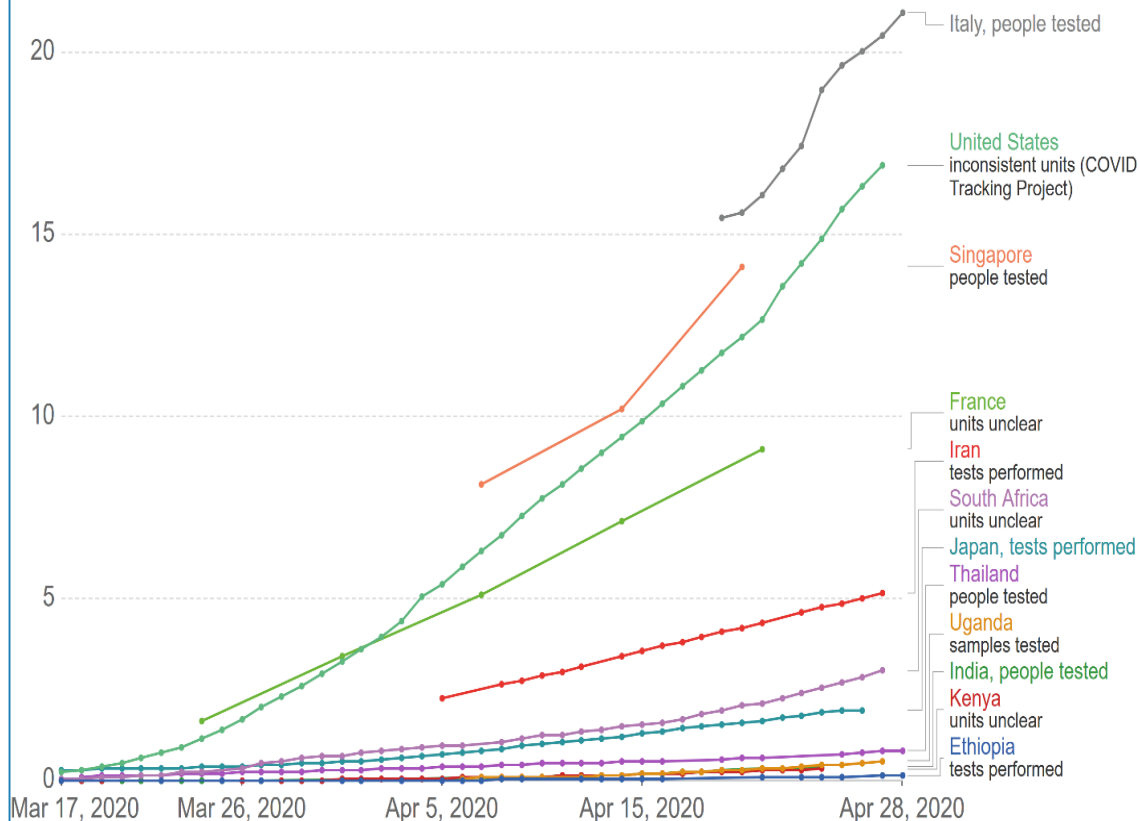
Testing related factors
65,760 tests
389 Confirmed cases

Testing related issues

- Testing coverage
- Number of tests for each confirmed cases
- Case fatality

Total COVID-19 tests per 1,000 people

Our World in Data



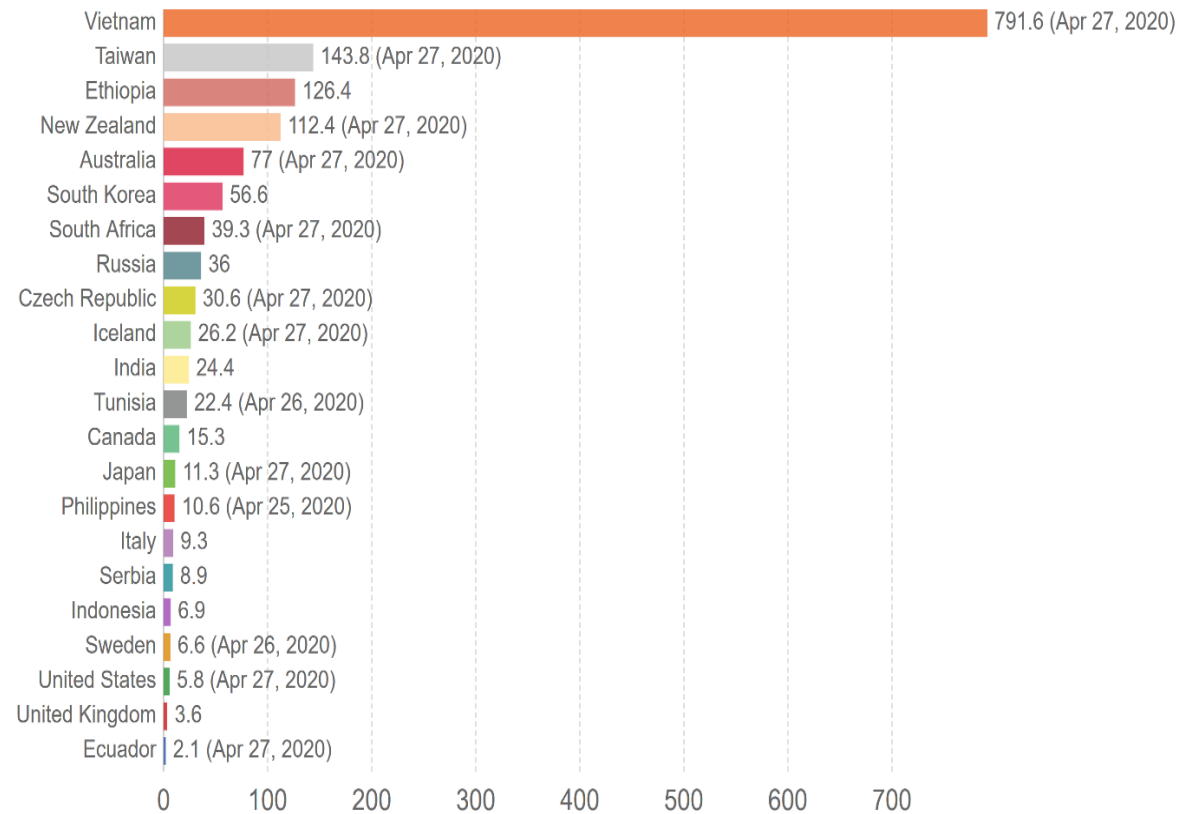
Source: Official sources collated by Our World in Data

OurWorldInData.org/coronavirus • CC BY

Note: For testing figures, there are substantial differences across countries in terms of the units, whether or not all labs are included, the extent to which negative and pending tests are included and other aspects. Details for each country can be found at the linked page.

