AFRO Weekly COVID-19 Literature Update

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Prepared by AFRO COVID-19 IMST through its information management cell, together with DAK team of the ARD's office

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Due to the abundance of information and literature produced on COVID-19 in the world in general and in Africa in particular, the WHO Regional Office for Africa is publishing a weekly "Weekly COVID Literature Update" to highlight the most important literature. Each week we will select some articles per topic as well as reports and grey literature when available.

The aim is to provide an easy-to-read summary of each publication. This Bulletin is organised according to several categories of interest.

The publications shared are the result of a bibliographic research work carried out regularly on several online information sources with a major search strategy "COVID-19 AND Africa" in combination with the following keywords: **epidemiology (response activities OR hygiene practices OR social distancing OR case management), vaccination, public perceptions, other diseases and other sectors**. For this issue, the list of information sources is as follows: WHO Covid-19 database, PubMed, BioMed Central, Lancet (including sister journals), One library, African Index Medicus, Nature (including sister journals), Science (including sister journals), PLOS, Google scholar, Oxford University Press, Taylor & Francis, Springer, the BMJ.
The list is subject to change and kindly note that the choice of the publications to be included in this update is subjective.

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En raison de l'abondance d'informations et de littérature produites sur la COVID-19 dans le monde en général et en Afrique en particulier, le Bureau régional de l'OMS pour l'Afrique publie chaque semaine "Weekly COVID Literature Update" pour mettre en évidence la littérature la plus importante. Chaque semaine, nous sélectionnerons quelques articles par sujet ainsi que les rapports et la littérature grise quand c'est disponible.

L'objectif est de fournir un résumé facile à lire de chaque publication. Ce bulletin est organisé suivant plusieurs catégories d'intérêt.

Les publications partagées sont le résultat d'un travail de recherche bibliographique effectué régulièrement sur plusieurs sources d'information en ligne avec une comme stratégie de recherche majeure "COVID-19 ET Afrique" combinés aux mots clés suivants : **epidemiology (response activities OR hygiene practices OR social distancing OR case management), vaccination, public perceptions, other diseases and other sectors.** Pour ce numéro, la liste des sources d'information utilisées est la suivante : WHO Covid-19 database, PubMed, BioMed Central, Lancet (including sister journals), One library, African Index Medicus, Nature (including sister journals), Science (including sister journals), PLOS, Google scholar, Oxford University Press, Taylor & Francis, Springer, the BMJ.
Cette liste est susceptible d'être modifiée. Veuillez noter que le choix des publications à inclure dans cette mise à jour est subjectif.

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Devido à abundância de informação e literatura produzida sobre a COVID-19 no mundo em geral e em África em particular, o Escritório Regional da OMS para África está a publicar semanalmente uma "Weekly COVID Literature Update" para destacar a literatura mais importante. Cada semana iremos seleccionar alguns artigos por tópico, bem como relatórios e literatura cinzenta, quando disponível.

O objectivo é fornecer um resumo de fácil leitura de cada publicação. Este boletim está organizado de acordo com várias categorias de interesse.

As publicações partilhadas são o resultado de um trabalho de pesquisa bibliográfica realizado regularmente em várias fontes de informação em linha com uma grande estratégia de pesquisa "COVID-19 E África" em combinação com as seguintes palavras-chave: **epidemiology (response activities OR hygiene practices OR social distancing OR case management), vaccination, public perceptions , other diseases and other sectors. Para esta edição, a lista de fontes de informação é a seguinte:** WHO Covid-19 database, PubMed, BioMed Central, Lancet (including sister journals), One library, African Index Medicus, Nature (including sister journals), Science (including sister journals), PLOS, Google scholar, Oxford University Press, Taylor & Francis, Springer, the BMJ.
A lista está sujeita a alterações e note-se que a escolha das publicações a serem incluídas nesta actualização é subjectiva.

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TOPICS

A. COVID-19 EPIDEMIOLOGY/ SURVEILLANCE (trends/ distribution)

Title: Global emerging Omicron variant of SARS-CoV-2: Impacts, challenges and strategies
Journal: Journal of Infection and Public Health
Publish Date: November 2022
URL: https://doi.org/10.1016/j.jiph.2022.11.024
Abstract:
Newly emerging variants of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) are continuously posing high global public health concerns and panic resulting in waves of coronavirus disease 2019 (COVID-19) pandemic. Depending on the extent of genomic variations, mutations and adaptation, few of the variants gain the ability to spread quickly across many countries, acquire higher virulency and ability to cause severe disease, morbidity and mortality. These variants have been implicated in lessening the efficacy of the current COVID-19 vaccines and immunotherapies resulting in break-through viral infections in vaccinated individuals and recovered patients. Altogether, these could hinder the protective herd immunity to be achieved through the ongoing progressive COVID-19 vaccination. Currently, the only variant of interest of SARS-CoV-2 is Omicron that was first identified in South Africa. In this review, we present the overview on the emerging SARS-CoV-2 variants with a special focus on the Omicron variant, its lineages and hybrid variants. We discuss the hypotheses of the origin, genetic change and underlying molecular mechanism behind higher transmissibility and immune escape of Omicron variant. Major concerns related to Omicron including the efficacy of the current available immunotherapeutics and vaccines, transmissibility, disease severity, and mortality are discussed. In the last part, challenges and strategies to counter Omicron variant, its lineages and hybrid variants amid the ongoing COVID-19 pandemic are presented.

Title: Significant risk of COVID-19 and related-hospitalization among patients with adrenal insufficiency: A large multinational survey
Journal: Frontiers in Endocrinology
Publish Date: November 2022
URL: https://doi.org/10.3389/fendo.2022.1042119
Abstract:
Objective: To determine self-reported incidence and potential risk factors for COVID-19 in patients with adrenal insufficiency (AI).
Methods: A 27-item AI survey was developed for AI and COVID-19 status, vetted by specialists and patients, and distributed *via* social media, websites, and advocacy groups. Participation was voluntary and anonymous. Data were collected from September 20th, 2020 until December 31st, 2020.
Results: Respondents (n=1291) with self-reported glucocorticoid treatment for AI, completed the survey, with 456 who reported having symptoms and were screened for COVID-19 during 2020; 40 tested positive (+ve), representing an 8.8% incidence. Of the

COVID-19^{+ve}, 31 were female (78%), with mean age of 39.9 years. COVID-19 among AI patients occurred most commonly in those aged 40-59 years (n=17; 42.5%); mean time since AI diagnosis was 13.5 years (range 0.2-42.0 years). Pulmonary disease, congenital adrenal hyperplasia, and higher maintenance doses of glucocorticoids were significantly associated with +ve COVID-19 (p=0.04, p=0.01, and p=0.001, respectively. In respondents the cumulative incidence of COVID-19^{+ve} during 2020 was 3.1%; greater than the 1.03% worldwide-incidence reported by WHO, by December 31st, 2020. There was a 3-fold (95% CI 2.16-3.98) greater relative risk (RR) of COVID-19 infection and a 23.8- fold (95% CI 20.7-31.2) RR of hospitalization in patients with AI, compared with the global population.
Conclusion: A markedly raised RR of COVID-19 and hospitalization in respondents reporting chronic AI was detected. We found that a diagnosis of congenital adrenal hyperplasia, age>40 years, male gender, pulmonary disease, and higher maintenance doses of glucocorticoids were associated with greatest risk.

Title: Epidemics and the Military: Responding to COVID-19 in Uganda
Journal: Social Science and Medicines
Publish Date: December 2022
URL: https://doi.org/10.1016/j.socscimed.2022.115482
Abstract:
The UN Security Council's response to Ebola in 2014 legitimised militarised responses. It also influenced responses to COVID-19 in some African countries. Yet, little is known about the day-to-day impacts for ordinary citizens of mobilising armies for epidemic control. Drawing on 18 months ethnographic research, this article analyses militarised responses to COVID-19 during, and following, two lockdowns at contrasting sites in Uganda: a small town in Pakwach district and a village in Kasese district. Both field sites lie close to the border of the Democratic Republic of Congo. Although the practice of health security varied between sites, the militarised response had more impact than the disease in these two places. The armed forces scaled back movement from urban conurbations to rural and peri-urban areas; while simultaneously enabling locally based official public authorities to use the proclaimed priorities of President Museveni's government to enhance their position and power. This led to a situation whereby inhabitants created new modes of mutuality to resist or subvert the regulations being enforced, including the establishment of new forms of cross-border movement. These findings problematise the widely held view that Uganda's response to COVID-19 was successful. Overall, it is argued that the on-going securitisation of global health has helped to create the political space to militarise the response. While this has had unknown effects on the prevalence of COVID-19, it has entrenched unaccountable modes of public authority and created a heightened sense of insecurity on the ground. The tendency to condone the violent practice of militarised public health programmes by international and national actors reflects a broader shift in the acceptance of more authoritarian forms of governance.

Title: Maternal mortality from COVID 19 among South African pregnant women
Journal: Journal of Maternal-Fetal and Neonatal Medicine
Publish Date: December 2022
URL: https://doi.org/10.1080/14767058.2021.1902501
Abstract:

Objective: To determine the COVID 19 related maternal deaths among South African pregnant women at Ekurhuleni health district in South Africa and to compare with similar studies.
Study design: Retrospective review of all maternal deaths from all health care facilities from April to September 2020 were conducted using COVID registers and maternity case records. Human Research Ethics Committee of the University of Witwatersrand approved the study. Data included total live births, maternal mortality ratio (MMR), age, ethnicity, place of admission, parity, pregnancy status, antenatal complications, gestational age (GA) at delivery, GA at COVID 19 diagnosis, GA at death, symptoms, comorbidity, investigations (HIV, platelets, lymphocytes and LDH), and fetal outcome. Descriptive statistics (mean ± standard deviation, number and percentages) were calculated.
Results: Six women died from COVID. All were African. Mean age was 33.5 (SD ± 4.3) years majority (83%) were multiparous. The mean GA at the time of diagnosis was 35 (± 5.8) weeks. All had dyspnea at presentation. All had hypertension. HIV rate (50%) was higher than the national rate. High lactic dehydrogenase was the commonest laboratory abnormality. Rate of macerated stillborn (66%) was very high.
Conclusion: To date, there are no African studies reporting on maternal mortality from COVID 19. This study provided valuable insight into maternal deaths due to COVID among South African women. COVID 19 is a novel cause of maternal death that has increased the death rate among South African pregnant women. Hypertensive women are at increased risk of death. They should be routinely tested for COVID. Women are at risk of death during the third trimester of pregnancy. High rate of stillborn is a concern. Decision to deliver earlier should be an option. High HIV rate and LDH count should alert health care workers to perform these tests among all COVID positive mothers.

