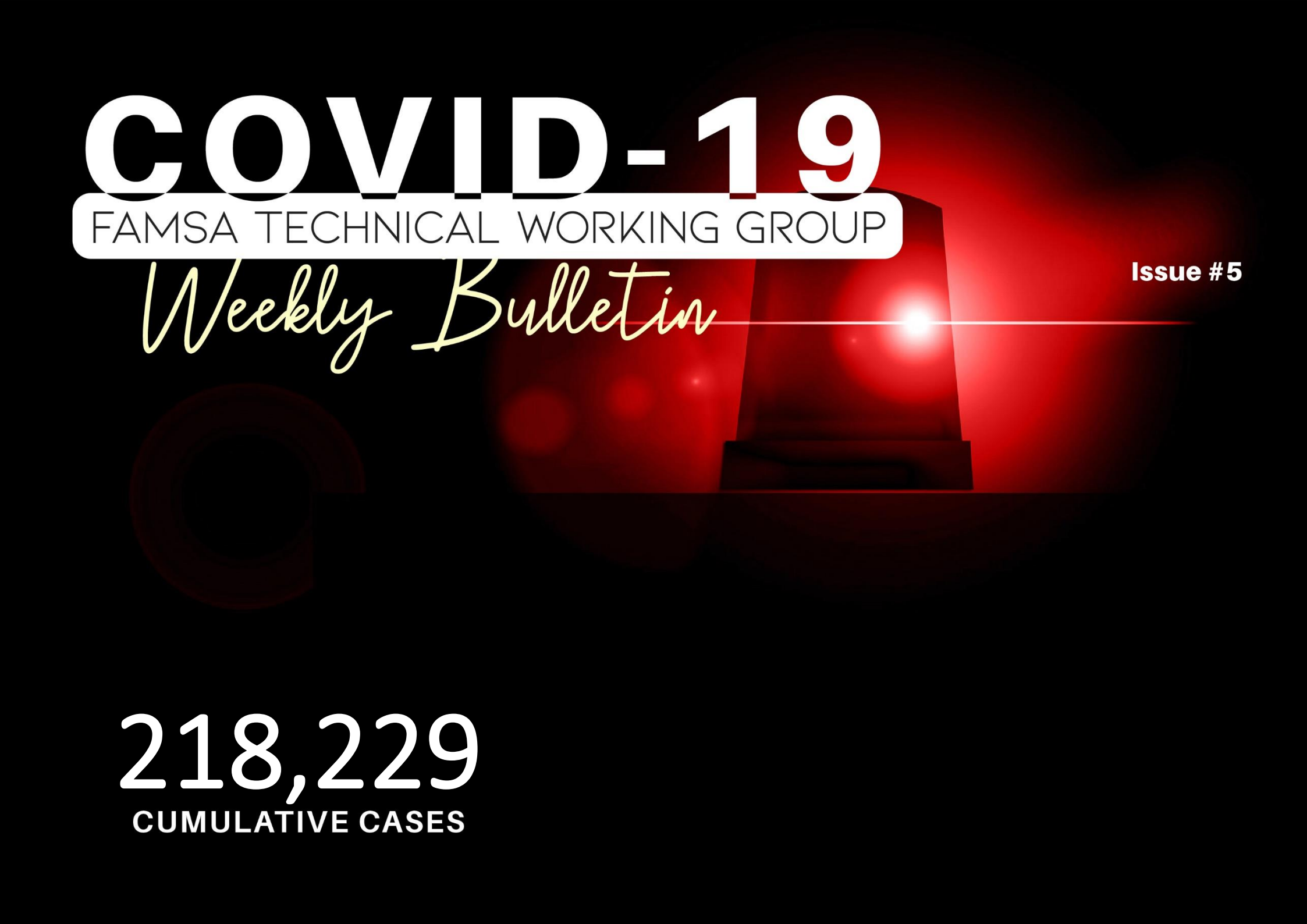
COVID-19

FAMSA TECHNICAL WORKING GROUP

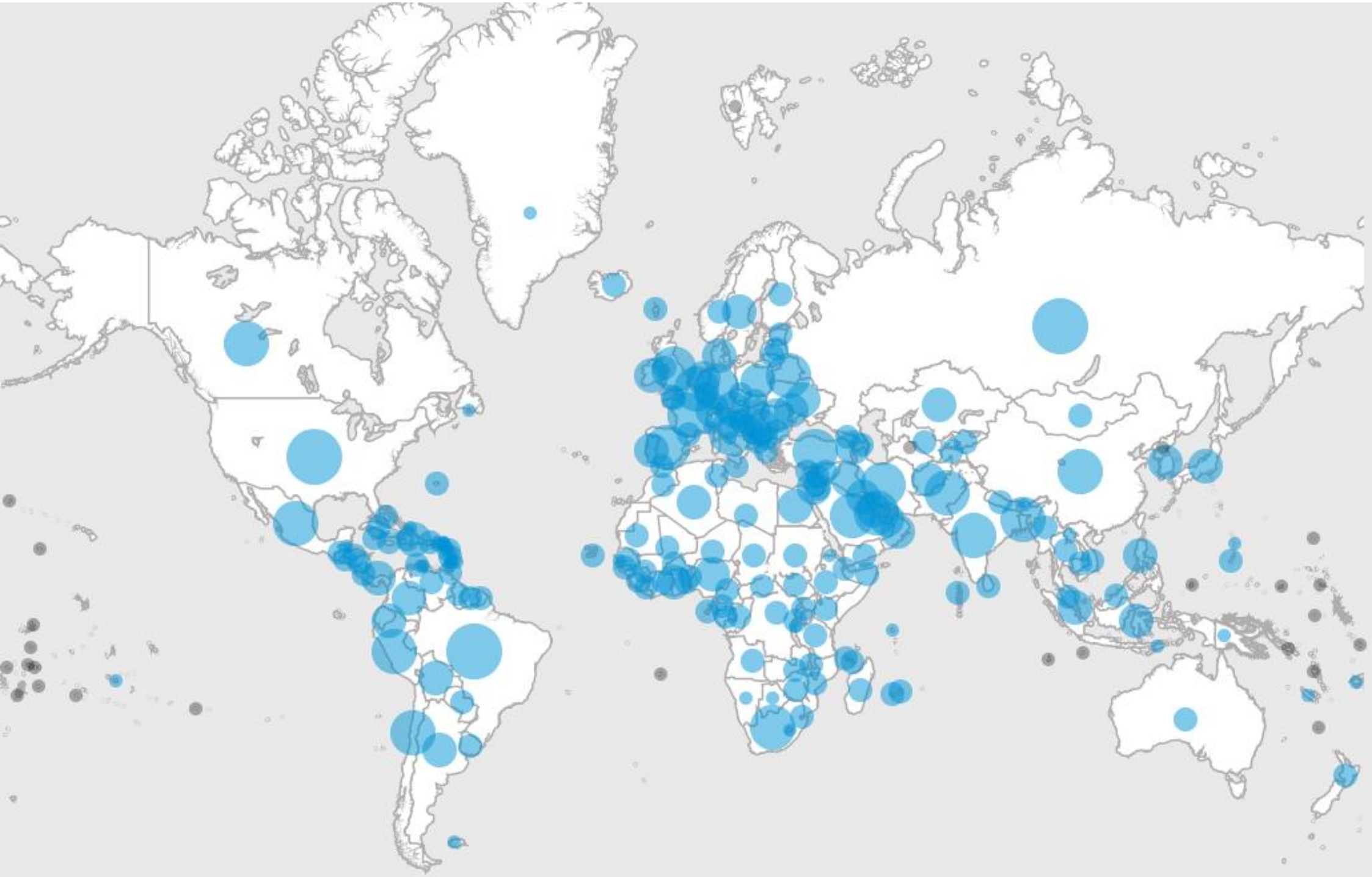
Weekly Bulletin

Issue #5



218,229

CUMULATIVE CASES



GLOBALLY (as of 12 June)

7,410,510 cases

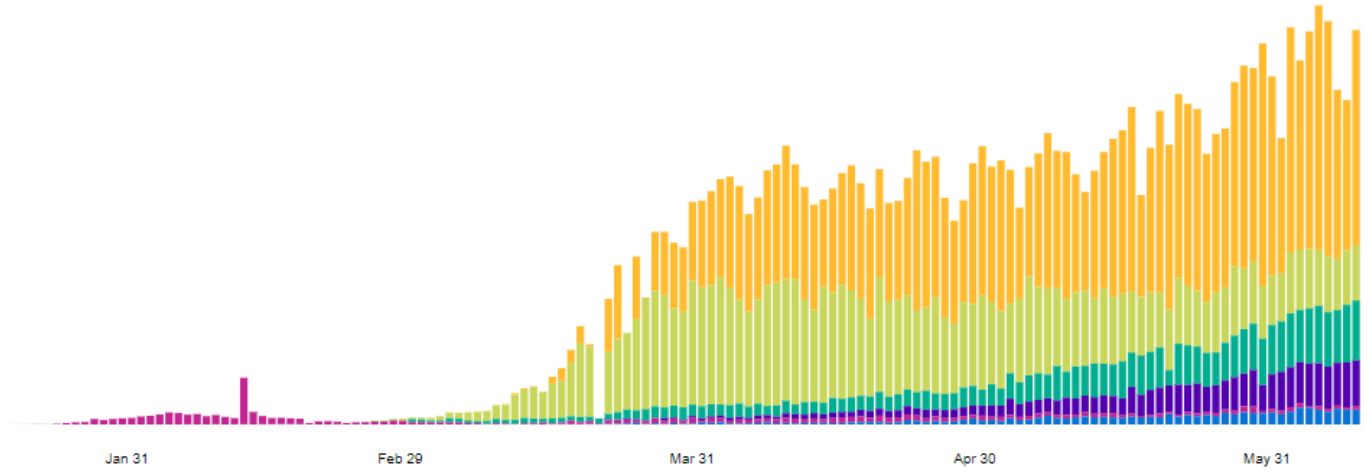
128,399 new cases

418,294 deaths

Case Comparison

WHO Regions

Americas	3,560,591 confirmed cases
Europe	2,358,953 confirmed cases
Eastern Mediterranean	716,151 confirmed cases
South-East Asia	422,825 confirmed cases
Western Pacific	195,487 confirmed cases
Africa	155,762 confirmed cases



