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ACADEMIC AND PEER REVIEWED ARTICLES

Incidence of SARS-CoV-2 Infection in Health Care Workers After a Single Dose of mRNA-1273 Vaccine

JAMA Network | 16 June 2021

Kalpna Gupta, William O'Brien, Pamela Bellino, Katherine Linsenmeyer, Sucheta Doshi, et al.

A 2021 randomized clinical trial¹ demonstrated remarkably high efficacy of mRNA-1273 vaccine in reducing symptomatic SARS-CoV-2 infection after 2 doses administered 28 days apart; however, low numbers of infection during the first 2 weeks following dose 1 prevented full assessment of early vaccine efficacy. VA Boston Healthcare System (VABHS) began vaccinating health care workers (HCWs) during an early winter surge in SARS-CoV-2 infections in Massachusetts.² A concomitant large increase in SARS-CoV-2 infections in our workforce provided an opportunity to evaluate the association between receipt of dose 1 of mRNA-1273 vaccine and SARS-CoV-2 infection.

Deep learning of HIV field-based rapid tests

Nature Medicine | 17 June 2021

Valérian Turbé, Carina Herbst, Thobeka Mngomezulu, Sepehr Meshkinfamfard, Nondumiso Dlamini, et al.

Although deep learning algorithms show increasing promise for disease diagnosis, their use with rapid diagnostic tests performed in the field has not been extensively tested. Here we use deep learning to classify images of rapid human immunodeficiency virus (HIV) tests acquired in rural South Africa. Using newly developed image capture protocols with the Samsung SM-P585 tablet, 60 fieldworkers routinely collected images of HIV lateral flow tests. From a library of 11,374 images, deep learning algorithms were trained to classify tests as positive or negative. A pilot field study of the algorithms deployed as a mobile application demonstrated high levels of sensitivity (97.8%) and specificity (100%) compared with traditional visual interpretation by humans—experienced nurses and newly trained community health worker staff—and reduced the number of false positives and false negatives. Our findings lay the foundations for a new paradigm of deep learning-enabled diagnostics in low- and middle-income countries, termed REASSURED diagnostics, an acronym for real-time connectivity, ease of specimen collection, affordable, sensitive, specific, user-friendly, rapid, equipment-free and deliverable.

The emerging SARS-CoV-2 variants of concern

Therapeutic Advances in Infectious Disease | 18 June 2021*Adekunle Sanyaolu, Chuku Okorie, Aleksandra Marinkovic, Nafees Haider, Abu Fahad Abbasi, et al.*

Since emerging from Wuhan, China, in December of 2019, the coronavirus (SARS-CoV-2) has been causing devastating severe respiratory infections in humans worldwide. With the disease spreading faster than the medical community could contain it, death tolls increased at an alarming rate worldwide, causing the World Health Organization to officially sanction the SARS-CoV-2 outbreak as a pandemic, leading to a state of worldwide lockdown for the majority of the year 2020. There have been reports of new strains of the virus emerging in various parts of the world, with some strains displaying even greater infectivity and transmissibility. Areas of the emerging variant of concern arise from countries like the United Kingdom, South Africa, Brazil, and India. These mutations carry a lineage from N501Y, D614G, N439K, Y453F, and others, which are globally dominated by clades 20A, 20B, and 20C. This literature review intends to identify and report SARS-CoV-2 variants that are currently evolving and their disease implications.

Acceptance of COVID-19 Vaccine among the Healthcare Workers in the Eastern Cape, South Africa: A Cross Sectional Study*MDPI* | 18 June 2021*Oladele Adeniyi, David Stead, Mandisa Singata-Madliki, Joanne Batching, Matthew Wright, et al.*

This study assesses the perceptions and acceptance of severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) vaccination. It also examines its influencing factors among the healthcare workers (HCWs) in the Eastern Cape, South Africa. In this cross-sectional study performed in November and December 2020, a total of 1308 HCWs from two large academic hospitals participated in the Eastern Cape Healthcare Workers Acquisition of SARS-CoV-2 (ECHAS) study. Validated measures of vaccine hesitancy were explored using a questionnaire. Logistic regression was used to identify the determinants of vaccine hesitancy.

Chronic diseases of lifestyle risk factor profiles of a South African rural community*Journal of Public Health in Africa* | 18 June 2021*Mukada Akindele, Ushotanefe Useh*

Globally, chronic diseases of lifestyle account for millions of dollars spent annually on health. These diseases share similar risk factors including: physical inactivity, obesity, cigarette smoking, and hypertension among others. This study sought to assess risk factors for chronic diseases of lifestyle of a rural community in South Africa. This study used a survey design with data randomly collected using the WHO STEPS Instrument for Chronic Disease Risk Factor Surveillance from participants who attended routine checks from February to October 2018 from a trained healthcare practitioner. Informed consent was sought from all participants before the administration of the instrument. The research setting was the community Primary Health Center. About 54.0% of participants presented with no family history of hypertension but 19.7% had a family history of type II diabetes mellitus. More women were found to be hypertensive, with the majority (93.4%) monitoring their blood pressure. The study revealed that more men were current smokers. A large number of participants were engaged in a sedentary lifestyle with about one-third of the participants reported being obese. Physical inactivity, sedentary lifestyle, and hypertension were among the lifestyle-related risk factors for chronic diseases among residents of this rural community.