Title: Strengthening monkeypox diagnostics and healthcare amidst Covid-19 realities: A call to action
Journal: Annals of Medicine and Surgery
Publish Date: December 2022
URL: https://doi.org/10.1016/j.amsu.2022.104898
Abstract:
Monkeypox virus is a zoonotic DNA virus related to the virus that causes smallpox. It was first isolated and identified in 1958 but its first confirmed human case was in 1970 when the virus was isolated from a child in the Democratic Republic of Congo. Since then, several cases have been reported within the African continent and globally. Despite its spread, Monkey pox disease has continued to suffer neglect in terms of research and funding due to its reported inefficiency in transmitting from Man to man as its transmission was reportedly limited to its endemic regions in Africa. Poor health data management, inadequate capacities in terms of testing infrastructure and health care workers and weak surveillance systems are some of the challenges faced by African countries. Multisectoral collaboration in breaking the transmission cycle of monkeypox infection and other preventive measures must be improved upon. Community advocacies and education play integral roles in infection spread preparedness, as well as in strengthening the healthcare system.

Title: Trends in Cases, Hospitalization and Mortality Related to the Omicron BA.4/BA.5 Sub-Variants in South Africa
Journal: Clinical Infectious Diseases
Publish Date: December 2022
URL: https://doi.org/10.1093/cid/ciac921
Abstract:
Background: This study compared admission incidence risk across waves, and the risk of mortality in the Omicron BA.4/BA.5 wave, to the Omicron BA.1/BA.2 and Delta waves.
Methods: Data from South Africa's national hospital surveillance system, SARS-CoV-2 case linelist and Electronic Vaccine Data System were linked and analysed. Wave periods were defined when the country passed a weekly incidence of 30 cases/100,000 people. In-hospital case fatality ratios (CFR) in the Delta, Omicron BA.1/BA.2 and Omicron BA.4/BA.5 wave periods were compared by post-imputation random effect multivariable logistic regression models.
Results: The CFR was 25.9% (N = 37,538/144,778), 10.9% (N = 6,123/56,384) and 8.2% (N = 1,212/14,879) in the Delta, Omicron BA.1/BA.2, and Omicron BA.4/BA.5 waves respectively. After adjusting for age, sex, race, comorbidities, health sector and province, compared to the Omicron BA.4/BA.5 wave, patients had higher risk of mortality in the Omicron BA.1/BA.2 wave (adjusted odds ratio [aOR] 1.3; 95% confidence interval [CI] 1.2-1.4) and Delta (aOR 3.0; 95% CI 2.8-3.2) wave. Being partially vaccinated (aOR 0.9, CI 0.9-0.9), fully vaccinated (aOR 0.6, CI 0.6-0.7) and boosted (aOR 0.4, CI 0.4-0.5); and prior laboratory-confirmed infection (aOR 0.4, CI 0.3-0.4) were associated with reduced risks of mortality.
Conclusion: Overall, admission incidence risk and in-hospital mortality, which had increased progressively in South Africa's first three waves, decreased in the fourth Omicron BA.1/BA.2 wave and declined even further in the fifth Omicron BA.4/BA.5 wave. Mortality risk was lower in those with natural infection and vaccination, declining further as the number of vaccine doses increased.

Title: Long-term validation of a reverse transcription loop-mediated isothermal amplification (RT-LAMP) assay for the rapid detection of SARS-CoV-2 from March 2020 to October 2021 in Central Africa, Gabon
Journal: PLoS Neglected Tropical Diseases
Publish Date: December 2022
URL: https://doi.org/10.1371/journal.pntd.0010964
Abstract:
Background: Despite the development of several methods for diagnosing COVID-19, long-term validation of such methods remains limited. In the early phase of the COVID-19 pandemic, we developed a rapid and sensitive diagnostic method based on reverse transcription loop-mediated isothermal amplification (RT-LAMP) methodology, which is suitable for point-of-care application or for use in resource-limited settings to detect SARS-CoV-2. To assess the applicability of the RT-LAMP assay technique to resource-limited regions, such as rural areas in Africa, and to verify the usability of the method against various SARS-CoV-2 variants, the method was validated using clinical samples collected longitudinally during the pandemic.

Methodology/principal findings: First, the sensitivity of the RT-LAMP assay for detecting 10 SARS-CoV-2 variants was evaluated using viral RNA samples extracted from cell culture with a portable battery-supported device, resulting in the successful detection of 20-50 copies of the viral genome within 15 min, regardless of the variant. COVID-19 positive samples collected in Gabon between March 2020 and October 2021 were used to evaluate the sensitivity of the assay and to calculate the copy number of the SARS-CoV-2 genome. More than 292 copies of the viral genome were detected with 100% probability within 15 min in almost all tests.
Conclusions: This long-term validation study clearly demonstrated the applicability of the RT-LAMP assay for the clinical diagnosis of COVID-19 in resource-limited settings of Africa, such as rural areas in Gabon. The results show the potential of the assay as a promising COVID-19 diagnostic method, especially in rural and remote regions located far from the official diagnosis facilities in urban or semi-urban areas.

Title: Prevalence of SARS-CoV-2 antibodies in the Republic of Congo in mid-2021
Journal: IJID Regions
Publish Date: December 29, 2022
URL: https://doi.org/10.1186/s12913-022-08859-6
Abstract:
Objectives: To estimate the seroprevalence of severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) antibodies in the general population in the Republic of Congo.
Methods: In this cross-sectional study, conducted from June to July 2021, participants were recruited from the general population in three districts in the Republic of Congo. Eligible participants were tested for anti-SARS-CoV-2 antibodies using a rapid diagnostic assay.
Results: Overall, 31.8% [95% confidence interval (CI) 29.5-34.0] of the 1669 participants tested positive for anti-SARS-CoV-2 antibodies. Higher prevalence was observed in the rural region (37.3%, 95% CI 31.0-44.1%) than the urban region (30.9%, 95% CI 28.5-33.3); however, the difference was not significant. The risk of testing positive for anti-SARS-CoV-2 antibodies increased significantly with age, ranging from 22.5% (95% CI 18.1-27.5) in 15-24 year olds to 47.9% (95% CI 39.3-56.5) in 55-64 year olds.
Conclusions: The antibody levels observed in this survey correlate with a moderate rate of virus circulation, which correlates with the low number of confirmed cases of coronavirus disease 2019 in the Republic of Congo.

Title: Gradual emergence followed by exponential spread of the SARS-CoV-2 Omicron variant in Africa
Journal: Science
Publish Date: December 2022
URL: https://doi.org/10.1126/science.add8737
Abstract:
The geographic and evolutionary origins of the SARS-CoV-2 Omicron variant (BA.1), which was first detected mid-November 2021 in Southern Africa, remain unknown. We tested 13,097 COVID-19 patients sampled between mid-2021 to early 2022 from 22 African countries for BA.1 by real-time RT-PCR. By November-December 2021, BA.1 had

replaced the Delta variant in all African sub-regions following a South-North gradient, with a peak Rt of 4.1. Polymerase chain reaction and near-full genome sequencing data revealed genetically diverse Omicron ancestors already existed across Africa by August 2021. Mutations, altering viral tropism, replication and immune escape, gradually accumulated in the spike gene. Omicron ancestors were therefore present in several African countries months before Omicron dominated transmission. These data also indicate that travel bans are ineffective in the face of undetected and widespread infection.

B. COVID-19 RESPONSE ACTIVITIES
(hygiene practices, social distancing, case management)

Title: How can we strengthen partnership and coordination for health system emergency preparedness and response? Findings from a synthesis of experience across countries facing shocks
Journal: BMC Health Service Research
Publish Date: November 29, 2022
URL: https://doi.org/10.1186/s12913-022-08859-6
Abstract:
Background: Discussions of health system resilience and emergency management often highlight the importance of coordination and partnership across government and with other stakeholders. However, both coordination and partnership have been identified as areas requiring further research. This paper identifies characteristics and enablers of effective coordination for emergency preparedness and response, drawing on experience from different countries with a range of shocks, including floods, drought, and COVID-19.
Methods: The paper synthesises evidence from a set of reports related to research, evaluation and technical assistance projects, bringing together evidence from 11 countries in sub-Saharan Africa and South Asia. Methods for the original reports included primary data collection through interviews, focus groups and workshop discussions, analysis of secondary data, and document review. Reports were synthesised using a coding framework, and quality of evidence was considered for reliability of the findings.
Results: The reports highlighted the role played by coordination and partnership in preparedness and response, and identified four key areas that characterise and enable effective coordination. First, coordination needs to be inclusive, bringing together different government sectors and levels, and stakeholders such as development agencies, universities, the private sector, local leaders and civil society, with equitable gender representation. Second, structural aspects of coordination bodies are important, including availability of coordination structures and regular meeting fora; clear roles, mandates and sufficient authority; the value of building on existing coordination mechanisms; and ongoing functioning of coordination bodies, before and after crises. Third, organisations responsible for coordination require sufficient capacity, including staff, funding, communication infrastructure and other resources, and learning from previous emergencies. Fourth, effective coordination is supported by high-level political leadership and incentives for collaboration. Country experience also highlighted interactions between these components, and with the wider health system and governance architecture, pointing to the need to consider coordination as part of a complex adaptive system.

Conclusion: COVID-19 and other shocks have highlighted the importance of effective coordination and partnership across government and with other stakeholders. Using country experience, the paper identifies a set of recommendations to strengthen coordination for health system resilience and emergency management.