Source: World Health Organization

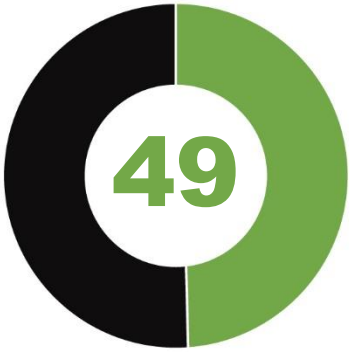
218,229 CUMULATIVE CASES

5,797 DEATHS

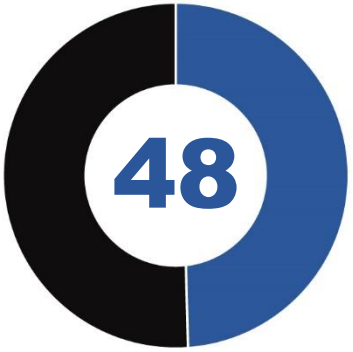
97,891 RECOVERIES

Africa !

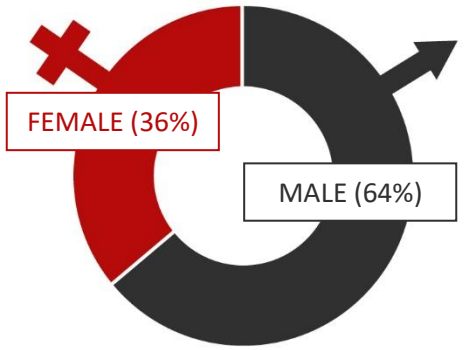
ACTIVE CASES (%)



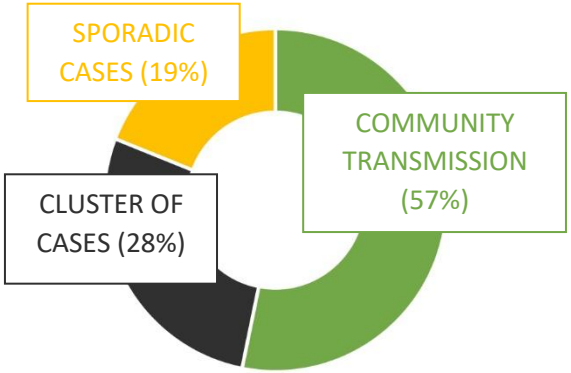
RECOVERIES (%)