Number of COVID-19 tests per confirmed case, Apr 28, 2020

Our World in Data

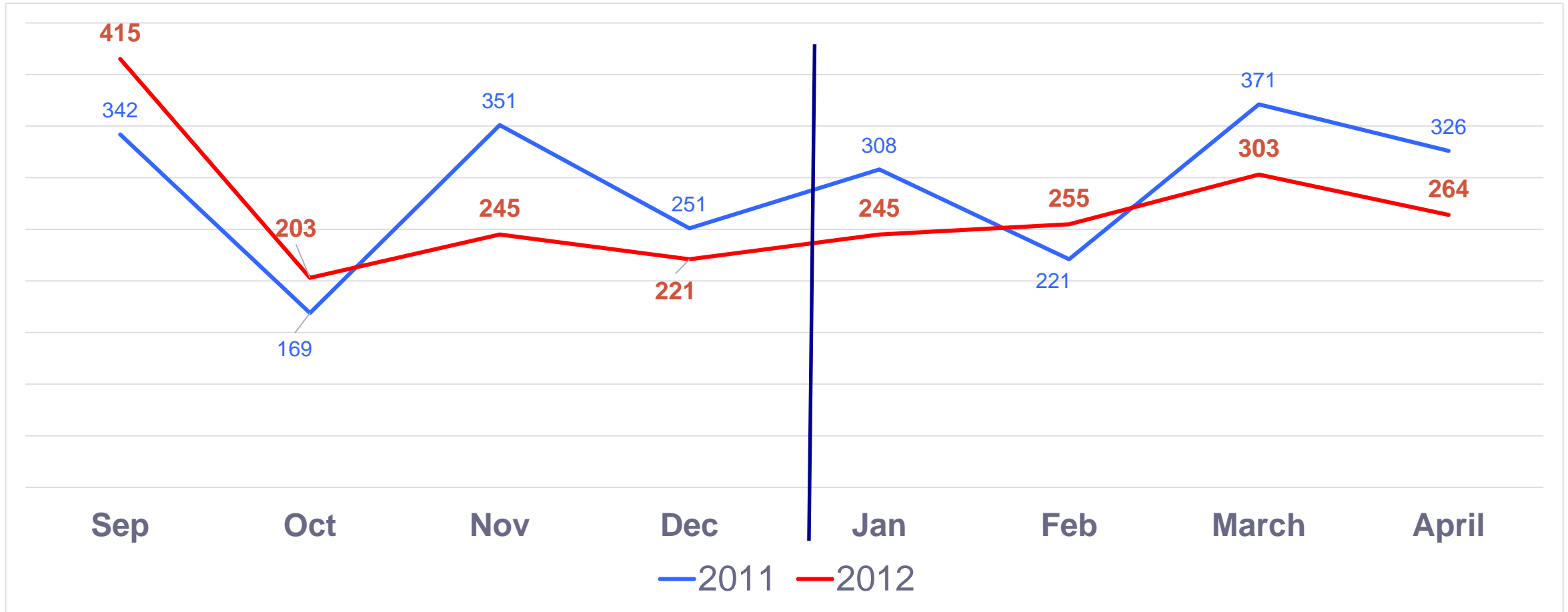


Source: Tests: official data collated by Our World in Data. Confirmed cases: European CDC – Situation Update Worldwide

Note: For testing figures, there are substantial differences across countries in terms of the units, whether or not all labs are included, the extent to which negative and pending tests are included and other aspects. Details for each country can be found at the linked page.

OurWorldInData.org/coronavirus • CC BY

Comparison of Mortality before and after the COVID-19 pandemic and from the last year



Immunity and low susceptibility

Burden of infectious disease and COVID-19

- Negative association of burden of TB and Malaria with COVID-19
- BCG Vaccination

Malaria and COVID-19

Malaria



COVID-19



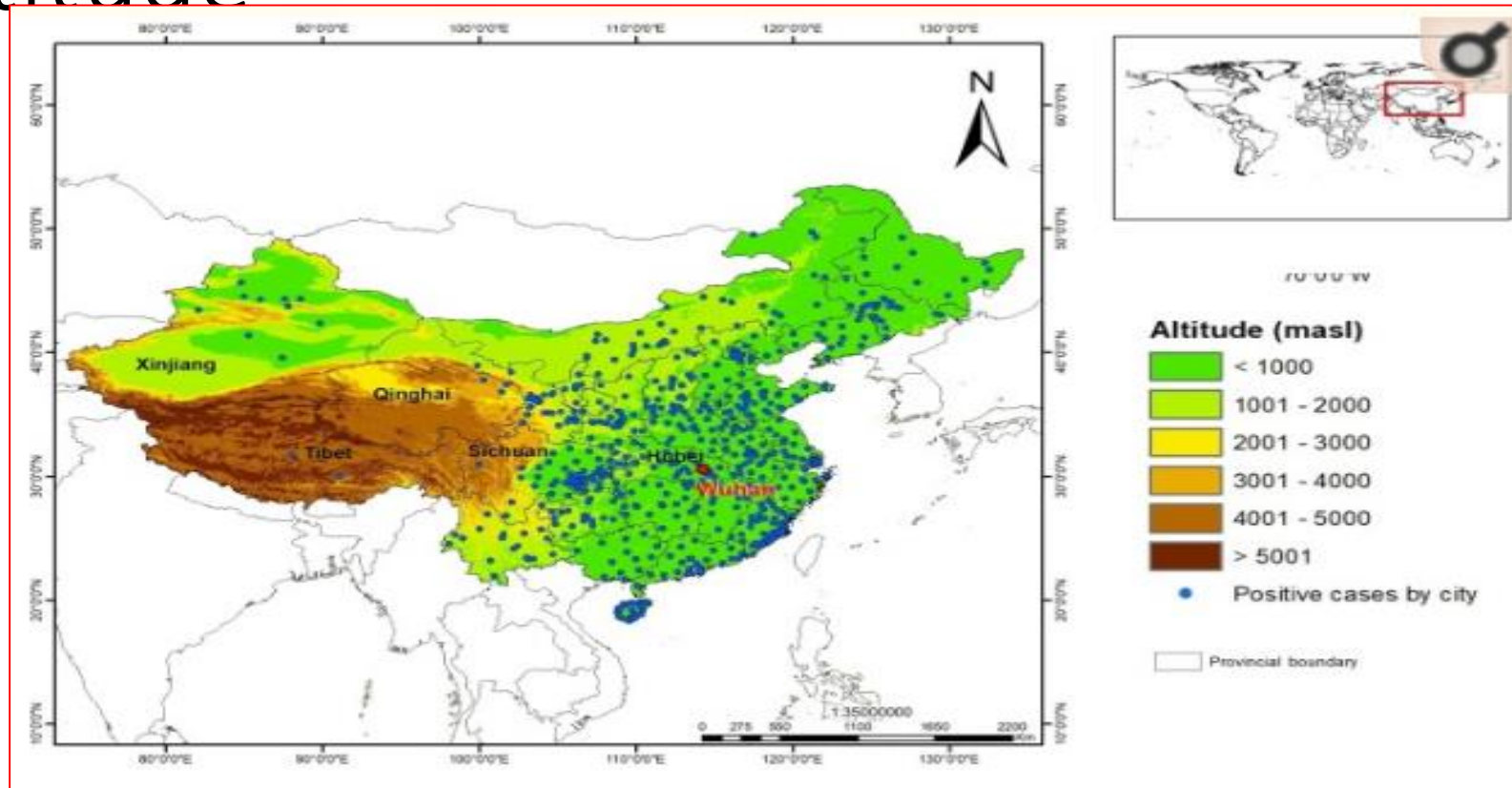
Genetic diversity viral and Host

- ACE2 receptor overexpression
- Patient derived mutations
- Around 30
- Difference in virulence More than 270 times

