



CAPRISA

CENTRE FOR THE AIDS PROGRAMME OF RESEARCH IN SOUTH AFRICA

Newsletter

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HIV prevention: discrepancies in what one partner knows about the other's risk

In this Issue

Our feature story this month we highlight the CAPRISA study, *Exploring discrepant knowledge of partner sexual behaviour to inform self-risk assessment in a high HIV burdened district in rural KwaZulu-Natal*, published recently in *Global Public Health*.

On page 2 we report on the 2021 Nobel Inspired lecture hosted by the National Research Foundation (NRF) & Sweden's Embassy in Pretoria, SA; and the Covid-19 vaccine research underway at CAPRISA research sites.

We congratulate CAPRISA's Profs Salim and Quarraisha Abdool Karim on their recognition for scientific excellence by the NRF and Rhodes University respectively, on page 3; and the NICD's Dr Cathrine Scheepers who recently received a 3-year research grant from the NHLS Research Trust.

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According to a CAPRISA-led study, there is a need to understand the sexual behaviours of partners, the characteristics of the relationships and the information used to make sexual decisions to prevent HIV infections.

The study, *Exploring discrepant knowledge of partner sexual behaviour to inform self-risk assessment in a high HIV burdened district in rural KwaZulu-Natal*, published recently in the journal, *Global Public Health*, explored the sexual behaviour and relationships of young females and their primary sexual partners in rural KwaZulu-Natal, South Africa.

Purposive sampling was used to select 18–27-year-old sexually active women. Consenting female participants completed a structured and semi-structured interview while consenting male sexual partners identified through the female participant completed a structured questionnaire on sexual health information. Using a reflexive inductive approach and thematic analysis, we identified key discrepancies in the assumptions partners make about each other's sexual health.

Among the 23 sexual dyads analysed, four key discrepancies were identified: age, HIV status, lack of awareness of concurrent relationships, and overall

knowledge of the partner's sexual health behaviours and relationship status. Female and male partners over-, or underestimated their partner's age, were unaware or incorrectly assumed their partner's HIV status, and made assumptions about relational fidelity and status.

Decisions about sexual health were mediated by relationship length, relationship status, relational value, power, and perceived fidelity. Sexual health decisions were often made concerning the

impact it would have on the relationships.

HIV prevention should focus on the relationship and the individual,

to better respond to the real situations in which HIV risk occurs.

Sex-positive and egalitarian sexual health interventions that target the individual, as well as the sexual relationship, are needed.

- Hilton Humphries

For further reading see:
Humphries H et al. Exploring discrepant knowledge of partner sexual behaviour to inform self-risk assessment in a high HIV burdened district in rural KwaZulu-Natal. *Global Public Health*. 2021;1-16. doi: 10.1080/17441692.2021.1969672. <https://pubmed.ncbi.nlm.nih.gov/34488554/>





The 2021 Virtual Nobel Inspired Lecture - The meaning of science in the age of Covid-19, one year later

CAPRISA's Director, Professor Salim Abdool Karim (*left photo*) and Sweden's state epidemiologist Dr Anders Tegnell (*right photo*) were once again the key participants in the annual 2021 Nobel Inspired Public Lecture, "The Meaning of Science in the Age of COVID-19, one year on," which was hosted by the National Research Foundation (NRF) in partnership with the Swedish Embassy in Pretoria, on 12th October. Last year Abdool Karim and Tegnell delivered the 2020 Nobel Inspired Lecture, "The meaning of science in the age of COVID-19," held on 8th October.



Prof Fulufhelo Nelwamondo, CEO of the NRF and Deputy Ambassador Ami Larsson Jain of the Embassy of Sweden in Pretoria opened the virtual lecture moderated by Ms Mia Malan. Editor-in-chief, Bhekisisa Centre for Health Journalism.

In his presentation titled: "Science in the era of Covid-19: One year later", Abdool Karim explored the growing clinical problems in long Covid-19 and raised alarm that medical doctors were complicit in anti-vaxx sentiments and in promoting unproven Covid-19 treatments.

The virtual lecture explored the meaning of science, its promise, ethos and method, the sociology of science, the interplay between the social context and scientific knowledge. "We believe that given the unprecedented speed of the scientific breakthrough of Covid-19 vaccines and ensuing skepticism and doubt, a follow up dialogue will also help to explore what this means for trust and belief in research and science," said the NRF's Prof Fulufhelo Nelwamondo and Ambassador Håkan Juholt of the Embassy of Sweden in Pretoria.