Title: Assessing core capacities for addressing public health emergencies of international concern at designated points of entry in Cameroon during the COVID-19 Pandemic
Journal: BMC Public Health
Publish Date: November 28, 2022
URL: https://doi.org/10.1186/s12889-022-14614-7
Abstract:
Background: Points of Entry (POEs) are at the frontline for prevention, detection and response to international spread of diseases. The objective of this assessment was to ascertain the current level of existing International Health Regulations (IHR) core capacities of designated airports, ports and ground crossings in Cameroon and identify critical gaps for capacity building for prevention, early warning and response to public health threats including COVID-19.
Methods: Data were collected from April to May 2020 in 5 designated POEs: Yaounde Nsimalen International Airport (YIA), Douala international Airport (DIA), Douala Autonomous Port (DAP), Garoua-Boulai ground crossing, Kye-Ossi ground crossing which were all selected for their high volume of passenger and goods traffic. The World Health Organization (WHO) assessment tool for core capacity requirements at designated airports, ports and ground crossings was used to collect data on three technical capacities: (i) communication and coordination, (ii) Capacities at all times and (iii) capacities to respond to Public Health Emergencies of International Concern (PHEIC).
Results: All the investigated POEs scored below 50% of capacities in place. YIA recorded the highest percentage for all groups of capacities, coordination and communication and for core capacity at all times with a percentage of 42%, 58% and 32% respectively. For core capacity to respond to PHEIC, all the POEs recorded below 50%. The DAP and all ground crossings lacked trained personnel for inspection of conveyances. Only DIA had a public health emergency plan. There is no isolation/quarantine and transport capacity at the POEs.
Conclusion: All POEs assessed did not meet IHR standards and need significant improvement to fulfill the IHR requirements. Unstructured communication channels between stakeholders make the implementation of IHR challenging. A coordination mechanism, with clear functions and structure, is necessary for well-coordinated response efforts to health emergencies at POEs. This assessment will serve as a baseline to inform planning and IHR implementation at designated POEs in Cameroon.

Title: Efficacy of selected Nigerian tropical plants in the treatment of COVID-19: in silico and in vitro investigations
Journal: Environmental Science and Pollution Research International
Publish Date: December 2022
URL: https://doi.org/10.1007/s11356-022-22025-9
Abstract:

The whole world is still challenged with COVID-19 pandemic caused by Coronavirus-2 (SARS-CoV-2) which has affected millions of individuals around the globe. Although there are prophylactic vaccines being used, till now, there is ongoing research into discovery of drug candidates for total eradication of all types of coronaviruses. In this context, this study sought to investigate the inhibitory effects of six selected tropical plants against four pathogenic proteins of Coronavirus-2. The medicinal plants used in this study were selected based on their traditional applications in herbal medicine to treat COVID-19 and related symptoms. The biological activities (antioxidant, free radical scavenging, and anti-inflammatory activities) of the extracts of the plants were assessed using different standard procedures. The phytochemicals present in the extracts were identified using GCMS and further screened via in silico molecular docking. The data from this study demonstrated that the phytochemicals of the selected tropical medicinal plants displayed substantial binding affinity to the binding pockets of the four main pathogenic proteins of Coronavirus-2 indicating them as putative inhibitors of Coronavirus-2 and as potential anti-coronavirus drug candidates. The reaction between these phytocompounds and proteins of Coronavirus-2 could alter the pathophysiology of COVID-19, thus mitigating its pathogenic reactions/activities. In conclusion, phytocompounds of these plants exhibited promising binding efficiency with target proteins of SARS-COV-2. Nevertheless, in vitro and in vivo studies are important to potentiate these findings. Other drug techniques or models are vital to elucidate their compatibility and usage as adjuvants in vaccine development against the highly contagious COVID-19 infection.

Title: A socio-ecological exploration to identify factors influencing the COVID-19 vaccine decision-making process among pregnant and lactating women: Findings from Kenya
Journal: Vaccine
Publish Date: December 2022
URL: https://doi.org/10.1016/j.vaccine.2022.10.068
Abstract:
The vaccine decision-making process of pregnant and lactating women is complex. Regarding COVID-19, pregnant women are at increased risk for severe disease and poor health outcomes. While pregnant and lactating women were excluded from COVID-19 vaccine trials, available evidence suggests that COVID-19 vaccines are safe and protective during pregnancy. In this study, we used a socio-ecological approach to explore factors influencing the decision-making process for COVID-19 vaccines in pregnant and lactating women in Kenya, for the purpose of informing demand generation strategies. As pregnant and lactating women are influenced by many factors, we conducted 84 in-depth interviews with a variety of stakeholders, including 31 pregnant or lactating women, 20 healthcare workers such as nurses, midwives, doctors, and frontline workers, 25 male family members of pregnant or lactating women, and 8 gatekeepers such as community leaders and faith-based leaders. These individuals were recruited from six communities in Kenya: three urban, and three rural. We applied a grounded theory approach to identify emerging themes and organized emerging themes using the SAGE Vaccine Hesitancy model, which includes three categories of determinants of vaccine acceptance, including contextual influences, individual and group influences, and vaccine and vaccination specific issues. Myths, interpersonal norms, and religion emerged as themes related to contextual influences. Safety, risk perception, and the role of the healthcare worker emerged as

themes related to individual and group influences. For vaccine and vaccination specific issues, emerging themes included availability, accessibility, and eligibility. While maternal immunization can substantially reduce the effect of infectious diseases in mothers and infants, vaccine acceptance is critical. However, vaccines do not save lives; vaccination does. We hope the results of this study can be used to tailor communication efforts to increase vaccine demand among pregnant and lactating women.

Title: Medicinal plants used for the management of respiratory diseases in Zimbabwe: Review and perspectives potential management of COVID-19
Journal: Physics and Chemestry on the Earth
Publish Date: December 2022
URL: https://doi.org/10.1016/j.pce.2022.103232
Abstract:
Respiratory diseases have in the recent past become a health concern globally. More than 523 million cases of coronavirus disease (COVID19), a recent respiratory diseases have been reported, leaving more than 6 million deaths worldwide since the start of the pandemic. In Zimbabwe, respiratory infections have largely been managed using traditional (herbal) medicines, due to their low cost and ease of accessibility. This review highlights the plants' toxicological and pharmacological evaluation studies explored. It seeks to document plants that have been traditionally used in Zimbabwe to treat respiratory ailments within and beyond the past four decades. Extensive literature review based on published papers and abstracts retrieved from the online bibliographic databases, books, book chapters, scientific reports and theses available at Universities in Zimbabwe, were used in this study. From the study, there were at least 58 plant families comprising 160 medicinal plants widely distributed throughout the country. The Fabaceae family had the highest number of medicinal plant species, with a total of 21 species. A total of 12 respiratory ailments were reportedly treatable using the identified plants. From a total of 160 plants, colds were reportedly treatable with 56, pneumonia 53, coughs 34, chest pain and related conditions 29, asthma 25, tuberculosis and spots in lungs 22, unspecified respiratory conditions 20, influenza 13, bronchial problems 12, dyspnoea 7, sore throat and infections 5 and sinus clearing 1 plant. The study identified potential medicinal plants that can be utilised in future to manage respiratory infections

Title: Using COVID-19 to Address Environmental Threats to Health and Leverage for Prison Reform in South Africa, Malawi and Zimbabwe
Journal: Journal of Human Rights Practice
Publish Date: December 1st, 2022
URL: https://doi.org/10.1093/jhuman/huac050
Abstract:
Health rights of prisoners has long been a neglected political issue in Africa, where over one million people are detained, and almost half of whom are in pre-trial detention. African prisons constitute high-risk environments for communicable disease transmission. During the COVID-19 pandemic, the public health literature on African prison responses focused on preparedness as it related to testing capacity, quarantine practices and personal protective measures to mitigate disease spread. This article combines the right to health as narrowly defined by a prisoner's right to access non-discriminatory equivalent health

care, with a broader focus on assessing normative standards of detention. A comparative legal realist assessment of prison operations in South Africa, Malawi and Zimbabwe during COVID-19 state disaster measures is presented, focusing on the environmental determinants of health (ventilation, minimum floor space, water, sanitation, hygiene and nutrition) in prisons. It reveals the inherent tensions in ensuring a balance between respecting the fundamental rights of people living and working in prisons, ensuring adequate environmental health standards and mitigating disease during public health emergencies. Despite insufficient government resourcing and inadequate coverage of COVID-19 responses, few severe outbreaks were reported. This could be due to lack of testing, reporting or other factors (asymptomatic infection, acquired immunity). Prison congestion and unrest however affected prisoners and staff fearful of hazardous living and occupational health conditions. COVID-19 as public health emergency amplifies the need to address systemic deficits in infrastructure, resourcing and efficiency of criminal justice systems. Policy level and pragmatic recommendations for enhanced human rights practice are outlined.

C. COVID-19 VACCINATION

Title: COVID-19 vaccination in Africa: A case of unsatisfied expectation and ill-preparedness
Journal: Vaccine X
Publish Date: December 2022
URL: https://doi.org/10.1016/j.jvacx.2022.100234
Abstract:
With a population of 1.3 billion people, of which 56% reside in rural settings, Africa seemed ill-prepared to handle the distribution of a COVID-19 vaccine. In addition, the capacity needed for a successful COVID-19 vaccination campaign in Africa surpassed the available resources in local and state health agencies. As a result, African governments were advised to coordinate resources, health officials, and vaccinators, including local health practitioners, medical technicians, and pharmacists for the largest-ever vaccination campaign in Africa. Although the rolling out of the SARS-COV-2 vaccine was, as expected, slow in many African countries, and not yet enough to cover the entire population in Africa, the mass vaccination campaign in Africa must continue to ensure that priority for vaccination is extended beyond front-liners (healthcare workers) and specific high-risk populations, which has largely been the case in some African countries. This article highlights the overarching areas that we believe need to be prioritized to enhance Africa's effectiveness and coverage in the mass COVID-19 vaccination program.

Title: A COVID-19 model incorporating variants, vaccination, waning immunity, and population behavior
Journal: Scientific Reports
Publish Date: December 2022
URL: https://doi.org/10.1038/s41598-022-24967-z
Abstract:
Vaccines for COVID-19 have allowed countries to combat the spread of the disease. However, new variants have resulted in significant spikes in cases and raised severe health

and economic concerns. We present a COVID-19 model to predict coupled effects of vaccine multiple-dose roll-out strategies, vaccine efficacy, waning immunity, population level of caution, sense of safety, under-reporting of cases, and highly prevalent variants such as the Delta (B.1.617.2) and Omicron (B.1.1.529). The modeling framework can incorporate new variants as they emerge to give critical insights into the new cases and guide public policy decision-making concerning vaccine roll-outs and reopening strategies. The model is shown to recreate the history of COVID-19 for five countries (Germany, India, Japan, South Africa, and the United States). Parameters for crucial aspects of the pandemic, such as population behavior, new variants, vaccination, and waning immunity, can be adjusted to predict pandemic scenarios. The model was used to conduct trend analysis to simulate pandemic dynamics taking into account the societal level of caution, societal sense of safety, and the proportions of individuals vaccinated with first, second, and booster doses. We used the results of serological testing studies to estimate the actual number of cases across countries. The model allows quantification of otherwise hard to quantify aspects such as the infectious power of variants and the effectiveness of government mandates and population behavior. Some example cases are presented by investigating the competitive nature of COVID variants and the effect of different vaccine distribution strategies between immunity groups.