Environment

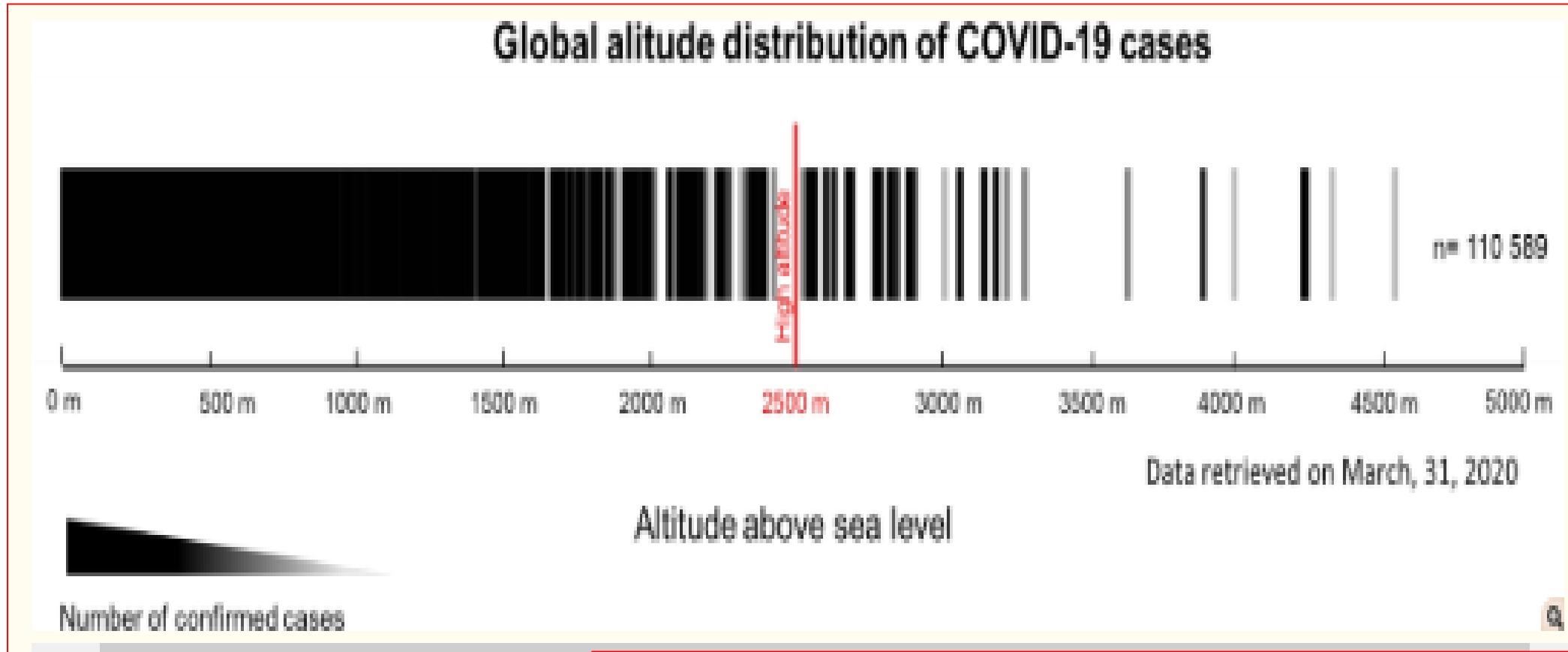
- Altitude
- Temperature and Humidity

Altitude



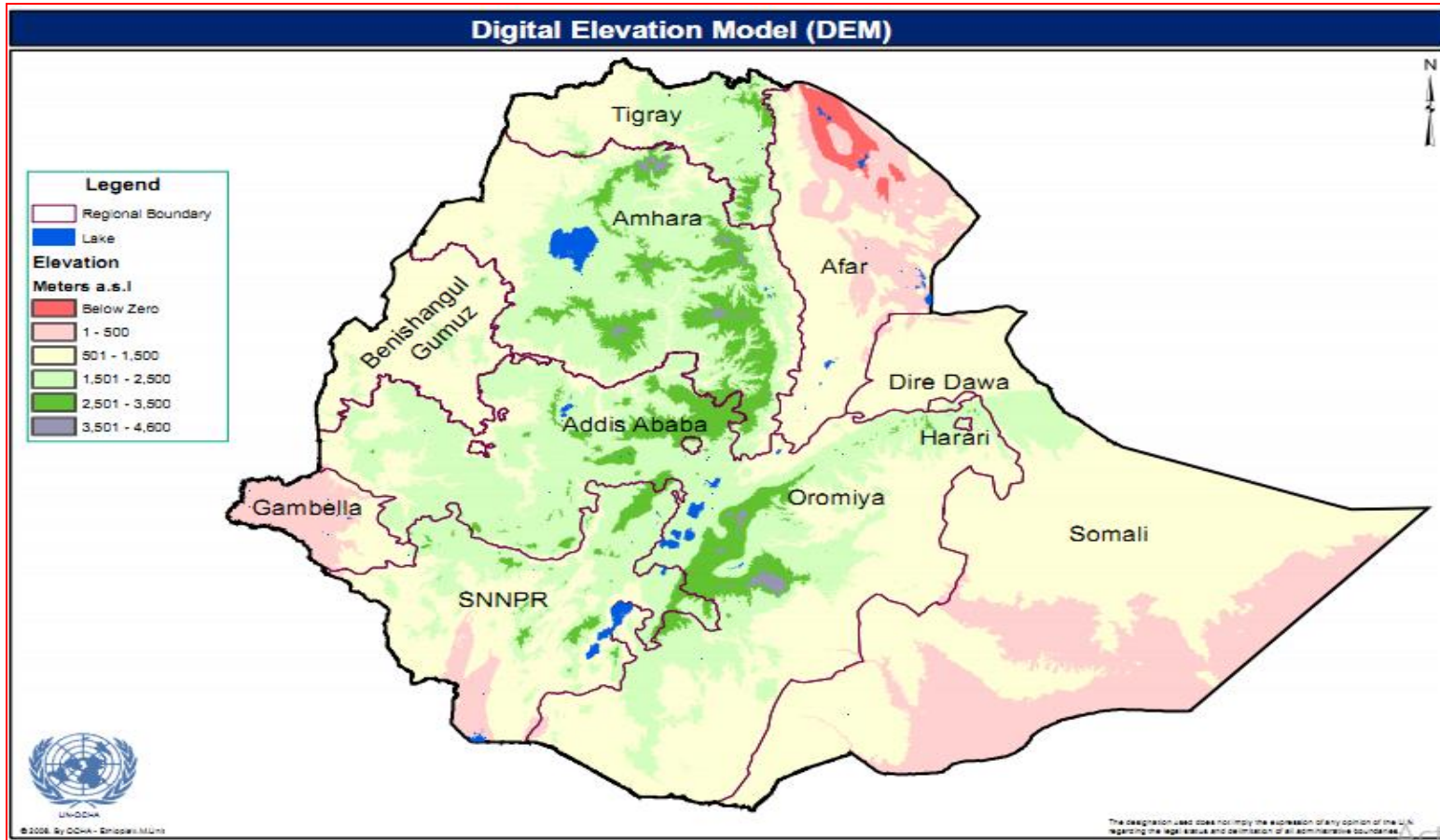
Does the pathogenesis of SAR-CoV-2 virus decrease at high-altitude?
Respiratory Physiology & Neurobiology. 2020 ;277:103443.

Altitude



Does the pathogenesis of SAR-CoV-2 virus decrease at high-altitude?
Respiratory Physiology & Neurobiology. 2020 ;277:103443.

Altitude



Temperature and humidity

- **Other corona viruses show seasonality¹**
- **Most viable at low relative humidity [20%] and low temperatures (4 degree Celsius)²**
- **Cold and dry conditions may facilitate the spread of the covid-19²**