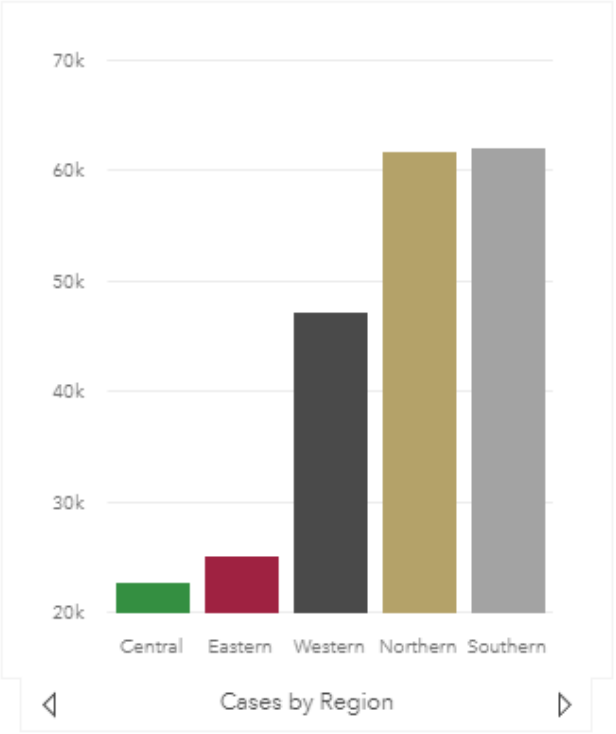
SEX

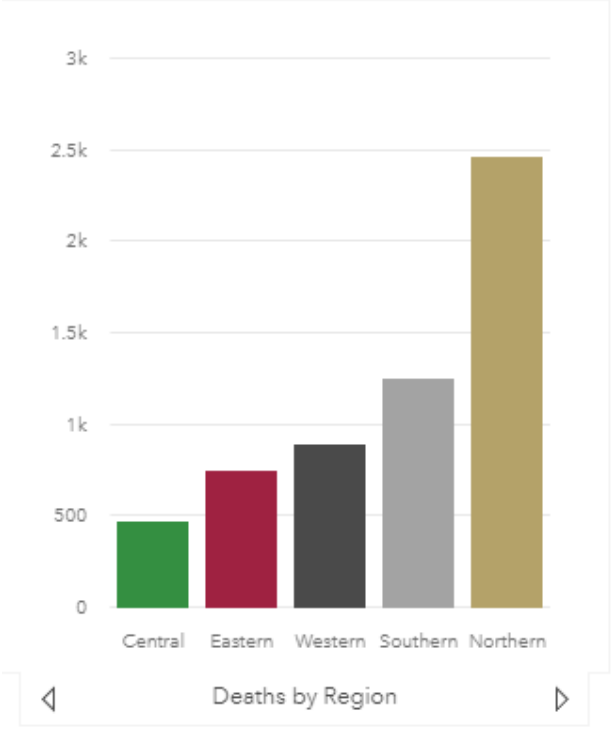


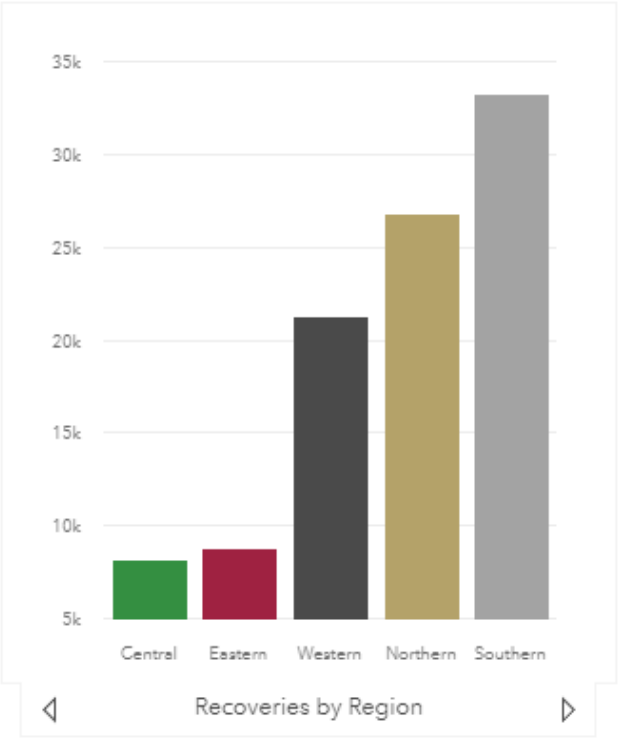
TRANSMISSION PATTERN

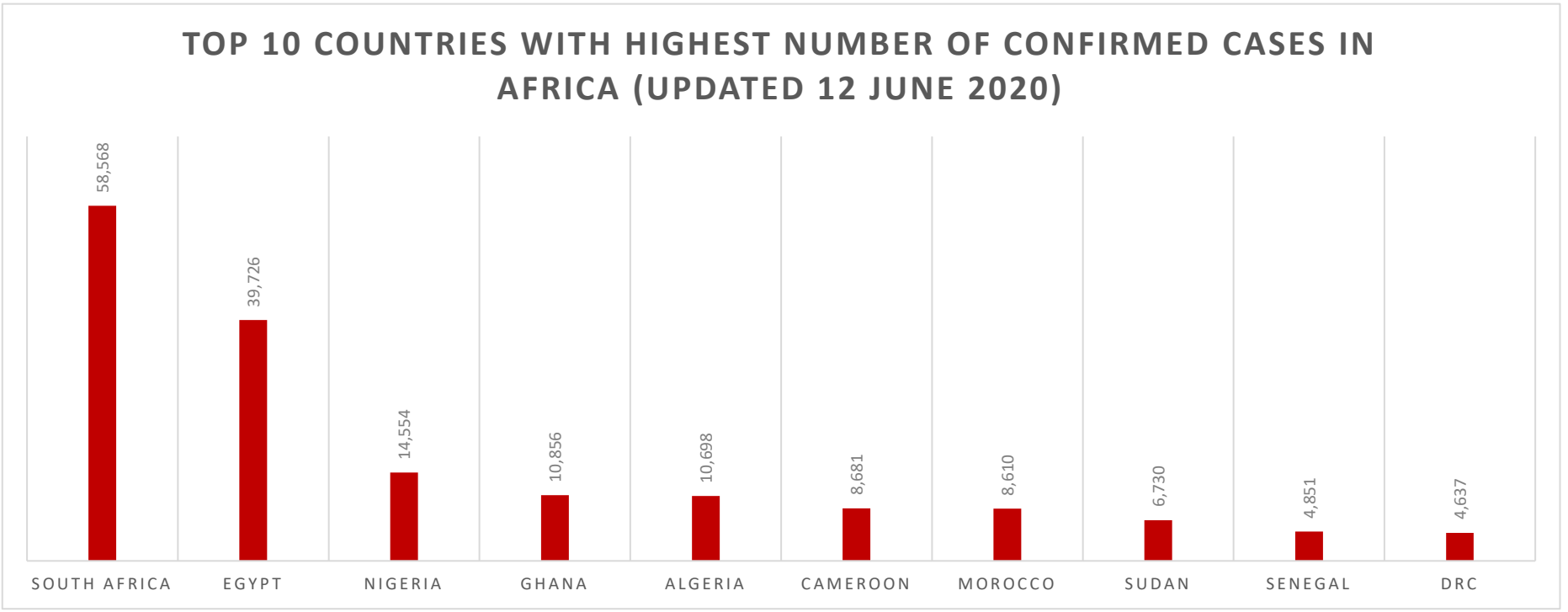


SOURCE: WHO Africa Dashboard


70k
60k
50k
40k
30k
20k
Central
Eastern
Western
Northern
Southern
Cases by Region


3k
2.5k
2k
1.5k
1k
500
0
Central
Eastern
Western
Southern
Northern
Deaths by Region


35k
30k
25k
20k
15k
10k
5k
Central
Eastern
Western
Northern
Southern
Recoveries by Region