Title: Hesitancy of COVID-19 vaccines: Rapid systematic review of the measurement, predictors, and preventive strategies
Journal: Human Vaccines and Immunotherapeutics
Publish Date: November 30, 2022
URL: https://doi.org/10.1080/21645515.2022.2074716
Abstract:
Vaccine hesitancy is one of the top ten global health threats and the first threat to fighting COVID-19 through vaccination. With the increasing level of COVID-19 vaccine hesitancy amidst the rising level of confirmed cases and death tolls, this paper provides rapid systematic literature reviews on the measurement of COVID-19 vaccine hesitancy, key determinants and evidence-based strategies to prevent COVID-19 vaccine hesitancy. The findings reveal three standard measures of vaccine hesitancy: optional response questions, Likert scale, and linear scale measurements. Factors such as sociodemographic/economic factors, occupational factors, knowledge on the vaccine, vaccine attributes, conspiracy belief and psychological factors are the major predictors of COVID-19 vaccine hesitancy. Evidence-based findings identified measures such as effective education on the vaccine, clear and consistent communication to build public confidence and trust, health education on vaccination and its social benefit, outreach program and targeted messaging to minimize COVID-19 vaccine hesitancy.

Title: Prevention of monkeypox with vaccines: a rapid review
Journal: Lancet Infectious Diseases
Publish Date: November 30, 2022
URL: https://doi.org/10.1016/s1473-3099(22)00574-6
Abstract:
The largest outbreak of monkeypox in history began in May, 2022, and has rapidly spread across the globe ever since. The purpose of this Review is to briefly describe human

immune responses to orthopoxviruses; provide an overview of the vaccines available to combat this outbreak; and discuss the various clinical data and animal studies evaluating protective immunity to monkeypox elicited by vaccinia virus-based smallpox vaccines, address ongoing concerns regarding the outbreak, and provide suggestions for the appropriate use of vaccines as an outbreak control measure. Data showing clinical effectiveness (~85%) of smallpox vaccines against monkeypox come from surveillance studies conducted in central Africa in the 1980s and later during outbreaks in the same area. These data are supported by a large number of animal studies (primarily in non-human primates) with live virus challenge by various inoculation routes. These studies uniformly showed a high degree of protection and immunity against monkeypox virus following vaccination with various smallpox vaccines. Smallpox vaccines represent an effective countermeasure that can be used to control monkeypox outbreaks. However, smallpox vaccines do cause side-effects and the replication-competent, second-generation vaccines have contraindications. Third-generation vaccines, although safer for use in immunocompromised populations, require two doses, which is an impediment to rapid outbreak response. Lessons learned from the COVID-19 pandemic should be used to inform our collective response to this monkeypox outbreak and to future outbreaks.

Title: Efficacy, safety, and immunogenicity of a booster regimen of Ad26.COV2.S vaccine against COVID-19 (ENSEMBLE2): results of a randomised, double-blind, placebo-controlled, phase 3 trial
Journal: Lancet Infectious Diseases
Publish Date: December 2022
URL: https://doi.org/10.1016/s1473-3099(22)00506-0
Abstract:
Background: Despite the availability of effective vaccines against COVID-19, booster vaccinations are needed to maintain vaccine-induced protection against variant strains and breakthrough infections. This study aimed to investigate the efficacy, safety, and immunogenicity of the Ad26.COV2.S vaccine (Janssen) as primary vaccination plus a booster dose.
Methods: ENSEMBLE2 is a randomised, double-blind, placebo-controlled, phase 3 trial including crossover vaccination after emergency authorisation of COVID-19 vaccines. Adults aged at least 18 years without previous COVID-19 vaccination at public and private medical practices and hospitals in Belgium, Brazil, Colombia, France, Germany, the Philippines, South Africa, Spain, the UK, and the USA were randomly assigned 1:1 via a computer algorithm to receive intramuscularly administered Ad26.COV2.S as a primary dose plus a booster dose at 2 months or two placebo injections 2 months apart. The primary endpoint was vaccine efficacy against the first occurrence of molecularly confirmed moderate to severe-critical COVID-19 with onset at least 14 days after booster vaccination, which was assessed in participants who received two doses of vaccine or placebo, were negative for SARS-CoV-2 by PCR at baseline and on serology at baseline and day 71, had no major protocol deviations, and were at risk of COVID-19 (ie, had no PCR-positive result or discontinued the study before day 71). Safety was assessed in all participants; reactogenicity, in terms of solicited local and systemic adverse events, was assessed as a secondary endpoint in a safety subset (approximately 6000 randomly selected participants). The trial is registered with ClinicalTrials.gov, NCT04614948, and is ongoing.

Findings: Enrolment began on Nov 16, 2020, and the primary analysis data cutoff was June 25, 2021. From 34 571 participants screened, the double-blind phase enrolled 31 300 participants, 14 492 of whom received two doses (7484 in the Ad26.COV2.S group and 7008 in the placebo group) and 11 639 of whom were eligible for inclusion in the assessment of the primary endpoint (6024 in the Ad26.COV2.S group and 5615 in the placebo group). The median (IQR) follow-up post-booster vaccination was 36·0 (15·0-62·0) days. Vaccine efficacy was 75·2% (adjusted 95% CI 54·6-87·3) against moderate to severe-critical COVID-19 (14 cases in the Ad26.COV2.S group and 52 cases in the placebo group). Most cases were due to the variants alpha (B.1.1.7) and mu (B.1.621); endpoints for the primary analysis accrued from Nov 16, 2020, to June 25, 2021, before the global dominance of delta (B.1.617.2) or omicron (B.1.1.529). The booster vaccine exhibited an acceptable safety profile. The overall frequencies of solicited local and systemic adverse events (evaluated in the safety subset, n=6067) were higher among vaccine recipients than placebo recipients after the primary and booster doses. The frequency of solicited adverse events in the Ad26.COV2.S group were similar following the primary and booster vaccinations (local adverse events, 1676 [55·6%] of 3015 vs 896 [57·5%] of 1559, respectively; systemic adverse events, 1764 [58·5%] of 3015 vs 821 [52·7%] of 1559, respectively). Solicited adverse events were transient and mostly grade 1-2 in severity.
Interpretation: A homologous Ad26.COV2.S booster administered 2 months after primary single-dose vaccination in adults had an acceptable safety profile and was efficacious against moderate to severe-critical COVID-19. Studies assessing efficacy against newer variants and with longer follow-up are needed.

Title: Perception and willingness to accept COVID-19 Vaccines: A cross-sectional survey of the general population of Sokoto State, Nigeria
Journal: PLos One
Publish Date: December 2022
URL: https://doi.org/10.1371/journal.pone.0278332
Abstract:
The number of confirmed cases of COVID-19 globally is well over 400 million, however, the number of cases is showing a downward trend especially in developed countries largely as a result of effective vaccination against COVID-19. In developing countries, vaccination coverage is still very low as a result of vaccine hesitancy, which could be attributed to misconceptions about COVID-19 itself and its newly developed vaccines. This study assessed COVID-19 vaccine acceptance and perception amongst the adult population in Sokoto state, Nigeria. A cross-sectional study was conducted in Sokoto state among 854 respondents selected via a multi-stage sampling technique. Data was collected electronically using a set of structured questionnaire and analysis was done using IBM SPSS version 25. Respondents' perception was assessed using a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). Respondents having a score of 3 and below were graded as having poor perception and those having scores above 3 were graded as having good perception. Respondents' ages ranged from 17 to 76 years, with a mean of 34.8±12.07; more than half [474(53.7%)] of the respondents were males, 667(75.5%) were married and 539(61.0%) had formal education. The majority [839(95.0%)] of the respondents had a good perception of COVID -19 vaccine; 49.9%

agreed enough research would be required on the safety of the vaccine. The majority, (72.4%) expressed their willingness to accept the COVID- 19 vaccine (male 38.4% vs. female 34.0%); 410(47.4%) said they can spend more than one hour to get the vaccine. Significant predictors of willingness to accept COVID 19 vaccine include age ($p = 0.006$; aOR = 0.223; 95% CI = 0.077–0.645), education ($p<0.001$; aOR = 1.720; 95% CI = 1.274–2.321) and perception of COVID 19 vaccine ($p<0.001$; aOR = 0.020; 95% CI = 0.009–0.044). The majority of the respondents had a good perception of COVID- 19 vaccine and more than two-thirds were willing to be vaccinated with the vaccine. Government should make the vaccine available for vaccination since a significant proportion of the respondents expressed their willingness to accept the vaccine

D. COVID-19 PUBLIC PERCEPTIONS AND EFFECTS

Title: Public perception of radio campaign messages in managing COVID-19 pandemic in selected states, Nigeria
Journal: Human Vaccines and Immunotherapeutics
Publish Date: November 30, 2022
URL: https://doi.org/10.1080/21645515.2022.2085958
Abstract:
The study examined public perception of Nigeria Center of Disease Control's (NCDC) radio campaign messages in managing the Covid-19 pandemic in three selected states in the south-western part of the country. A survey research design was adopted with a questionnaire as a data collection instrument. A sample size of 400 respondents was chosen through the multistage approach. The study revealed that the residents in selected states in South-Western Nigeria reported exposure to radio campaign messages on COVID-19 preventive measures and perceived that the messages influenced the awareness and adoption of COVID-19 preventive measures. It was recommended that behavioral change communication experts and public health officers at all levels should leverage the reliability and spread of radio among the populace to disseminate public health issues.

Title: Depression, Anxiety, and Stress Among Chiropractors in South Africa During the Early COVID-19 Pandemic
Journal: Journal of Chiropractic Humanities
Publish Date: October 2022
URL: https://doi.org/10.1016/j.echu.2022.08.001
Abstract:
Objective: The purpose of this study was to assess the self-reported depression, anxiety, and stress responses of chiropractors in South Africa during the first year of the COVID-19 pandemic.
Methods: This was an explorative cross-sectional survey. The survey was distributed to 884 chiropractors through the membership databases of the Chiropractic Association of South Africa and the Allied Health Professions Council of South Africa from July 9, 2020, until August 4, 2020. The study was conducted through Google Forms and included the Depression, Anxiety, and Stress Scale questionnaire. Data were analyzed using the

Kolmogorov-Smirnov and Shapiro-Wilk tests and comparatively using the Mann-Whitney *U* and Kruskal-Wallis tests.
Results: The response rate was 17%. The chiropractor scores for depression, anxiety, and stress were within the normal range (7.35, 5.42, and 11.58, respectively). Female chiropractors under the age of 40 years old were found to be affected to a greater degree than the other participants in this study (9.87, 7.56, and 14.14).
Conclusion: Self-reported levels for stress, anxiety, and depression among chiropractors in South Africa were found to be within normal limits during the initial phase of the COVID-19 pandemic.