Prevalence and factors associated with common mental disorders in young people living with HIV in sub-Saharan Africa: a systematic review*Journal of the International AIDS Society* | 24 June 2021*Ezra Too, Amina Abubakar, Carophine Nasambu, Hans Koot, Pim Cuijpers, et al.*

Common mental disorders (CMDs) particularly depression and anxiety, are highly comorbid with HIV also in young people living with HIV (YLWH). In sub-Saharan Africa (SSA) where most YLWH reside, there are limited summary data on CMDs among these youths, yet there are previous systematic reviews summarizing data on CMDs among adults living with HIV. We conducted a systematic literature review on the prevalence and correlates of CMDs among YLWH, aged 10 to 24 years, from SSA.

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RECENT PUBLIC HEALTH NEWS

Covid-19 resurgence in Gauteng: A crisis that is likely to worsen rapidly, unless...

Daily Maverick | 21 June 2021

Gauteng, the province with the smallest landmass in South Africa, is home to 15.6 million (25%) of South Africa's estimated 59.6 million population. Consequently, the trajectory of Covid-19 resurgences in Gauteng has a major influence on the national picture. Scientists (including one of the authors of this article) warned already in February 2021 as the second wave was receding, that South Africa was likely to experience another resurgence by late May to June 2021 — as has transpired. This educated prediction was premised on three major factors.

The EVDS will schedule your appointments 6 weeks apart. Here's why

Bhekisisa | 21 June 2021

In South Africa, people who received their first shot of the Pfizer COVID vaccine will now have to wait six weeks before returning for the second jab. This follows updated guidance issued by the national health department a month ago, in light of new data showing a longer delay between doses could offer more protection. Until last week, the Pfizer vaccines were the main jabs being rolled out in South Africa — with just over 1.5-million people receiving their first shot. On Thursday, 300 000 Johnson & Johnson jabs arrived and this week Aspen Pharmacare will release an additional 1-million doses.

Gauteng SOS: We are overwhelmed with calls for oxygen – Gift of the Givers

Daily Maverick | 21 June 2021

Gauteng is in great difficulty. This is evident from the calls to us of desperation from medical professionals, families and patients. The overwhelming request is for oxygen concentrators, oxygen cylinders and oxygen, or bed availability at hospitals. Both private and public hospitals are filled to capacity. Beds are very difficult to come by. Patients travel from hospital to hospital to try to find an emergency department that is not busy. Once there, patients wait for hours before they can get access to a bed. The lucky ones get admitted, but the rest are sent home.

The importance of young people's sexual and reproductive health and rights to the global HIV response

UNAIDS | 21 June 2021

More than a quarter of the world's population is between the ages of 10 and 24 years—and in some parts of the global South the proportion is two thirds or higher. This is a generation caught between biology and society—between curiosity, questions and concerns about their emerging sexual and reproductive selves and the controls, constraints and conditions imposed by laws, policies and community practices. On the sidelines of the United Nations High-Level Meeting on AIDS, a group of young activists, government representatives and experts came together in a virtual event on 10 June to discuss the Facts of Life: Youth, Sexuality and HIV. The meeting, co-hosted by UNAIDS and the International Planned Parenthood Federation (IPPF), brought home the urgency of action. Nearly half of all new HIV infections worldwide occur among young people aged 15 to 24 years, with young women being twice as likely to become infected. Globally, AIDS-related illnesses are the second leading cause of death among young people (aged 10–24 years) and the most common cause of mortality of young people in Africa.

Rural South Africa has a high burden of undiagnosed non-communicable diseases: Study

DownToEarth | 22 June 2021

Rural South Africa has a high burden of undiagnosed or poorly controlled non-communicable diseases (NCDs), according to a study by the Africa Health Research Institute (AHRI). The study showed that four out of five women over the age of 30 in the uMkhanyakude district of rural northern KwaZulu-Natal, South Africa were living with a chronic health condition. Older people — especially those over 50, bore a higher burden of undiagnosed diseases or poorly controlled NCDs such as diabetes and hypertension, the study, published in *The Lancet Global Health*, said.

Six years after Life Esidimeni, Health Department 'is short-changing' mental health services

Daily Maverick | 22 June 2021

One such challenge surfaced earlier this year with late payments to over 100 non-governmental

organisations (NGOs) housing and providing care for mental health patients. DA MPL Jack Bloom sounded the alarm over these late payments by the Gauteng Department of Health. “Towards the end of the financial year which ends on 31 March, there is always a ‘dry season’ because the [Gauteng] Department of Health is short of funds and it carries over to the new year,” says Bloom. He says another problem is the delay in signing new Service-Level Agreements (SLAs) with the NGOs. “It boils down to inefficiency and insensitivity to NGOs who constantly struggle with cash flow problems. Unreasonable demands are made in the SLAs, including unnecessary and expensive technical issues,” he says. “It is disappointing that the Life Esidimeni tragedy has not led to a constructive relationship with mental health NGOs.”