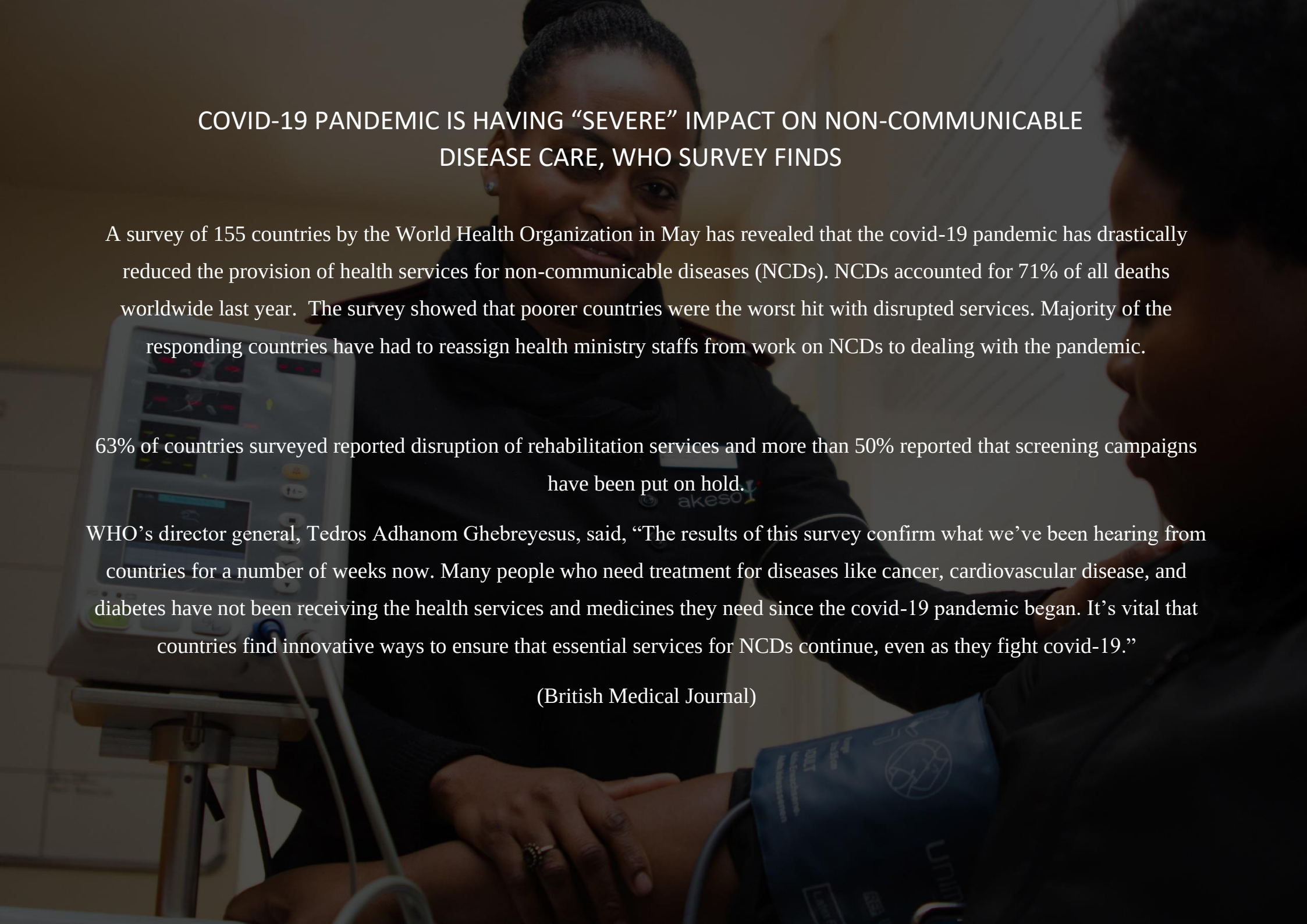

TOP 10 COUNTRIES WITH HIGHEST NUMBER OF CONFIRMED CASES IN AFRICA (UPDATED 12 JUNE 2020)
58,568
39,726
14,554
10,856
10,698
8,681
8,610
6,730
4,851
4,637
SOUTH AFRICA
EGYPT
NIGERIA
GHANA
ALGERIA
CAMEROON
MOROCCO
SUDAN
SENEGAL
DRC

MAINTAINING ESSENTIAL HEALTH SERVICES DURING THE COVID-19 CONTEXT

The COVID-19 pandemic and the subsequent measures taken by different governments to mitigate its spread has affected and impaired the delivery of essential health services. In order to maintain these essential services, the WHO released “operational guidance for COVID-19 context” to help countries at the national, local and regional level. In the said document the WHO recommends:

- To adjust governance and coordination mechanisms to support timely action: there should be put in place an emergency management team with a focal point for essential health services as member
- To prioritize essential health services and adapt to changing contexts and needs: countries should identify context-relevant essential health services that will be prioritized for continuation during the acute phase of the COVID-19 pandemic
- To optimize service delivery settings and platforms: the settings where specific services are delivered may need to be modified and delivered remotely where feasible
- To establish safe and effective patient flow at all levels
- To rapidly optimize health workforce capacity
- To maintain the availability of essential medications, equipment and supplies
- To fund public health and remove financial barriers to access: people should not pay user fees (co-payments) at the point of care for essential services during this outbreak because the need for payment may be a barrier to people seeking and receiving needed care.
- To strengthen communication strategies to support the appropriate use of essential services
- To strengthen the monitoring of essential health services
- To use digital platforms to support essential health service delivery

(WHO)



COVID-19 PANDEMIC IS HAVING “SEVERE” IMPACT ON NON-COMMUNICABLE DISEASE CARE, WHO SURVEY FINDS

A survey of 155 countries by the World Health Organization in May has revealed that the covid-19 pandemic has drastically reduced the provision of health services for non-communicable diseases (NCDs). NCDs accounted for 71% of all deaths worldwide last year. The survey showed that poorer countries were the worst hit with disrupted services. Majority of the responding countries have had to reassign health ministry staffs from work on NCDs to dealing with the pandemic.