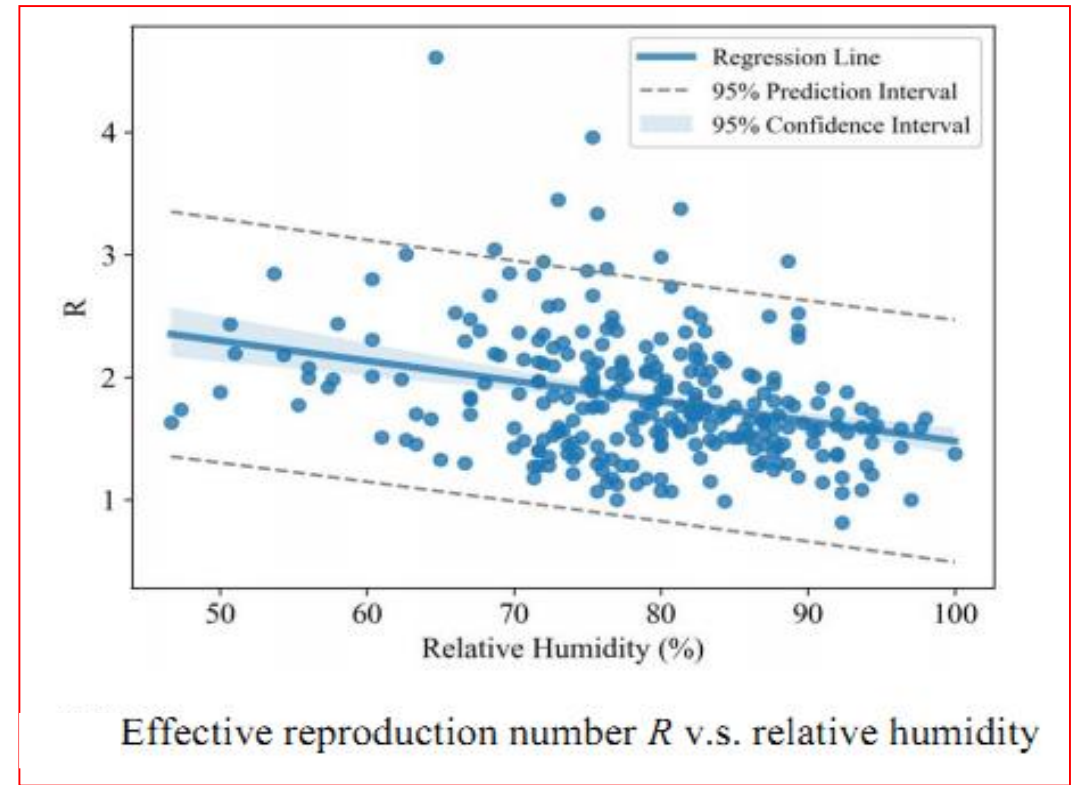
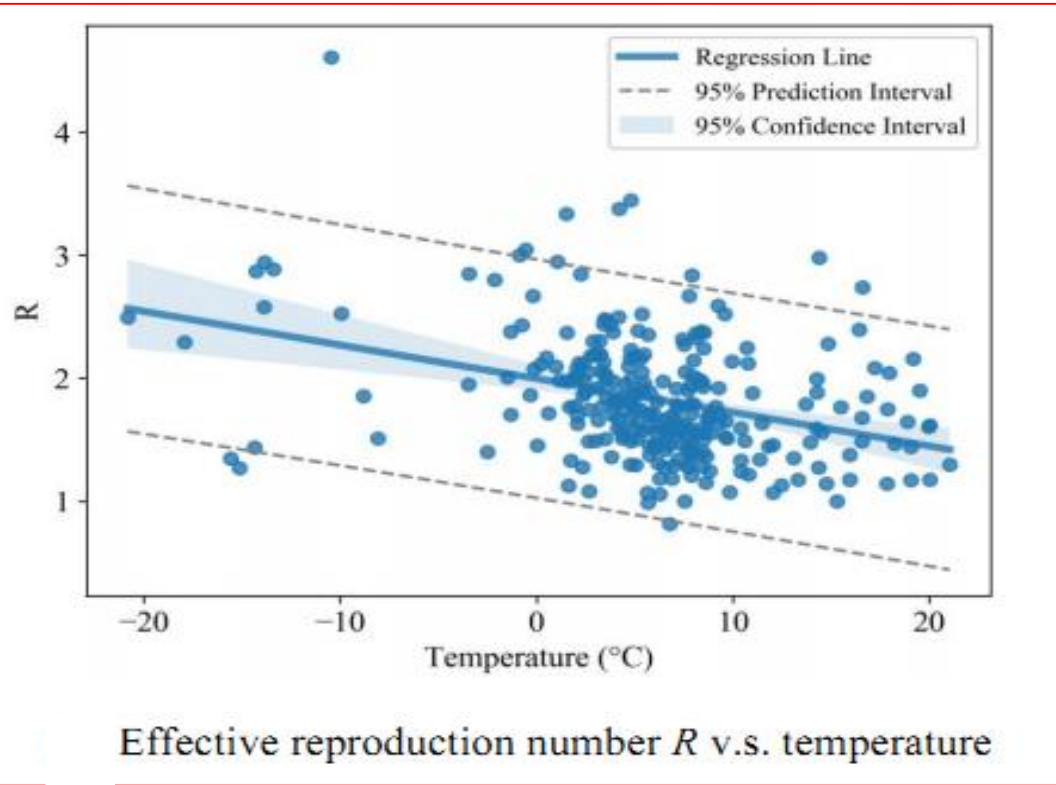
¹K. H. Chan, et al. Advances in Virology., Vol. 2011, 2011.