Title: Impact of COVID-19 lockdown and health risk modeling of polycyclic aromatic hydrocarbons in Onne, Nigeria
Journal: Environmental Monitoring Assessment
Publish Date: November 2022
URL: https://doi.org/10.1007/s10661-022-10670-z
Abstract:
The people living in Onne are highly vulnerable to PAH exposure due to constant exposure to black soot through oral, dermal, and inhalation routes. This work aims to determine the PAHs profile of selected soils in Onne, to determine the health risks associated with PAHs exposure through the soil, and to determine the impact of reduced industrial and other activities on the PAHs profile and associated public health risks. This study evaluated 16 priority polycyclic aromatic hydrocarbon (PAHs) pollutants in soil samples from the four (4) major clans in Onne using a gas chromatography flame ionization detector (GC-FID) during and after the COVID-19 lockdown. The results showed a differential presence of PAHs during and after the lockdown. Of the 16 priority PAHs, 10 and 8 PAHs were respectively detected during and after the COVID-19 lockdown. High molecular weight PAHs such as benzo(k)fluoranthene and benzo(a)anthracene were major contributors during the lockdown, while low molecular weight PAHs such as naphthalene, acenaphthylene, and fluorene were present at higher levels after the lockdown. An assessment of health risk by incremental lifetime cancer risks revealed that the entire population of Onne might be at risk of cancer development across periods, though a higher risk was presented during the lockdown. In addition, children under the age of 18 may be at greater risk. To the best of our knowledge, there is no previous report on the impact of the COVID-19 lockdown on soil PAH profile and health risks, with particular attention to the Onne industrial host community. Earlier work considered the ecological risks of heavy metals on dumpsites in Onne. Taken together, the PAH-contaminated soil in Onne poses an immediate health concern. Therefore, reduced anthropological activities, as evident during the COVID-19 lockdown, may play a role in exposure and cancer risk reduction. While there may not be another lockdown due to the challenging impacts associated with a physical lockdown, firmly controlled economic activity can be a solution if embraced by stakeholders. The COVID-19-lockdown was encumbered with restricted movements and security checks, which limited the number of samples collected. However, the Local Government Council (Department of the Environment) granted permission for the researchers to work with a minimal threat to their lives.

Title: Cost-effectiveness of Coronavirus Disease 2019 Vaccination in Low- and Middle-Income Countries
Journal: Journal of Infectious Diseases
Publish Date: November 28, 2022
URL: https://doi.org/10.1093/infdis/jiac243
Abstract:
Background: Despite the advent of safe and effective coronavirus disease 2019 vaccines, pervasive inequities in global vaccination persist.
Methods: We projected health benefits and donor costs of delivering vaccines for up to 60% of the population in 91 low- and middle-income countries (LMICs). We modeled a highly contagious (Re at model start, 1.7), low-virulence (infection fatality ratio [IFR], 0.32%) "Omicron-like" variant and a similarly contagious "severe" variant (IFR, 0.59%) over 360 days, accounting for country-specific age structure and healthcare capacity. Costs included vaccination startup (US$630 million) and per-person procurement and delivery (US$12.46/person vaccinated).
Results: In the Omicron-like scenario, increasing current vaccination coverage to achieve at least 15% in each of the 91 LMICs would prevent 11 million new infections and 120 000 deaths, at a cost of US$0.95 billion, for an incremental cost-effectiveness ratio (ICER) of US$670/year of life saved (YLS). Increases in vaccination coverage to 60% would additionally prevent up to 68 million infections and 160 000 deaths, with ICERs <US$8000/YLS. ICERs were <US$4000/YLS under the more severe variant scenario and generally robust to assumptions about vaccine effectiveness, uptake, and costs.
Conclusions: Funding expanded COVID-19 vaccine delivery in LMICs would save hundreds of thousands of lives, be similarly or more cost-effective than other donor-funded global aid programs, and improve health equity.

E. COVID-19 EFFECTS ON OTHER DISEASES AND SECTORS

Title: What lessons can African nations learn from the COVID-19 pandemic?
Journal: Tropical Medicine and Health
Publish Date: November 28, 2022
URL: https://doi.org/10.1186/s41182-022-00480-x
Abstract:
While the impact of the COVID-19 pandemic differed per country, the impact on African nations was comparable. Health, money, the economy, education, and inventions have all been criticised over the years, but the discoveries during the pandemic were stunning. We witnessed a system being devoured by corruption and anti-patriotic citizens seeking their agenda. The commentary discusses the influence of the COVID-19 pandemic on several sectors in African nations, as well as the lessons that may be drawn from it. Furthermore, it recommends methods to avoid a recurrence.

Title: Sociodemographic characteristics of professional categories most affected by COVID-19 in Mozambique, from March to July 2020

Journal: Pan African Medical Journal
Publish Date: 24 November 2022
URL: https://www.panafrican-med-journal.com/content/article/43/155/full/

Abstract

Introduction: the risk of a worker becoming ill due to coronavirus disease 2019 (COVID-19) is related to occupational exposure to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Due to the need to restore work activities in Mozambique, the study was conducted with the aim of identifying the occupational categories most affected by COVID-19 in the former in the period from March to July 2020.

Methods: this is a cross-sectional descriptive study, in which data from professions of confirmed cases of COVID-19 from 22 March to 29 July 2020 in Mozambique were analyzed. The professionals' data were reported daily by the NIH and merged into a single database and exported to Excel, the latter categorized according to standard operating procedure (SOP) and descriptive statistics performed for its analysis.

Results: in the period under analysis, 1,127 professionals were diagnosed with COVID-19, divided into 11 categories. Nampula province had the highest frequency of cases with 25.00% (277). The highest frequency of cases was registered in the domestic professional category, which had 16.77% (189/1,127) with the female sex being more frequent, 79.37% (150/189); and defense and security had 14.20% (160/1,127) of cases and male gender with 91.25% (146/160); Health workers had 13.04% (147/1,127), and the maximum number of COVID-19 cases was recorded in June with 58.50% (86/147).

Conclusion: the professional categories most affected by COVID-19 in the period under review correspond to those groups that carry out activities requiring a physical presence at the workplace and from this it is recommended that professionals reinforce preventive measures.

Title: Effect of Remote Ischaemic Conditioning on the Inflammatory Cytokine Cascade of COVID-19 (RIC in COVID-19): a Randomized Controlled Trial
Journal: Cardiovascular Drugs and Therapy
Publish Date: November 29, 2022
URL: https://doi.org/10.1007/s10557-022-07411-2

Abstract:

Purpose: Patients hospitalized with COVID-19 may develop a hyperinflammatory, dysregulated cytokine "storm" that rapidly progresses to acute respiratory distress syndrome, multiple organ dysfunction, and even death. Remote ischaemic conditioning (RIC) has elicited anti-inflammatory and cytoprotective benefits by reducing cytokines following sepsis in animal studies. Therefore, we investigated whether RIC would mitigate the inflammatory cytokine cascade induced by COVID-19.

Methods: We conducted a prospective, multicentre, randomized, sham-controlled, single-blind trial in Brazil and South Africa. Non-critically ill adult patients with COVID-19 pneumonia were randomly allocated (1:1) to receive either RIC (intermittent ischaemia/reperfusion applied through four 5-min cycles of inflation (20 mmHg above systolic blood pressure) and deflation of an automated blood-pressure cuff) or sham for approximately 15 days. Serum was collected following RIC/sham administration and analyzed for inflammatory cytokines using flow cytometry. The endpoint was the change in serum cytokine concentrations. Participants were followed for 30 days.

Results: Eighty randomized participants (40 RIC and 40 sham) completed the trial. Baseline characteristics according to trial intervention were overall balanced. Despite downward trajectories of all cytokines across hospitalization, we observed no substantial changes in cytokine concentrations after successive days of RIC. Time to clinical improvement was similar in both groups (HR 1.66; 95% CI, 0.938-2.948, p 0.08). Overall RIC did not demonstrate a significant impact on the composite outcome of all-cause death or clinical deterioration (HR 1.19; 95% CI, 0.616-2.295, p = 0.61).
Conclusion: RIC did not reduce the hypercytokinaemia induced by COVID-19 or prevent clinical deterioration to critical care.

Title: COVID-19 and a temporary ban on tobacco sales in South Africa: impact on smoking cessation
Journal: Tobacco Control
Publish Date: December 2022
URL: https://doi.org/10.1136/tobaccocontrol-2020-056293
Abstract:
Objective: To evaluate the impact of COVID-19 plus a temporary ban on the sale of tobacco and vaping products, on smoking cessation in South Africa, by reviewing research surveys conducted while the prohibition was in place.
Method: An internet search was conducted on 20 August 2020, using the key words: 'South Africa', 'survey', 'poll', 'smoking', 'cigarettes', 'tobacco'', 'vaping', and 'COVID-19'. There were no language restrictions. Additional studies were identified through press reports. Only studies conducted between March and August 2020 were included.
Results: Four surveys which reported on smokers quitting behaviour were included. None had been published in a peer reviewed journal. The heterogeneity of the data did not allow pooling. Support for the ban on tobacco sales amongst smokers varied from 6% to 36%. Similarly, there were inconsistent findings about quitting behaviour. Nationally, between 16% to 49% of smokers reported not smoking during the ban.
Conclusions: Cigarette smoking in SA dropped during the 2020 COVID-19 lockdown, but the estimates were inconsistent, probably because of survey design. There was evidence that the lockdown achieved the fastest rate of decline in smoking prevalence in the country's history. The true extent of the fall though is uncertain. Prevalence studies post lockdown, using probability sampling, may more accurately show how many people quit smoking.

Title: COVID-19 hospital admissions and mortality among healthcare workers in South Africa, 2020-2021
Journal: IJID Regions
Publish Date: December 2022
URL: https://doi.org/10.1016/j.ijregi.2022.08.014
Abstract:
Objectives: This study describes the characteristics of admitted HCWs reported to the DATCOV surveillance system, and the factors associated with in-hospital mortality in South African HCWs.
Methods: Data from March 5, 2020 to April 30, 2021 were obtained from DATCOV, a national hospital surveillance system monitoring COVID-19 admissions in South Africa.