63% of countries surveyed reported disruption of rehabilitation services and more than 50% reported that screening campaigns have been put on hold.

WHO’s director general, Tedros Adhanom Ghebreyesus, said, “The results of this survey confirm what we’ve been hearing from countries for a number of weeks now. Many people who need treatment for diseases like cancer, cardiovascular disease, and diabetes have not been receiving the health services and medicines they need since the covid-19 pandemic began. It’s vital that countries find innovative ways to ensure that essential services for NCDs continue, even as they fight covid-19.”

(British Medical Journal)

AFRICAN UNION COMMISSION ANNOUNCES AFRICA CDC KOFI ANNAN GLOBAL HEALTH LEADERSHIP PROGRAMME

The Deputy Chairperson of the African Union Commission, H.E. Quartey Thomas Kwesi, announced the Africa Centres for Disease Control and Prevention (Africa CDC) Kofi Annan Global Health Leadership Programme, in memory of late Kofi Atta Annan, seventh Secretary-General of the United Nations, Nobel Peace Prize Laureate, and founding chair of the Kofi Annan Foundation.

The Africa CDC Kofi Annan Global Health Leadership Programme has three components:

(1) Public Health Leadership Fellow Programme, to support capacity development of emerging and established public health leaders to becoming ardent, effective leaders who can support and empower others, and provide strategic leadership for Africa to achieve the health goals of the Sustainable Development Goals by African Union Member States.

(2) Public Health Scholar Programme, to support the placement of experienced public health experts within National Public Health Institutes and Ministries of Health to support strategic leadership for public health planning, coordination, management, advocacy, and policy development leading to positive and progressive organizational change at the country level.

(3) Virtual Leadership Academy, which will become the continent's leading virtual "think tank" public health leadership platform that will connect the public with public health professionals to discuss healthcare-related issues across the continent.

(Africa CDC)

AN EVIDENCE & RISK-BASED APPROACH TOWARDS THE USE OF CLOTH MASKS

Governments and public health authorities have been debating about the validity of using non-medical masks by general public to reduce COVID-19 transmission and their decision should be informed by evidence. Though there is no direct evidence that cloth masks reduce effectively the transmission of SARS-CoV2 and cloths cannot stop isolated virions, most virus transmission occurs via larger particles in secretions, aerosols or droplets, generated by speaking, eating, coughing, and sneezing; aerosols are also created when water evaporates from smaller droplets.

Filtration efficiency (ability of a material to block transmission in %) for single layers of different types of cotton cloth in a bio aerosol experiment was between 43% and 94%, compared with 98% to 99% for fabric from disposable medical masks. For tea towel fabric, filtration efficiency in experiments using virus, 1 layer of tea towel had 72% efficiency and 1 layer of T-shirt fabric 51%, compared with 90% for a medical mask. A 2020 study confirms that some fabrics block transmission that is clinically significant, even for aerosols and even in single layer – though more layers add efficiency. The importance is not that some particles can penetrate but that some particles are stopped, particularly in the outward direction. Every virus-laden particle retained in a mask should be carefully handled – avoiding hanging in the air as an aerosol or picking it up once fallen to the floor. Given the severity of this pandemic and the difficulty of control, Clase C.M., et al suggest that the possible benefit of a modest reduction in transmission likely outweighs the possibility of harm.

(Annals of Internal Medicine)

SEROPREVALENCE OF ANTI-SARS-COV-2 IGG ANTIBODIES

A population-based study (SEROCoV-POP) in Geneva, Switzerland attempted to estimate the weekly seroprevalence of anti-severe acute respiratory syndrome coronavirus 2 (anti-SARS-CoV-2) antibodies, to estimate infection rate and progression of the COVID-19 pandemic – noting the challenges with relying on case numbers due to variation of continually changing case definitions, testing strategies and clinical presentations.