² Kai Feng et al. arxiv:2003.05003 [q-bio.pe]. 2020

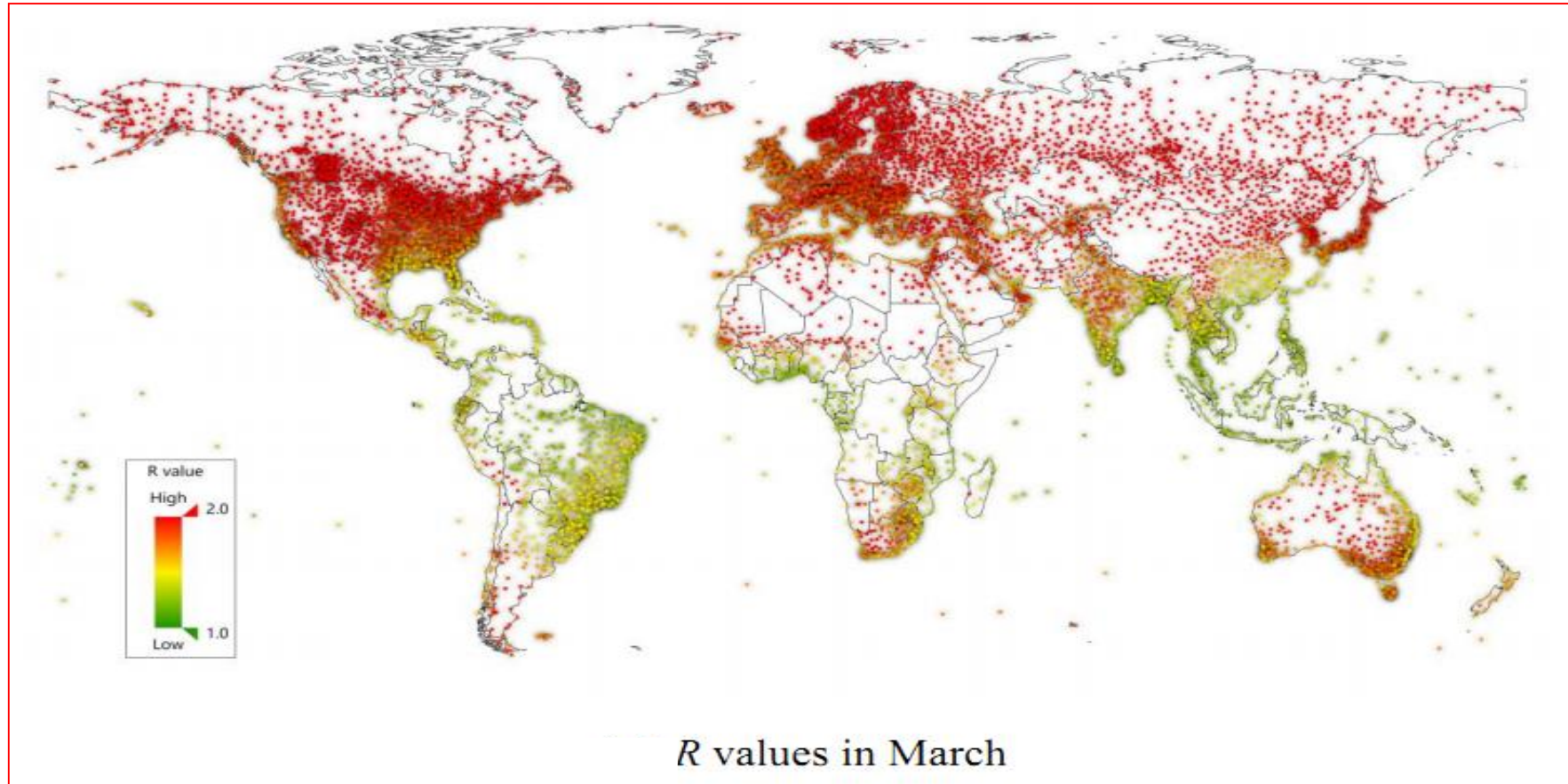
Temperature and humidity

Abstract. This paper investigates the influence of air temperature and relative humidity on the transmission of COVID-19. After estimating the serial interval of COVID-19 from 105 hand-collected pairs of the virus carrier and the infected, we calculate the daily effective reproductive number, R , for each of all 100 Chinese cities with more than 40 cases. Using the daily R values from January 21 to 23, 2020 as proxies of *non-intervened* transmission intensity, we find, under a linear regression framework, high temperature and high humidity significantly *reduce* the transmission of COVID-19, respectively. One-degree Celsius increase in temperature and one percent increase in relative humidity lower R by 0.0225 and 0.0158, respectively. This result is consistent with the fact that the high temperature and high humidity reduce the transmission of influenza and SARS. It indicates that the arrival of summer and rainy season in the northern hemisphere can effectively reduce the transmission of the COVID-19. We also developed a website to provide R of major cities around the world according to their daily temperature and relative humidity: <http://covid19-report.com/#/r-value>

Temperature and humidity



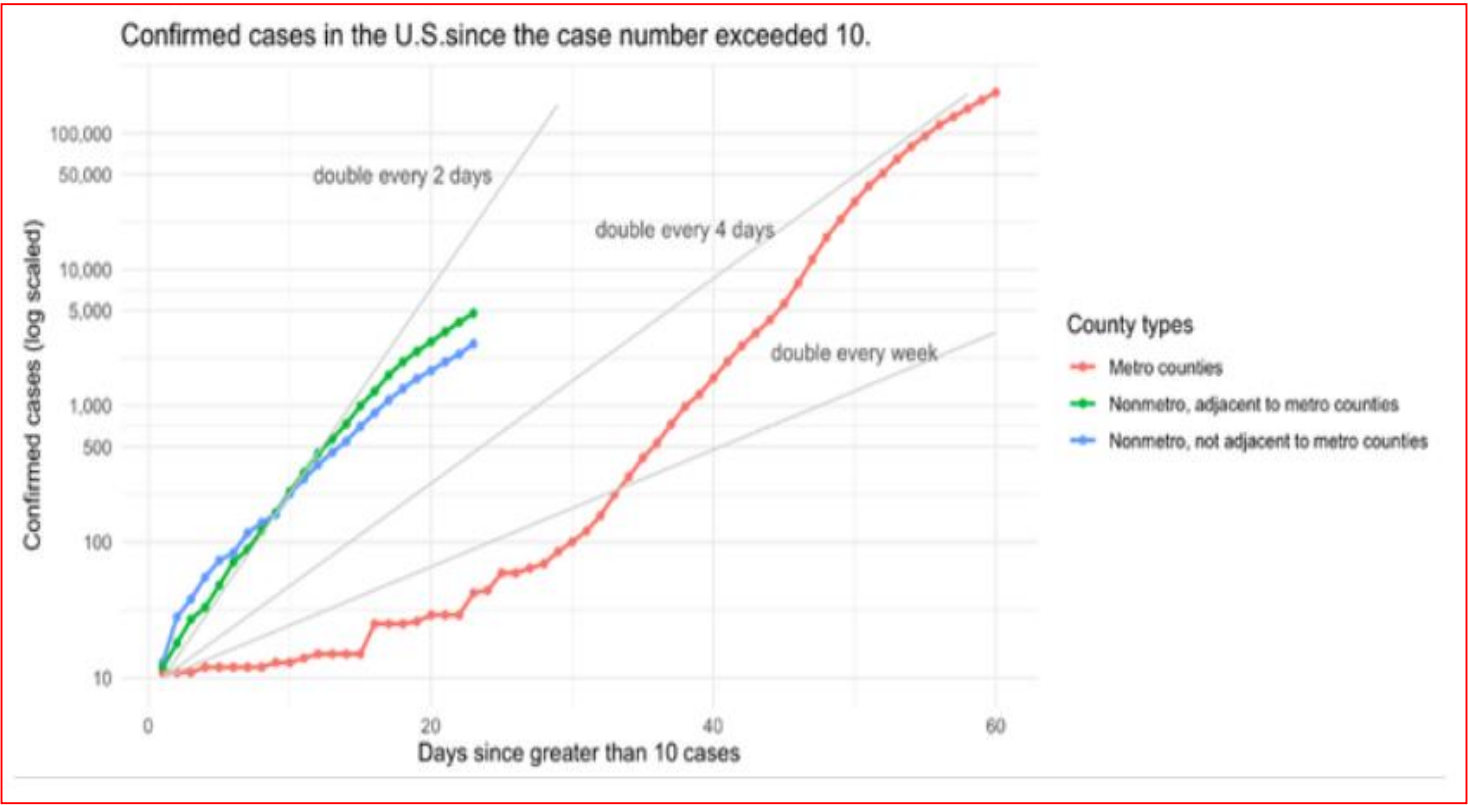
Temperature and humidity



Social determinants

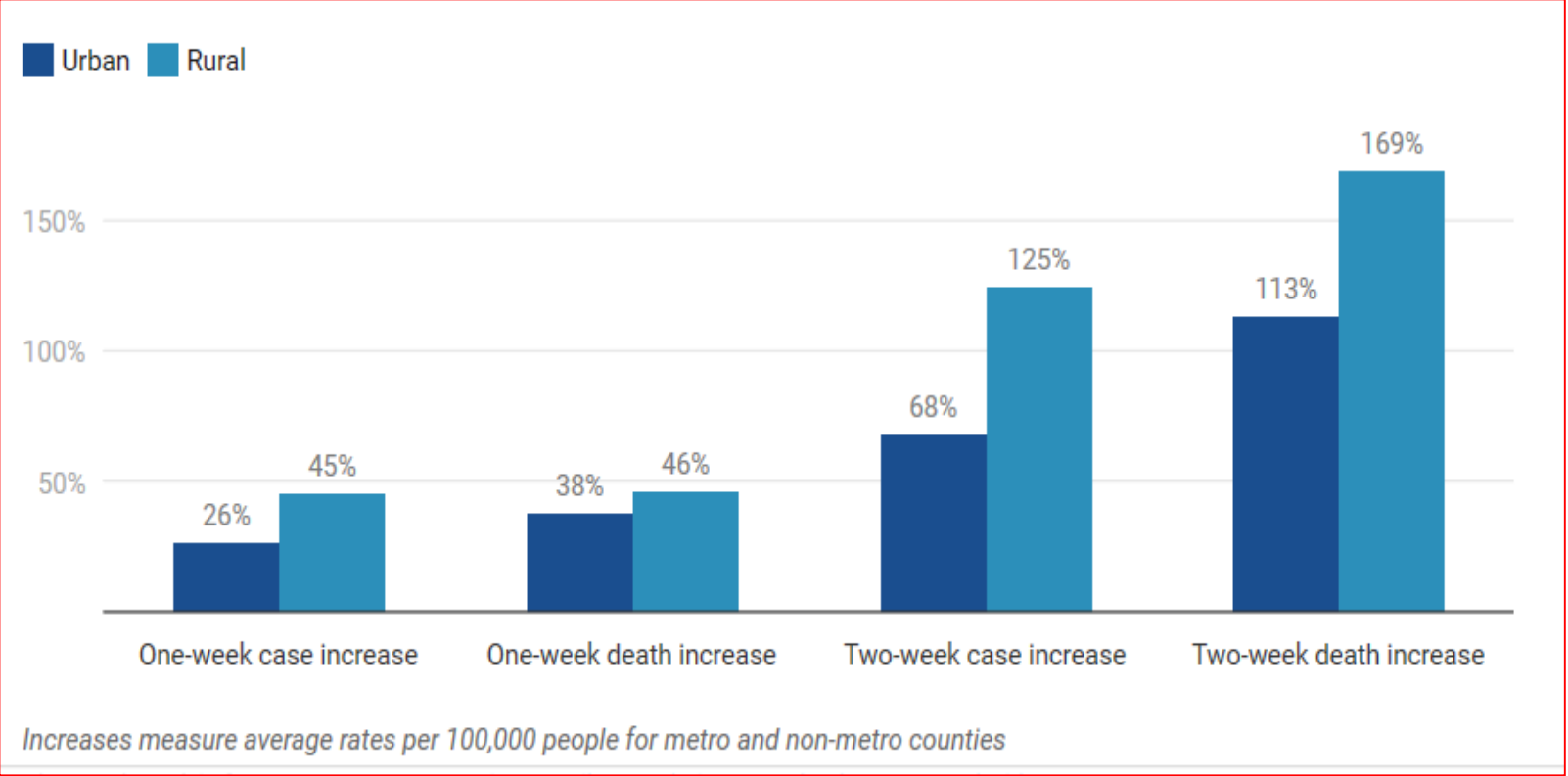
- Age
- Urban/Rural ratio
- International exposures