Characteristics of HCWs were compared with those of non-HCWs. Furthermore, a logistic regression model was used to assess factors associated with in-hospital mortality among HCWs.
Results: In total, there were 169 678 confirmed COVID-19 admissions, of which 6364 (3.8%) were HCWs. More of these HCW admissions were accounted for in wave 1 (48.6%; *n* = 3095) than in wave 2 (32.0%; *n* = 2036). Admitted HCWs were less likely to be male (28.2%; *n* = 1791) (aOR 0.3; 95% CI 0.3-0.4), in the 50-59 age group (33.1%; *n* = 2103) (aOR 1.4; 95% CI 1.1-1.8), or accessing the private health sector (63.3%; *n* = 4030) (aOR 1.3; 95% CI 1.1-1.5). Age, comorbidities, race, wave, province, and sector were significant risk factors for COVID-19-related mortality.
Conclusion: The trends in cases showed a decline in HCW admissions in wave 2 compared with wave 1. Acquired SARS-COV-2 immunity from prior infection may have been a reason for reduced admissions and mortality of HCWs despite the more transmissible and more severe beta variant in wave 2.

Title: COVID-19 associated changes in HIV service delivery over time in Central Africa: Results from facility surveys during the first and second waves of the pandemic
Journal: PLoS One
Publish Date: November 30, 2022
URL: https://doi.org/10.1371/journal.pone.0275429
Abstract:
Introduction: The COVID-19 pandemic has impacted population health around the globe, directly and indirectly. The objective of this study was to document changes in HIV care associated with the COVID-19 pandemic at selected clinics in Central Africa, along with clinic-level strategies for minimizing disruptions in HIV care and treatment for people with HIV (PWH).
Methods: A 51-item questionnaire on COVID-19 pandemic-associated changes in HIV service delivery was completed by clinicians involved in HIV care at 21 clinics in five countries participating in Central Africa International epidemiology Databases to Evaluate AIDS (CA-IeDEA). The survey was completed at two timepoints: June-July 2020 and October 2020 to February 2021. Descriptive statistics were used to characterize changes in HIV care and related services.
Results: While 81% of sites reported at least one negative consequence of COVID-19 for clinic operations during the first survey, none reported suspending antiretroviral therapy (ART) initiation services for new patients, and 24% reported adopting telemedicine. In the follow-up survey, fewer sites (48%) reported at least one disruption to clinic operations, and more sites reported mitigation strategies, including expanding rapid ART initiation services and providing extra supplies of ART medications to reduce visit frequency. In the follow-up survey, more sites, especially in Rwanda, reported stockouts of commodities, including HIV and viral load testing and HIV pre-exposure prophylaxis. More than one-fifth of sites reported stockouts of second- or third-line ART at each survey timepoint.
Conclusions: While the initial wave of the COVID-19 pandemic resulted in concerning disruptions to HIV service delivery at CA-IeDEA sites, most of these disruptions attenuated over time, and many sites introduced measures to help PWH avoid frequent visits to the clinic for care and medications. The impact of HIV commodity stockouts and clinic mitigation strategies on treatment outcomes needs to be assessed.

Title: Impact of good governance, economic growth and universal health coverage on COVID-19 infection and case fatality rates in Africa
Journal: Health Research Policy and Systems
Publish Date: October 2022
URL: https://doi.org/10.1186/s12961-022-00932-0
Abstract:
Background: The coronavirus disease 2019 (COVID-19) pandemic has disrupted lives across all countries and communities. It significantly reduced the global economic output and dealt health systems across the world a serious blow. There is growing evidence showing the progression of the COVID-19 pandemic and the impact it has on health systems, which should help to draw lessons for further consolidating and realizing universal health coverage (UHC) in all countries, complemented by more substantial government commitment and good governance, and continued full implementation of crucial policies and plans to avert COVID-19 and similar pandemic threats in the future. Therefore, the objective of the study was to assess the impact of good governance, economic growth and UHC on the COVID-19 infection rate and case fatality rate (CFR) among African countries.
Methods: We employed an analytical ecological study design to assess the association between COVID-19 CFR and infection rate as dependent variables, and governance, economic development and UHC as independent variables. We extracted data from publicly available databases (i.e., Worldometer, Worldwide Governance Indicators, Our World in Data and WHO Global Health Observatory Repository). We employed a multivariable linear regression model to examine the association between the dependent variables and the set of explanatory variables. STATA version 14 software was used for data analysis.
Results: All 54 African countries were covered by this study. The median observed COVID-19 CFR and infection rate were 1.65% and 233.46%, respectively. Results of multiple regression analysis for predicting COVID-19 infection rate indicated that COVID-19 government response stringency index (β = 0.038; 95% CI 0.001, 0.076; P = 0.046), per capita gross domestic product (GDP) (β = 0.514; 95% CI 0.158, 0.87; P = 0.006) and infectious disease components of UHC (β = 0.025; 95% CI 0.005, 0.045; P = 0.016) were associated with COVID-19 infection rates, while noncommunicable disease components of UHC (β = -0.064; 95% CI -0.114; -0.015; P = 0.012), prevalence of obesity among adults (β = 0.112; 95% CI 0.044; 0.18; P = 0.002) and per capita GDP (β = -0.918; 95% CI -1.583; -0.254; P = 0.008) were associated with COVID-19 CFR.
Conclusions: The findings indicate that good governance practices, favourable economic indicators and UHC have a bearing on COVID-19 infection rate and CFR. Effective health system response through a primary healthcare approach and progressively taking measures to grow their economy and increase funding to the health sector to mitigate the risk of similar future pandemics would require African countries to move towards UHC, improve governance practices and ensure economic growth in order to reduce the impact of pandemics on populations.

Title: Nutritional knowledge and immunity-boosting food consumption patterns before and after the COVID-19 pandemic lockdown periods in Osun State, Nigeria
Journal: Nutrition and Health

Publish Date: December 2022
URL: https://doi.org/10.1177/02601060221122153
Abstract:
Background: A healthy diet can ensure a robust immune system that can resist any onslaught by viruses and bacteria.
Aim: To assess the nutritional knowledge and consumption patterns of immunity boosting foods of adults before & after the COVID-19 pandemic lockdown periods and the effect of the lockdown on daily food intake among respondents in selected towns in Osun state.
Methods: Cross sectional data was collected from six largest local governments areas purposively selected from the three senatorial districts of Osun State (n = 1000) using a well-structured, self-administered questionnaire and the data collected was analyzed using mean, standard deviation, and Pearson's correlation test The study assessed the food intakes of adults using a qualitative food frequency questionnaire.
Results: The results indicated that the majority (89.8%) of the respondents had high knowledge of the occurrence of the COVID-19 pandemic. Daily food intake was affected by COVID-19 lockdown, consumption of healthy food among the respondents was high during lockdown as 77% strongly agreed that vitamins and minerals supplement can be considered healthy and immunity boosting, while there was a reduction in the consumption of healthy foods after the lockdown periods. The test of hypothesis showed that the occurrence of pandemic and nutritional knowledge had a significant relationship with the consumption of healthy foods.
Conclusion: This study extends and confirms previous research on high nutritional knowledge of immunity-boosting foods in relation to COVID-19 among the respondents and a general reduction in the consumption of healthy foods after the COVID -19 lockdown periods.

Title: Global impact of COVID-19 on childhood tuberculosis: an analysis of notification data
Journal: Lancet Global Health
Publish Date: December 2022
URL: https://doi.org/10.1016/s2214-109x(22)00414-4
Abstract:
Background: There is concern that the COVID-19 pandemic has damaged global childhood tuberculosis management. Quantifying changes in childhood tuberculosis notifications could support more targeted interventions to restore childhood tuberculosis services. We aimed to use time-series modelling to evaluate the impact of COVID-19 on child tuberculosis notifications.
Methods: Annual tuberculosis case notification data reported to WHO by 215 countries were used to calculate annual notification counts for the years 2014-20, stratified by age groups (0-4, 5-14, and ≥15 years) and sex. We used time-series modelling to predict notification counts for 2020, and calculated differences between these predictions and observed notifications in 2020 for each of the six WHO regions and at the country level for 30 countries with high tuberculosis burden. We assessed associations between these differences and the COVID-19 stringency index, a measure of COVID-19 social impact.
Findings: From 2014 to 2019, annual tuberculosis notification counts increased across all age groups and WHO regions. More males than females in the 0-4 years age group and ≥15 years age group had notifications in all years from 2014 to 2020 and in all WHO

regions. In the 5-14 years age group, more females than males were notified globally in all years, although some WHO regions had higher notifications from males than females. In 2020, global notifications were 35·4% lower than predicted (95% prediction interval -30·3 to -39·9; 142 525 observed vs 220 794 predicted notifications [95% prediction interval 204 509 to 237 078]) for children aged 0-4 years, 27·7% lower (-23·4 to -31·5; 256 398 vs 354 578 [334 724 to 374 431]) in children aged 5-14 years, and 18·8% lower (-15·4 to -21·9; 5 391 753 vs 6 639 547 [6 375 086 to 6 904 007]) for people aged 15 years or older. Among those aged 5-14 years, the reduction in observed relative to predicted notifications for 2020 was greater in males (-30·9% [-24·8 to -36·1]) than females (-24·5% [-18·1 to -29·9]). Among 28 countries with high tuberculosis burden, no association was observed between the stringency of COVID-19 restrictions and the relative difference in observed versus predicted notifications.
Interpretation: Our findings suggest that COVID-19 has substantially affected childhood tuberculosis services, with the youngest children most affected. Although children have mostly had fewer severe health consequences from COVID-19 than have adults, they have been disproportionately affected by the effects of the pandemic on tuberculosis care. Observed sex differences suggest that targeted interventions might be required. As countries rebuild health systems following the COVID-19 pandemic, it is crucial that childhood tuberculosis services are placed centrally within national strategic plans.