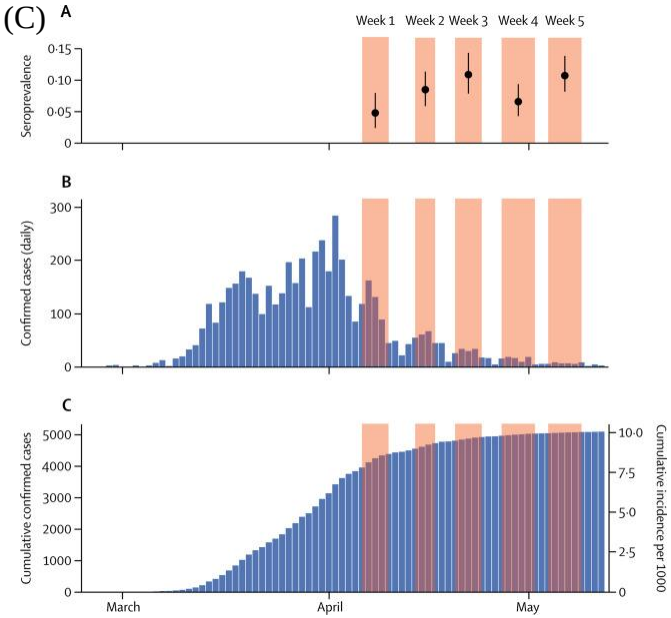
This study involved 12 consecutive weekly serosurveys from randomly selected participant (aged 5 and older). 2766 participants were enrolled from 1339 households. ELISA was used to test for antibodies and a Bayesian logistic regression model was used to estimate seroprevalence adjusting for test performance, age and sex.

Individuals aged 5–9 years (relative risk [RR] 0·32 [95% CI 0·11–0·63]) and those older than 65 years (RR 0·50 [0·28–0·78]) had a significantly lower risk of being seropositive than those aged 20–49 years. After accounting for the time to seroconversion, we estimated that for every reported confirmed case, there were 11·6 infections in the community.

Considering children aged 5-9 (maybe indicative of lower susceptibility of infection) and adults over 65 years (possibly due to lower exposure and immune system aging) had a significantly lower seroprevalence, compared to those aged 10-64, these results may inform countries of easing of restrictions aimed at curbing transmission.

Figure 1: Seroprevalence estimates and 95% CIs for each week of the survey (A), daily confirmed COVID-19 cases reported in Geneva (B), and cumulative case counts per day and cumulative incidence rate of confirmed COVID-19 (C)

	SARS-CoV-2 serology test result			Relative risk (95% CI)	p value
	Positive	**Negative**	**Indeterminate**		
Age group, years					
5–9 (n=123)	1 (0·8%)	114 (92·7%)	8 (6·5%)	0·32 (0·11–0·63)	0·0008
10–19 (n=332)	32 (9·6%)	295 (88·9%)	5 (1·5%)	0·86 (0·57–1·22)	0·37
20–49 (n=1096)	108 (9·9%)	970 (88·5%)	18 (1·6%)	1 (ref)	..
50–64 (n=846)	63 (7·4%)	772 (91·3%)	11 (1·3%)	0·79 (0·57–1·04)	0·090
≥65 (n=369)	15 (4·1%)	348 (94·3%)	6 (1·6%)	0·50 (0·28–0·78)	0·0020
Sex					
Female (n=1454)	101 (6·9%)	1333 (91·7%)	20 (1·4%)	1 (ref)	..
Male (n=1312)	118 (9·0%)	1166 (88·9%)	28 (2·1%)	1·26 (1·00–1·58)	0·054



CONVALESCENT PLASMA THERAPY FOR SEVERE AND LIFE-THREATENING COVID-19

A randomised control trial from Wuhan, China investigated the effect of Convalescent plasma therapy on time to clinical improvement in patients with severe and life-threatening COVID-19.

103 participants were included with laboratory-confirmed COVID-19 that was severe (respiratory distress and/or hypoxemia) or life-threatening (shock, organ failure, or requiring mechanical ventilation). One arm was Convalescent plasma in addition to standard treatment (n = 52) whilst the other arm was standard treatment alone (control) (n = 51), stratified by disease severity.

The primary outcome was time to clinical improvement within a 28 days, defined as patient who was discharged as alive or improvement of 2 points on a 6 point disease severity scale (1 – discharge to 6-death). Various secondary outcomes were investigated (mortality, time to discharge and rate of PCR results turned from positive to negative up to 72 hours).

Clinical improvement occurred within 28 days in 51.9% (27/52) of the convalescent plasma group vs 43.1% (22/51) in the control group (difference, 8.8% [95% CI, −10.4% to 28.0%]; hazard ratio [HR], 1.40 [95% CI, 0.79-2.49]; P = .26). Among those with severe disease, the primary outcome occurred in 91.3% (21/23) of the convalescent plasma group vs 68.2% (15/22) of the control group (HR, 2.15 [95% CI, 1.07-4.32]; P = .03); among those with life-threatening disease the primary outcome occurred in 20.7% (6/29) of the convalescent plasma group vs 24.1% (7/29) of the control group (HR, 0.88 [95% CI, 0.30-2.63]; P = .83) There was no significant difference in 28-day mortality.

The trial was terminated early after 103 of a planned 200 patients were enrolled.

Convalescent plasma therapy added to standard treatment did not result in statistically significant difference, in the time to clinical improvement within 28 days.