Urban vs. rural



Rural COVID-19 Cases Lag Urban Areas but Are Growing Much More Rapidly , April 3, 2020, S.J. Goetz, Z. Tian; NERC RD and Penn State University

Urban vs. rural



Rural COVID-19 Cases Lag Urban Areas but Are Growing Much More Rapidly ,
April 3, 2020, S.J. Goetz, Z. Tian; NERC RD and Penn State University

Social determinants

Composite Country List of Key Risk Factors										
Country	Int'l Exposure	Public Health System	Density of Urban Areas	Total Pop. in Urban Areas	Pop. Age	Gov't Transparency	Press Freedom	Conflict Magnitude	Forced Displacement	Risk Total (out of 45)
South Sudan	2	5	5	3	2	5	5	5	5	37
DRC	3	5	3	5	1	5	4	5	5	36
Nigeria	5	5	2	5	2	4	3	4	5	35
Sudan	3	3	4	4	2	5	4	5	5	35
Cameroon	3	4	3	3	2	4	5	3	5	32
Egypt	5	1	3	5	4	3	4	2	4	31
Ethiopia	3	3	4	5	2	2	4	3	5	31
CAR	1	5	3	2	3	4	4	4	4	30
Somalia	1	5	1	2	2	5	4	5	5	30
Chad	1	5	5	3	1	5	4	1	4	29
Equatorial Guinea	4	5	3	1	3	5	5	1	1	28
Libya	3	1	1	2	4	5	4	4	4	28
Uganda	3	2	4	4	1	4	4	1	5	28
Algeria	4	1	2	4	5	3	4	1	3	27
Angola	3	4	4	3	1	4	4	1	3	27
Côte d'Ivoire	4	4	2	3	3	3	3	1	4	27
Mali	2	5	4	3	1	3	3	2	4	27
Morocco	5	1	3	4	5	2	4	1	2	27
Mozambique	4	4	3	3	1	4	3	2	3	27
Republic of Congo	3	3	4	2	2	5	4	1	3	27
Burkina Faso	2	4	3	3	2	2	3	3	4	26

Africa Center for Strategic Studies, Mapping Risk Factors for the Spread of COVID-19 in Africa, *infographic*, April 3, 2020.

Comorbidities

- Hypertension: 16%¹
- Diabetes: 3.2%¹
- Smoking: 5%²
- Cardiovascular disease: 4-24%³
- Cancer: 0.3%³
- Asthma and COPD: 4% and 17%³

¹Prevalence of high bloodpressure, hyperglycemia, dyslipidemia, metabolic syndrome and their determinants in Ethiopia: Evidences from the National NCDs STEPS Survey, 2015

²WHO report on the global tobacco epidemic, 2019 Country profile Ethiopia

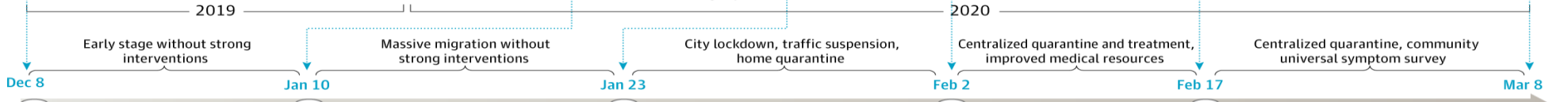
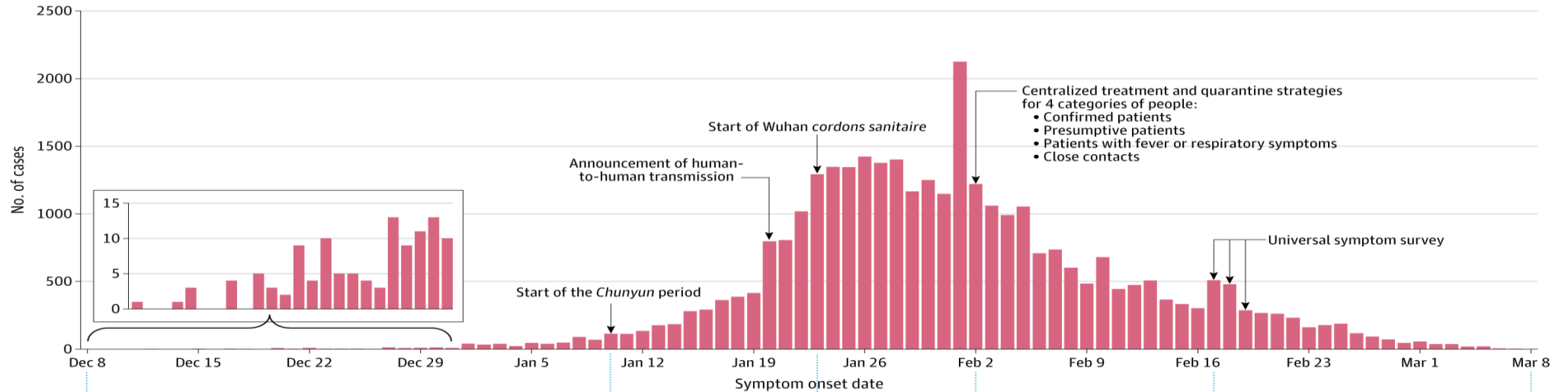
³Epidemiology of major Non-communicable Disease in Ethiopia: Asystematic review, Awoke Misganawet al. J Health Popul Nutr. 2014 Mar.

**Public Health Interventions are
slowing the pandemic**

Interventions to mitigate early spread of SARS-CoV-2 in Singa...