Title: HIV care experiences and health priorities during the first wave of COVID-19: clients' perspectives - a qualitative study in Lusaka, Zambia
Journal: BMC Public Health
Publish Date: November 30, 2022
URL: https://doi.org/10.1186/s12889-022-14493-y
Abstract:
Background: The novel COVID-19 pandemic threatened to disrupt access to human immunodeficiency (HIV) treatment for persons living with HIV (PLHIV), two-thirds of whom live in sub-Saharan Africa. To inform a health system response supportive of continuity of care, we sought to understand clients' HIV care experiences and health priorities during the first wave of COVID-19 outbreak in Lusaka, Zambia.
Methods: Leveraging a study cohort of those who completed periodic SMS surveys on HIV care, we purposefully sampled 25 PLHIV after first confirmed COVID-19 case was reported in Zambia on 18th March 2020. We phone-interviewed participants, iteratively refining interview guide to capture emergent themes on COVID-19 awareness, health facility interactions, and social circumstances, which we analyzed using matrix analysis.
Results: All participants were aware of COVID-19, and HIV care experiences and health priorities of clients were affected by associated changes at health system, household, and individual level. The health system instituted early clinic visits to provide 6-months of antiretroviral therapy (ART) for stable patients and 3-months for unstable patients to reduce clinic visits and wait times. Most patients welcomed this long-desired extended appointment spacing. Some reported feeling respected and engaged when health care workers telephoned requesting their early clinic visit. However, others felt discouraged by an absence of physical distancing during their clinic visit due to 'severe acute respiratory syndrome coronavirus 2' (SARS-CoV-2) infection concerns. Several expressed a lack of clarity regarding next viral load monitoring date and means for receiving results. Patients

suggested regular patient-facility communication by telephone and SMS. Patients emphasized that COVID-19 restrictions led to loss of employment and household income, exacerbating poverty and difficulties in taking ART. At individual level, most participants felt motivated to stay healthy during COVID-19 by ART adherence and regular laboratory monitoring.
Conclusions: Clients' HIV care and health priorities during the first wave of COVID-19 in Lusaka province were varied with a combination of positive and negative experiences that occurred especially at health system and individual levels, while at household level, the experiences were all negative. More research is needed to understand how patients practice resiliency in the widespread context of socio-economic instability. Governments and patients must work together to find local, health systems solutions to support ART adherence and monitoring. Additionally, the health system should consider how to build on changes for long-term HIV management and service delivery.

Title: COVID-19 preventives consumed in South Africa versus other Sub-Saharan African countries
Journal: Health SA Gesondheid
Publish Date: 30 November, 2022
URL: https://doi.org/10.4102/hsag.v27i0.2061
Abstract
Background: The current coronavirus disease 2019 (COVID-19) pandemic has been of global concern as it has affected the health of many and the economies of nations. In order to strengthen the immune system against COVID-19, certain plant-source foods were consumed.
Aim: This study was designed to identify and compare various special foods and drinks consumed to prevent COVID-19 during the lockdown in various sub-Saharan countries in comparison to South Africa (SA), as well as highlighting some current dietary recommendations.
Setting: Online cross-sectional survey in six African countries, namely South Africa, Cameroon, Nigeria, Ghana, Ethiopia and Kenya.
Methods: After sample size determination, an online questionnaire was designed and content validated. The survey link was pretested on 25 people and then circulated for 6 weeks during total lockdown. The proportion of responses for each question were reported using descriptive statistics.
Results: Half of the 817 participants surveyed were not consuming anything special for COVID-19 prevention. South Africans mostly reported the consumption of supplements or conventional medicines (mainly vitamin C and zinc) while for other countries, a variety of natural foods and drinks were mentioned – some having already proved helpful in boosting immune systems. They included infusions of spices with or without honey, fruits and vegetables, medicinal drinks and local beverages.
Conclusion: Programmes and campaigns designed to increase awareness of dietary measures for COVID-19 prevention have proved beneficial and should be promoted. Analytical evaluation of the nutritional and health benefits and antiviral potentials of the identified special foods would help in determining which foods to prioritise and promote in the fight against COVID-19.

Title: Homes as 'cages of violence' during the COVID-19 pandemic: A pastoral care approach to the case of Botswana
Journal: HTS Teologiese Studies / Theological Studies
URL: https://doi.org/10.4102/hts.v78i4.7797
Publish Date: November 30, 2022
Abstract
Violence has become a common phenomenon that affects women and children, particularly during the coronavirus disease 2019 (COVID-19) pandemic. While the lockdown regulations were meant to save lives by preventing further spread of the virus, another virus called 'violence against women' encroached the space which is supposed to be the safest for women and children. For women, homes have now been turned into cages of violence and slaughterhouses. Toxic masculinity is seen at play as all dominant and power ideologies are employed against women. This article deals with these challenges of violence against women in Botswana from a pastoral care point of view. Firstly, it provides an overview of the current gender-based violence (GBV) situation in Botswana through empirical data from other social scientists. It then highlights some forms and the causes linked to the problem of GBV in Botswana. Secondly, it brings in pastoral care work, particularly mutual care, as a relevant tool for the church in addressing GBV. Lastly, it suggests ways in which the church could contribute in pursuit of gender justice and building a violence-free society.
Contribution: While the article grapples with the challenges of GBV and persistent toxic masculinities from a theological point of view, the implications of the outcome are multidisciplinary. They aim to respond and raise awareness about the need to build a violence-free society, and to deal with the challenges of oppression, toxic masculinity and manhood ideologies which result in the domination and killing of women.
Title: Nurse lecturers' experiences with online teaching during the pandemic at a public university in Gauteng, South Africa
Journal: Curationis
URL: https://doi.org/10.4102/curationis.v45i1.2371
Publish Date: November 30, 2022
Abstract
Background: Nurses' training has been mostly face-to-face in the South African context. This mode of delivery was linked to producing nurses who are critical thinkers, problem solvers and competent in practical skills. However, the emergence of coronavirus disease 2019 (COVID-19) accelerated the need for online teaching in nursing. Nurse lecturers were forced to teach online in order to save the academic project, despite concerns about the competencies and calibre of nurses produced through online teaching.
Objectives: This study aimed to explore and describe nurse lecturers' experiences with online teaching during the COVID-19 pandemic at a public university in Gauteng, South Africa.
Method: A qualitative, exploratory design was utilised. Six nurse lecturers – two males and four females – were purposefully selected to participate in this study. Data were collected through in-depth interviews to obtain rich, thick descriptions from the nurse lecturers who experienced online teaching. Content analysis was used to analyse the data.
Results: Five themes emerged as, (1) challenges related to the learner management system; (2) challenges related to competency; (3) factors out of the span of control of the

lecturer; (4) indirect benefits of online teaching; and (5) recommendations to facilitate the smooth delivery of online teaching.
Conclusion: The findings established that nurse lecturers experienced challenges when teaching online, which resulted in frustrations and discomfort for lecturers.
Contribution: The study revealed the challenges nurse lecturers faced while teaching online. It highlights the need for nurse lecturers to be trained and supported to enhance online teaching and learning.

Title: Ethics and governance challenges related to genomic data sharing in southern Africa: the case of SARS-CoV-2
Journal: Lancet Global Health
URL: https://doi.org/10.1016/s2214-109x(22)00417-x
Publish Date: December 2022
Abstract
Data sharing in research is fraught with controversy. Academic success is premised on competitive advantage, with research teams protecting their research findings until publication. Research funders, by contrast, often require data sharing. Beyond traditional research and funding requirements, surveillance data have become contentious. Public health emergencies involving pathogens require intense genomic surveillance efforts and call for the rapid sharing of data on the basis of public interest. Under these circumstances, timely sharing of data becomes a matter of scientific integrity. During the COVID-19 pandemic, the transformative potential of genomic pathogen data sharing became obvious and advanced the debate on data sharing. However, when the genomic sequencing data of the omicron (B.1.1.529) variant was shared and announced by scientists in southern Africa, various challenges arose, including travel bans. The scientific, economic, and moral impact was catastrophic. Yet, travel restrictions failed to mitigate the spread of the variant already present in countries outside Africa. Public perceptions of the negative effect of data sharing are detrimental to the willingness of research participants to consent to sharing data in postpandemic research and future pandemics. Global health governance organisations have an important role in developing guidance on responsible sharing of genomic pathogen data in public health emergencies.

Title: Effect of Remote Ischaemic Conditioning on the Inflammatory Cytokine Cascade of COVID-19 (RIC in COVID-19): a Randomized Controlled Trial
Journal: Cardiovascular Drugs and Therapy
URL: https://doi.org/10.1007/s10557-022-07411-2
Publish Date: November 29, 2022
Abstract
Purpose: Patients hospitalized with COVID-19 may develop a hyperinflammatory, dysregulated cytokine "storm" that rapidly progresses to acute respiratory distress syndrome, multiple organ dysfunction, and even death. Remote ischaemic conditioning (RIC) has elicited anti-inflammatory and cytoprotective benefits by reducing cytokines following sepsis in animal studies. Therefore, we investigated whether RIC would mitigate the inflammatory cytokine cascade induced by COVID-19.

Methods: We conducted a prospective, multicentre, randomized, sham-controlled, single-blind trial in Brazil and South Africa. Non-critically ill adult patients with COVID-19 pneumonia were randomly allocated (1:1) to receive either RIC (intermittent ischaemia/reperfusion applied through four 5-min cycles of inflation (20 mmHg above systolic blood pressure) and deflation of an automated blood-pressure cuff) or sham for approximately 15 days. Serum was collected following RIC/sham administration and analyzed for inflammatory cytokines using flow cytometry. The endpoint was the change in serum cytokine concentrations. Participants were followed for 30 days.
Results: Eighty randomized participants (40 RIC and 40 sham) completed the trial. Baseline characteristics according to trial intervention were overall balanced. Despite downward trajectories of all cytokines across hospitalization, we observed no substantial changes in cytokine concentrations after successive days of RIC. Time to clinical improvement was similar in both groups (HR 1.66; 95% CI, 0.938-2.948, p 0.08). Overall RIC did not demonstrate a significant impact on the composite outcome of all-cause death or clinical deterioration (HR 1.19; 95% CI, 0.616-2.295, p = 0.61).
Conclusion: RIC did not reduce the hypercytokinaemia induced by COVID-19 or prevent clinical deterioration to critical care.

Title: Investigating the effects of drought and lockdowns on smallholder and commercial agricultural production in KwaZulu-Natal using remotely sensed data
Journal: Heliyon
URL: https://doi.org/10.1016/j.heliyon.2022.e11637
Publish Date: November 2022
Abstract
Not many efforts have been made so far to understand the effects of both the 2015-2016 drought and the 2020 lockdown measures on the agricultural production of smallholder vis-a-vis commercial farmers in Kwazulu-Natal. Google Earth Engine, and random forest algorithm, are used to generate a dataset that help to investigate this question. A regression is performed on double differenced data to investigate the effects of interest. A k-mean cluster analysis, is also used to determine whether the distribution patterns of crop production changed with drought and disruption of agricultural production input. Results show that: (1) droughts affected the agricultural production of both areas similarly. Crop cover declined in both areas for one season after droughts were broken. Then recovery was driven by greener, more productive crops rather than the expansion of crop area. (2) The response of both areas to the COVID-19 lockdown was also similar. Both smallholder and commercial areas' Normalised Difference Vegetation Index - a proxy for crop vitality - improved in response to regulations favourable to the sector and improved rainfall. No significant adjustments in crop cover were observed. Production therefore changed primarily at the intensive margin (improved productivity of existing croplands) rather than the extensive (changing the extent of land under cultivation). (3) Cluster analysis allows for a more granular view, showing that the positive impact of lockdowns on agriculture were concentrated in areas with high rainfall and close proximity to metropolitan markets. Both smallholder and commercial farmers therefore are reliant on market access together with favourable environmental conditions for improved production.