NPO workers running on empty as Covid-19 batters their mental health

Times Live | 23 June 2021

While non-profit organisations have been working tirelessly during the Covid-19 pandemic to provide support, emergency relief and life-saving resources to struggling South Africans, the mental health of their workers has taken a battering. A survey conducted among 200 NPOs between October 2020 and March this year by the South African Depression and Anxiety Group (Sadag) and Tshikululu Social Investments to assess the [e]ffect of the pandemic on their wellbeing, found alarming rates of psychological distress and risk for mental illness. “While NPO workers continue to provide crucial services for those deeply affected by Covid-19, they are still having to maintain their own needs — all within a context of limited resources, sustained exposure to social suffering, and novel pandemic conditions,” said Sadag.

In-depth: The state of congenital syphilis in SA

Spotlight | 23 June 2021

Syphilis is a bacterial infection that is mainly spread through sexual contact. Left untreated, it can have severe long-term impacts on the health of both women and men. It can also be transmitted from mothers to infants with devastating consequences for the child. When an infant gets sick in this way it is referred to as congenital syphilis. South Africa’s National Institute for Communicable disease (NICD) defines it as a “severe, disabling, and often life-threatening infection seen in infants”. Back in 2004, a group of leading clinicians argued that the continued occurrence of congenital syphilis is an indictment of the inadequate antenatal care services and poor quality of programmes to control sexually transmitted infections. They wrote that at the time over 1 million infants were born with congenital syphilis each year worldwide and that despite national policies on antenatal testing and the widespread use of antenatal services, syphilis screening is still implemented only sporadically in many countries, leaving the disease undetected and untreated among many pregnant women.

Remarks by Under-Secretary-General of the United Nations and Executive Director of UN Women, Phumzile Mlambo-Ngcuka, on the implementation of recommendations in the independent victim-centred review of UN Women policies and processes on tackling sexual exploitation and abuse and sexual harassment at the UN Women Executive Board

UN Women | 23 June 2021

I would sincerely like to thank all Member States for their continuous support and engagement with UN Women in our efforts to tackle sexual exploitation and abuse (SEA) as well as sexual harassment (SH). UN Women is deeply committed to providing a safe, inclusive and respectful work environment, while having the highest standard of policies and processes in place to ensure the effective prevention and response to SEA and SH, using a victim-centred approach. I am pleased to report to you that we have completed the implementation of all the recommendations from the independent and victim-centered review of UN-Women’s Sexual Exploitation and Abuse and Sexual Harassment policies and procedures. SEA and SH constitute fundamental transgressions of UN Women’s mandate of promoting gender equality and the empowerment of women. We know that SEA and SH, abuse of power, harassment and discrimination are deeply rooted in inequalities and power imbalance, with SEA and SH sharing the same gendered inequalities.

Africa Faces Looming Health Disaster as COVID-19 Cases Surge, Delta Variant Spreads

Reliefweb | 24 June 2021

Coronavirus infections have spiked again across Africa with the highly contagious Delta variant spreading

to more countries. Several countries, primarily in Eastern and Southern Africa, are seeing their hospital isolation units filling up rapidly, often unable to provide adequate care. With low vaccination coverage across the continent, Project HOPE warns that the current COVID-19 wave in Africa is likely to be more devastating than previous surges.

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TRAINING AND RESOURCES

HSTi offers accredited and non-accredited short courses and full programmes

The Health Systems Training Institute (HSTi) is the training arm of the Health Systems Trust (HST), a leading force in the South African public health sector. HST was established in 1992, on the brink of democracy in South Africa, and has since played a significant role in strengthening the national primary health system through health research, informatics, clinical support, capacity-building and training.

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PUBLICATIONS AND REPORTS

Hospitalization of Adolescents Aged 12–17 Years with Laboratory-Confirmed COVID-19 — COVID-NET, 14 States, March 1, 2020–April 24, 2021

Morbidity and Mortality Weekly Report (MMWR) | 11 June 2021

Most COVID-19–associated hospitalizations occur in adults, but severe disease occurs in all age groups, including adolescents aged 12–17 years.

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CONFERENCES AND EVENTS

PTSD, Trauma, & Anxiety Disorders (webinar)

Date: 30 June 2021

Time: 15:30 (CAT)

The PTSD, Trauma, & Anxiety Disorders is an opportunity to learn how to describe the structure and function of neurons, glia, neurotransmitters, and brain regions, explain how the brain produces and is affected by anxiety, trauma disorders, and depression, review how stress is the foundation for anxiety, PTSD, trauma, and many depressions, describe the new criteria for the diagnosis of PTSD, trauma disorders, and anxiety disorders, etc.

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JOB OPPORTUNITIES

FEMALES RISING THROUGH EDUCATION, SUPPORT AND HEALTH (FRESH): Enrolled Nurse (x2)

Closing Date: 28 June 2020

FEMALES RISING THROUGH EDUCATION, SUPPORT AND HEALTH (FRESH): Facilitator

Closing Date: 2 July 2020

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