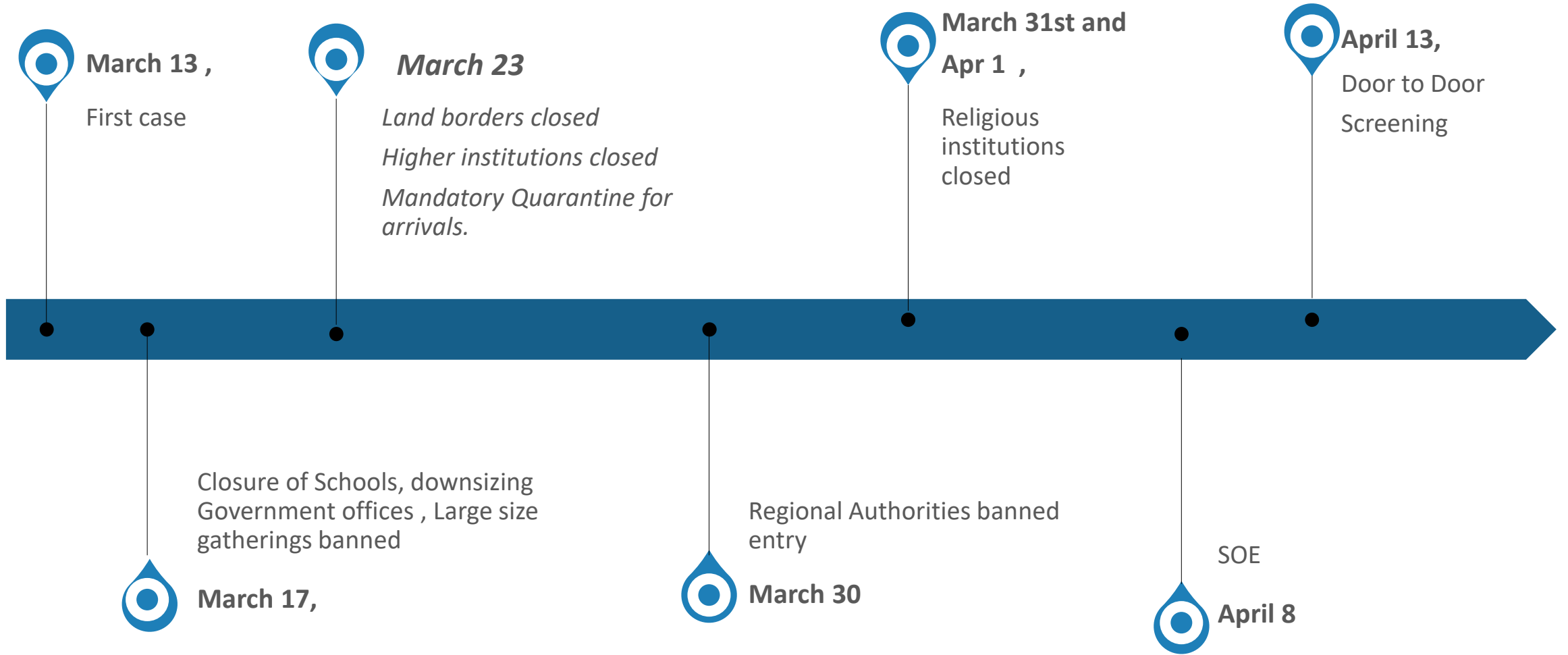
Table Estimated median or cumulative number of SARS-CoV-2 infections on day 80 by location, intervention, and level of infectivity

	Baseline	Quarantine	School closure	Workplace distancing	Combined intervention
$R_0=2.0$					
Total number of infections	727 000 (670 000–776 000)	130 000 (38 000–244 000)	97 000 (14 000–219 000)	67 000 (11 000–145 000)	50 000 (2000–143 000)
Home community	372 000 (339 000–411 000)	66 000 (23 000–129 000)	46 000 (11 000–113 000)	28 000 (8000–79 000)	21 000 (1200–68 000)
School	4300 (3700–4300)	600 (100–1200)	500 (27–1000)	300 (33–800)	200 (11–800)
Workplace	351 000 (327 000–361 000)	63 000 (15 000–127 000)	51 000 (3000–105 000)	38 000 (2800–65 000)	28 000 (800–67 000)
$R_0=2.5$					
Total number of infections	1 207 000 (1 164 000–1 249 000)	520 000 (268 000–754 000)	466 000 (175 000–728 000)	320 000 (116 000–558 000)	258 000 (65 000–508 000)
Home community	640 000 (623 000–675 000)	264 000 (144 000–410 000)	235 000 (92 000–366 000)	163 000 (66 000–281 000)	132 000 (34 000–265 000)
School	7100 (7200–7900)	3000 (1400–4000)	2400 (1300–3600)	1500 (800–3400)	1300 (300–2800)
Workplace	560 000 (550 000–584 000)	253 000 (140 000–390 000)	228 000 (82 000–358 000)	156 000 (49 000–274 000)	124 000 (31 000–241 000)



Control the source of infection	Medical resources	Fever clinics established, immediate reporting of pneumonia of unknown cause	Crowded patients, congested hospitals; high rate of nosocomial infection in health care workers	Severe shortage of all medical resources	Increased designated wards; increased supplies of medical devices, equipment, and health care workers; increased nucleic acid testing and reduced delay from onset to diagnosis; increased antibody testing for hospital discharge	
	Patient triage 1. Confirmed cases 2. Presumptive cases and close contacts	Increasing cases with COVID-19, treatment and isolation of patients but no other measures	Increasing cases of COVID-19, increasing community-acquired and nosocomial infections	Crowding of patients, increasing community-acquired and nosocomial infections, and familial clustering	Substantially increased hospitalization until all incident cases isolated and treated	Increased recovery and declining hospitalization
Block the transmission routes	Intracity transportation	No restriction of intracity transportation, massive human migration during <i>Chunyun</i> period because of approaching Chinese Lunar New Year		Cordons sanitaire of Wuhan City		
	Intercity transportation and social distancing	Normal human movement	Massive human movement	Home quarantine for presumptive cases, those with respiratory symptoms, and close contacts	Centralized isolation in designated hospitals, Fangcang shelter hospitals, public facilities	Centralized isolation in hospitals or facilities, closure of Fangcang shelter hospitals
Prevent new infections	Personal hygiene and protection, home confinement, health communication	Recommendation of wearing face masks to prevent seasonal flu	Official declaration of human-to-human transmission on Jan 20	Closure of entertainment venues and public places (except for permitted drugstores or supermarkets), cancellation of all public events, compulsory wearing of face masks in public places	Closure of all public places, centralized distribution of goods, including food and drugs	
		None	None	Compulsory wearing of face masks, personal hygiene (eg, handwashing, disinfection, home cleaning, and ventilation)	Universal and compulsory stay-at-home policy for all residents	
		None	None	Self-monitoring of body temperature	Self-monitoring of body temperature and symptoms	Universal symptom survey by community workers and volunteers

Timelines for NPI's in ETHIOPIA



Time in the phase's of the pandemic

- First case was detected on march 13
- 10 weeks from the first case
- Most countries had in 10,000 cases at 08 weeks

Conclusion

- It seems the testing coverage alone can't explain the current status
- There seems to be a trend towards low susceptibility
- Public health interventions may have contributed
- We may still be in early (pre growth phase)

- There is no single explanation.