Title: Primary hip and knee arthroplasty at district level is safe and may reduce the burden on tertiary care in a low-income setting
Journal: BMC Musculoskeletal Disorders
URL: https://doi.org/10.1186/s12891-022-05936-z
Publish Date: November 2022
Abstract
Background: Arthroplasty procedures in low-income countries are mostly performed at tertiary centers, with waiting lists exceeding 12 to 24 months. Recently, this is further exacerbated by the impact of the Covid Pandemic on elective surgeries. Providing arthroplasty services at other levels of healthcare aims to offset this burden, however there is a marked paucity of literature regarding surgical outcomes. This study aims to provide evidence on the safety of arthroplasty at district level.
Methods: Retrospective review of consecutive hip and knee primary arthroplasty cases performed at a District Hospital (DH), and a Tertiary Academic Hospital (TH) in Cape Town, South Africa between 1st January 2015 and 31st December 2018. Patient demographics, hospital length of stay, surgery related readmissions, reoperations, post-operative complications, and mortality rates were compared between cohorts.
Results: Seven hundred and ninety-five primary arthroplasty surgeries were performed at TH level and 228 at DH level. The average hospital stay was 5.2 ± 2.0 days at DH level and 7.6 ± 7.1 days for TH ($p < 0.05$). Readmissions within 3 months post-surgery of 1.75% (4 patients) for district and 4.40% (35) for tertiary level ($p < 0.05$). Reoperation rate of 1 in every 100 patients at the DH and 8.3 in every 100 patients at the TH ($p < 0.05$). Death rate was 0.4% vs 0.6% at district and tertiary hospitals respectively ($p > 0.05$). Periprosthetic joint infection (PJI) rate was 0.43% at DH and 2.26% at TH. The percentage of hip dislocation requiring revision was 0% at district and 0.37% at tertiary level. During the study period, 228 patients received their arthroplasty surgery at the DH; these patients would otherwise have remained on the TH waiting list.
Conclusions: Hip and Knee Arthroplasty at District health care level is safe and; for the reason that the DH feeds into the TH; providing arthroplasty at district level may help ease the pressure on arthroplasty services at tertiary care facilities in a Southern African context. Adequately trained surgeons should be encouraged to perform these procedures in district hospitals provided there is appropriate patient selection and adherence to strict theatre operating procedures.

Title: Clinical and laboratory profile and outcomes of hospitalized COVID-19 patients with type 2 diabetes mellitus in Ghana - A single-center study
Journal: Endocrinology, Diabetes Metabolism
URL: https://doi.org/10.1002/edm2.391
Publish Date: November 2022
Abstract
Background: In sub-Saharan Africa and particularly in Ghana, there is scarcity of published literature specifically on the impact of DM on outcomes in COVID-19 patients. Based on the difference in genetic makeup and demographic patterns in Africans compared to the Western world and with the rising burden of DM and other non-communicable diseases in Ghana there is a need to define the impact DM has on persons

with COVID-19. This would ensure adequate risk stratification and surveillance for such patients as well as appropriate scale up of therapeutic management if needed.
Aims: This single-center study describes the clinical and laboratory profile and outcomes of COVID-19 in-patients with type 2 diabetes mellitus (DM) in Ghana.
Materials and methods: Retrospective analysis was undertaken of the medical records of adults with COVID-19 hospitalized at a facility in Ghana from March to October 2020. Clinical, laboratory and radiological data and outcomes were analysed. Comparisons between COVID-19 patients with DM and non-diabetics were done with an independent t-test or a Mann-Whitney test when normality was not attained. Odds ratios (95% CI) were calculated using univariate logistic regression.
Results: Out of 175 COVID-19 patients, 64 (36.6%) had DM. Overall mean age was 55.9 ± 18.3 years; DM patients were older compared to non-diabetics (61.1 ± 12.8 vs. 53.0 ± 20.2 years, p = .049). Compared to non-diabetics, diabetics were more likely to have higher blood glucose at presentation, have hypertension, be on angiotensin 2 receptor blockers [OR, 95% CI 3.3 (1.6-6.7)] and angiotensin converting enzyme inhibitors [OR, 95% CI 3.1 (1.3-7.4)]; and be HIV negative (p < .05). Although the values were normal, diabetics had a higher platelet count but decreased lymphocytes, aspartate transaminase and alkaline phosphatase compared to non-diabetics (p < .05). There was no difference in clinical symptoms, severity or mortality between the two groups.
Discussion: The clinical profile of patients studied are similar to prior studies. However the outcome of this study showed that DM was not associated with worse clinical severity and in-hospital mortality. This could have been due to majority of DM patients in this study having relatively good blood glucose control on admission. Secondly, DM alone may not be a risk factor for mortality. Rather its concurrent existence with multiple co-morbidities (especially cardiovascular co-morbidities which may predispose to pro-inflammatory and pro-thrombotic states) may be driving the rise in severity and mortality risks reported in other studies. Furthermore, this study was conducted among an African population and Africa has been shown to be generally less severely hit by the COVID-19 pandemic compared to other regions outside the continent. This has been postulated to be due, among other factors, to inherent protective mechanisms in Africans due to early and repeated exposure to parasitic and other organisms resulting in a robust innate immunity.
Conclusions: This study suggested that DM was not associated with more severe clinical symptoms or worse outcomes among hospitalized COVID-19 patients. Despite this, it is important that DM patients adhere to their therapy, observe the COVID-19 containment protocols and are prioritized in the administration of the COVID-19 vaccines.

Title: Prevalence and risk factors of work-related contact dermatitis symptoms among healthcare cleaners during the COVID-19 pandemic in Northwest Ethiopia: a multicentre cross-sectional survey
Journal: BMJ Open
URL: https://doi.org/10.1136/bmjopen-2022-069019
Publish Date: November 2022
Abstract
Objective: This study was aimed to explore the prevalence and risk factors of work-related contact dermatitis (WRCD) symptoms among cleaners working in healthcare institutions in Gondar city, Northwest Ethiopia, during the COVID-19 pandemic.

Design: A multicentre cross-sectional study was conducted from September to October 2021. An interviewer-administered standardised Nordic Occupational Skin Questionnaire, V.2002 (NOSQ-2002) was used to assess WRCD. The collected data were entered into EpiData V.4.6 and analysed using Stata V.14 software. The association between dependent and independent variables was computed with a binary logistic regression. The association was determined using an adjusted OR (AOR) with a 95% CI at a p value of <0.05.
Setting: The study was conducted in Gondar city healthcare institutions, Northwestern Ethiopia.
Participants: A total of 409 cleaners participated in this study.
Outcome measures: The primary outcome is the prevalence of WRCD symptoms, which was measured using the NOSQ-2002.
Results: The response rate was 95.6%. The majority, 302 (73.8%), of the study participants were female. The mean age (±SD) was 31 (±7.87) years old. The overall prevalence of self-reported WRCD during the last 12 months was 213 (52.1%) (95% CI (47.1% to 57.0%)). The highest symptoms reported were skin redness, 51.6% (n=110), and the most affected skin body sites were hands (hand dermatitis), 74.2% (n=158). Hand washing frequency more than 20 times per day (AOR=1.73, 95% CI (1.03 to 2.92)), personal history of eczema (AOR=1.46, 95% CI (1.01 to 2.42)) and lack of training on skin hazards (AOR=2.06, 95% CI (1.16 to 3.63)) were factors influencing the occurrence of WRCD.
Conclusions: This study revealed the prevalence of WRCD is common during the COVID-19 pandemic. Adjusting hand washing frequency per day, educating people with atopy about the avoidance of exposure to skin irritants and providing training on skin hazards were recommended to minimise the condition.

Title: The Impact of SARS-CoV-2 Variants on the Clinical Phenotype and Severity of Multisystem Inflammatory Syndrome in Children in South Africa
Journal: Pediatric Infectious Disease Journal
URL: https://doi.org/10.1097/inf.0000000000003691
Publish Date: December 2022
Abstract
The effects of SARS-CoV-2 variants on disease phenotype and severity of multisystem inflammatory syndrome in children (MIS-C) are unknown. We compared the clinical phenotype of MIS-C in 129 South African children across four distinct (Ancestral type, Beta, Delta, and Omicron) variant-driven waves and found that MIS-C remains a severe disease with a stable clinical presentation, regardless of variant.

Title: A cross-sectional study of the psychological impact of the COVID-19 pandemic on camped refugees in Ghana
Journal: PLos One
URL: https://doi.org/10.1371/journal.pone.0277515
Publish Date: December 2022
Abstract
Vulnerable populations such as camped refugees are often exposed to spread of infectious diseases because of their living conditions, limited resources available to them and

exclusion from social services. This study examined the psychological state of camped refugees in Ghana during the COVID-19 pandemic and how their background characteristics predict the severity of the pandemic's psychological impact. It covered 763 refugees aged 15 years and above resident in two (Krisan = 316 and Ampain = 447) camps. Nine COVID-19 Anxiety Scale indicators were used to examine the psychological state of camped refugees. A composite indicator was derived to examine the overall psychological impact. Logistic regression was used to examine the factors that were associated with severe psychological impact. The multivariate analysis revealed that sex of the respondent, marital status and age of head of household were the only socio-demographic factors associated with having a severe psychological impact of the pandemic. There was very strong evidence that respondents who had moderate (OR = 1.74, 95% CI = 1.12, 2.7) and high (OR = 1.66, 95% CI = 1.05, 2.63) knowledge of the disease had increased odds of severe psychological impact. Also, those with moderate (OR = 2.97, 95% CI = 1.78, 4.97) and high (OR = 12.98, 95% CI = 7.86, 21.42) adherence had increased odds of severe psychological impact. None of the pre-existing health conditions and challenges were not significantly associated with severe psychological impact. The limited number of significant socio-demographic covariates suggests that severe psychological impact of the pandemic was a problem in the general population, and thus interventions should target the general population of camped refugees. Also, health education should not only focus on enhancing knowledge and promoting preventive measures but also on managing psychological distress.