(Journal of the American Medical Association)

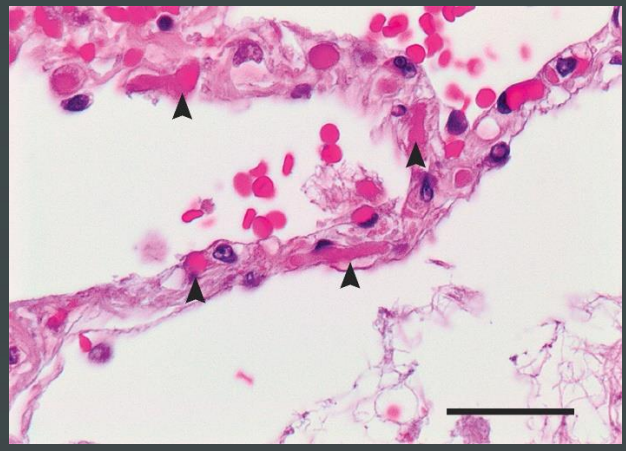
PULMONARY VASCULAR ENDOTHELIALITIS, THROMBOSIS, AND ANGIOGENESIS IN COVID-19

Researchers examined 7 lungs obtained during autopsy from patients who died from Covid-19 and compared them with 7 lungs obtained during autopsy from patients who died from acute respiratory distress syndrome (ARDS) secondary to influenza A(H1N1) infection and 10 age-matched, uninfected control lungs. And the results show that in the patients who died from Covid-19–associated or influenza-associated respiratory failure, the histologic pattern in the peripheral lung was diffuse alveolar damage with perivascular T-cell infiltration. The lungs from patients with Covid-19 also showed distinctive vascular features, consisting of severe endothelial injury associated with the presence of intracellular virus and disrupted cell membranes. Histologic analysis of pulmonary vessels in patients with Covid-19 showed widespread thrombosis with microangiopathy. Alveolar capillary microthrombi were 9 times as prevalent in patients with Covid-19 as in patients with influenza.

In lungs from patients with Covid-19, the amount of new vessel growth — predominantly through a mechanism of intussusceptive angiogenesis — was 2.7 times as high as that in the lungs from patients with influenza. In conclusion, vascular angiogenesis distinguished the pulmonary pathobiology of Covid-19 from that of equally severe influenza virus infection

The interalveolar septum of this patient (Patient 4 in Table S1A in the Supplementary Appendix) shows slightly expanded alveolar walls with multiple fibrinous microthrombi (arrowheads) in the alveolar capillaries. Extravasated erythrocytes and a loose network of fibrin can be seen in the intraalveolar space (hematoxylin–eosin staining; the scale bar corresponds to 50 μm).

(New England Journal of Medicine)



HOW LONG SHOULD PEOPLE WITH SEVERE COVID-19 BE TREATED WITH REMDESIVIR?

Preliminary trial results recently showed that 10 days of Remdesivir improved time to recovery in people with severe COVID-19. Now, in a manufacturer-sponsored, open-label, multicenter trial, 5 days and 10 days of Remdesivir treatment have been compared in people with severe COVID-19. A total of 397 people who had an oxygen saturation of ≤94% on ambient air or supplemental oxygen and had radiographic evidence of pneumonia were participants. Patients receiving mechanical ventilation or extracorporeal membrane oxygenation (ECMO) were excluded.

At baseline, the 10-day treatment group had greater disease severity than the 5-day treatment group. After adjustment for baseline severity, the day-14 clinical status was similar in the two treatment groups. Median time to recovery was 10 days in the 5-day treatment group and 11 days in the 10-day treatment group. Increased alanine aminotransferase occurred in 6% of the 5-day group and 8% of the 10-day group.

(New England Journal of Medicine)

KAWASAKI-LIKE MULTISYSTEM INFLAMMATORY SYNDROME IN CHILDREN DURING THE COVID-19 PANDEMIC IN PARIS, FRANCE: PROSPECTIVE

There is an increasing body of evidence that links the emergence of Kawasaki-like inflammatory syndrome among children and adolescents to COVID-19. This condition is referred as the pediatric multisystem inflammatory syndrome temporally associated with covid-19 (PIMS), and the multisystem inflammatory syndrome in children (MIS-C) associated with covid-19.

A linked study revealed affected patients all had leukocytosis and highly increased levels of inflammatory markers, including C reactive protein and serum interleukin-6. They typically presented after about one month of widespread lockdown and history of contact with someone with confirmed or presumed covid-19.

Majority of the children had a positive IgG result to SARS-CoV-2, suggesting a post- infection inflammatory response to a disease thought to commonly spare this age group.

(British Medical Journal)

CHILDREN AND THE LACK OF SEVERE CORONAVIRUS SYMPTOMS?

Children make up only a small proportion of those infected by SARS-CoV-2, and account for fewer than 2% of confirmed COVID-19 infections in the United States.

Since the coronavirus outbreak began, scientists have been trying to work out why children are much less likely than adults to experience severe complications from the infection. Now research suggests that the answer might lie in children's healthy blood vessels.

Several theories have been proposed to explain why children do not display severe symptoms. These include the possibility that they have a stronger and more effective initial immune response to the virus than adults do, but a growing number of researchers think that the difference between adults and children might be the condition of their blood vessels.

Endothelium is typically in much better condition in children than adults. "A kid's endothelium is set up perfectly and then just deteriorates with age," says Paul Monagle, a paediatric haematologist at the Melbourne Children's Campus. And evidence is mounting that healthy blood vessels protect children from serious complications of COVID-19, such as stroke.

(Nature news)

Photos courtesy of Unsplash.com and Pixabay.com

The report has been prepared by the
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FEDERATION OF AFRICAN MEDICAL STUDENTS' ASSOCIATIONS