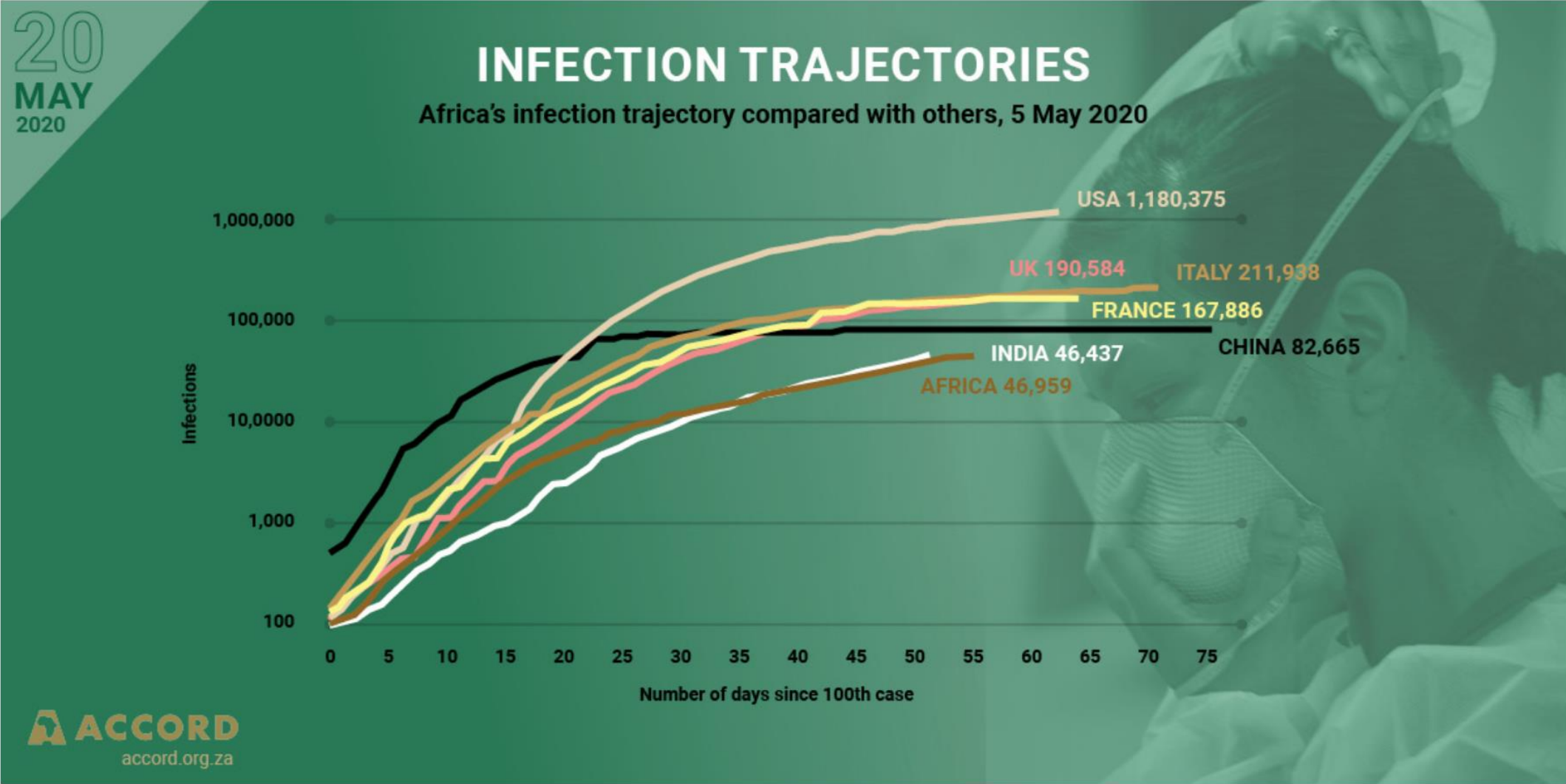


Covid-19

What does the future hold?



Africa's infection trajectory versus comparators, as at 5 May 2020



Source: Based on data from Johns Hopkins University and Africa Centres for Disease Control and Prevention, 5 May 2020



Middle East & Africa

May 16th 2020 edition >

The smouldering pandemic

Why covid-19 seems to spread more slowly in Africa

“While covid-19 likely won’t spread as exponentially in Africa as it has elsewhere in the world, it likely will smoulder in transmission hotspots,”

Dr Matshidiso Moeti, the Director for the WHO, AFRO

Cabore JW, Karamagi HC, Kipruto H, et al. The potential effects of widespread community transmission of SARS-CoV-2 infection in the AFRO Region: a predictive model. *BMJ Global Health* 2020;5

Gradual lifting of lockdowns



Ebola outbreak caused twice as many deaths as we thought



LIFE 24 February 2016

By Andy Coghlan

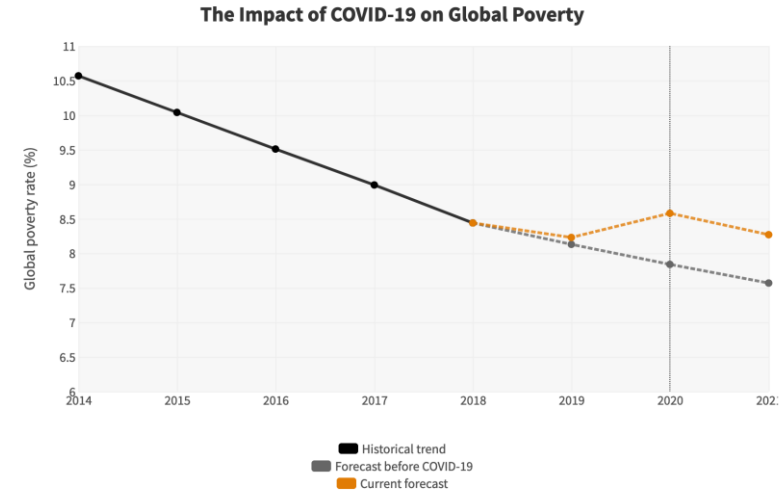


John Moore/Getty Images

The Ebola outbreak is estimated to have killed almost twice as many people as we thought, by diverting resources away from illnesses such as malaria, HIV and tuberculosis.

An effective Vaccine – A Global Public Good?

Intended and Unintended Consequences



Source: PovcalNet • The global poverty rate is measured as the share of the world's population living on less than \$1.90 per day.

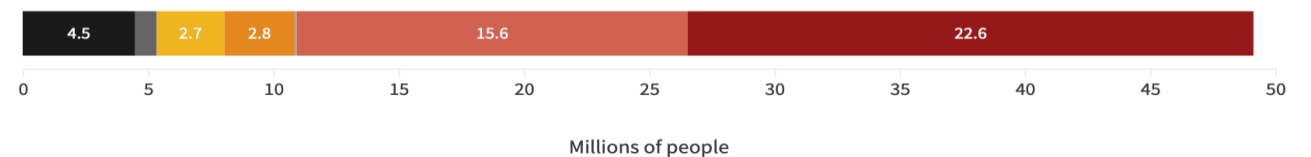
The impact of COVID-19 (Coronavirus) on global poverty: Why Sub-Saharan Africa might be the region hardest hit

DANIEL GERSZON MAHLER, CHRISTOPH LAKNER, R. ANDRES CASTANEDA AGUILAR & HAoyu WU | APRIL 20, 2020

This page in: English

Millions pushed into extreme poverty due to COVID-19

East Asia & Pacific Europe & Central Asia Latin America & Caribbean Middle East & North Africa North America South Asia Sub-Saharan Africa



How youth and technology can drive Africa's COVID-19 response



Youth, technology and community healthcare: an integrated response

Image: REUTERS/Thomas Mukoya

19 May 2020

Neema Kaseje

Founder, Surgical Systems Research Group

Dan Kaseje

Professor of Public Health, Tropical Institute of Community Health, Kisumu, Kenya



- Africa needs integrated responses to COVID-19 that build on countries' existing strengths and resources.
- Here we propose such a solution for Kenya, based on three factors: young people, technology, and community healthcare volunteers.
- This approach could serve Africa well for the future as well as during the current crisis.

Innovation & Opportunities

WORLD

Drones Are Delivering COVID-19 Tests in Ghana. Could the U.S. Be Next?



BY ARYAN BAKER APRIL 22, 2020 11:27 AM EDT

Bismark Sarkodie had a situation on his hands. As the Municipal Director of Health Services for a rural district of Ghana, he had ordered an entire camp of 244 construction workers into quarantine when three of them tested



Thank you

Any Questions/ Comments?