He said implementing an equitable vaccine distribution system remained a major challenge: "We need to do better in this pandemic and Covid-19 needed global corporation and an equitable vaccine distribution. Humanity is needed to create a united front against a global threat."

Click here to view the lecture: <https://www.youtube.com/watch?v=Msd3IsDF914&t=3686s>

COVID-19 Vaccine Research update at CAPRISA

A year after embarking on the Ensemble J&J trial, the CAPRISA eThekweni and Vulindlela clinical research teams are once again about to embark on a landmark study. The Ubuntu COVPN 3008 trial will assess a 2-dose versus a 3-dose regimen of the Moderna mRNA vaccine among people living with HIV in South Africa and 7 other sub-Saharan African countries. This is the first time the Moderna vaccine will enter clinical trials in Africa. Over 400 participants have been screened for trial participation at CAPRISA and enrolment into the trial will start imminently.



In the photo: Seated left, CAPRISA's Dr Nigel Garrett Head of Vaccine & Pathogenesis & Dr Nivashnee Naicker, Research Clinician with a participant.

In the Ensemble trial, study participants remain in follow-up a year into the trial. All trial participants will be offered a second dose of vaccine at their Year 1 visit. This decision was made following the release of the Ensemble 2 trial data, which showed that a second dose of the Ad26.CoV2.S vaccine induces robust immune responses when administered at least 2 months after the first dose.

with the J&J vaccine as part of the Sisonke trial earlier in 2021 will be eligible to receive a second dose of the vaccine. The Sisonke 2 study is planned to start on 8 November 2021 in collaboration with the Department of Health. Finally, the BaSiS (Boosting after Sisonke) study will assess homologous versus heterologous dosing strategies with the J&J vaccine and the COV3003 study will evaluate optimal dosing strategies for the J&J vaccine. Both studies will be commencing shortly at the CAPRISA eThekweni CRS.

Similarly, healthcare workers who were vaccinated

- Drs Nigel Garrett & Nivashnee Naicker



Recognising scientific excellence

Professor Quarraisha Abdool Karim retains her NRF A-rating status & Rhodes University confers an honorary degree on Prof Salim Abdool Karim



CAPRISA's Associate Scientific Director Professor Quarraisha Abdool Karim, has retained her National Research Foundation (NRF) A rating based on the quality and impact of her research outputs over the past 8 years. The NRF defines an A-rated scientist as 'a researcher recognised by all reviewers as a leading

scholar in his/her field internationally for the high quality and wide impact (i.e., beyond a narrow field of specialisation) of his/her recent research outputs'.

The announcement was made at the prestigious NRF 2020/2021 Awards hybrid event hosted on the 2nd of November to recognize outstanding achievements made by individuals whose excellence has significantly advanced science for the benefit of society.

Abdool Karim's research over the past 32 years has focused on understanding the evolving HIV epidemic; factors contributing to the increased vulnerability of HIV infection in young women and evaluation of women-initiated HIV prevention technologies. Abdool Karim co-chairs the United Nations Sustainable Development Goal 10 Member Technology Facilitation Mechanism (TFM) and a member of the PEP-FAR Scientific advisory Board, the Board of Directors of Friends of the Global Fight Against AIDS, Tuberculosis and Malaria (USA). She is the UNAIDS Special Ambassador for Adolescents and HIV and member of the Steering Groups for the WHO Covid-19 Solidarity Therapeutics Trials and Vaccines Trials.

In her welcome address, Dr Nompumelelo Obokoh, Chairperson of the NRF Board said, "Amidst the despair and grief brought about by the COVID-19 pandemic are also many stories of selflessness, kindness and courage that continue to restore our faith in humanity and inspire us to dream of a better tomorrow. Even during this turbulent time, our researchers have continued to nurture the country's knowledge economy in many other scientific fields as well."

Rhodes University honoured CAPRISA's Director, Professor Salim Abdool Karim and conferred an honorary degree of Doctor of Science (DSc) (honoris causa) at a virtual graduation ceremony held on 29th October for his leadership in guiding South Africa's response to the Covid-19 pandemic.

"Our nation owes you an inestimable debt of gratitude and appreciation for all that you have done to give much hope to many South Africans and for being a passionate advocate of science to guide the South African response to COVID-19," said Rhodes University's Vice-Chancellor, Dr Sizwe Mabizela. "In the many public briefings on COVID-19, you have always provided extremely lucid explanations and unambiguous information for the South African public and explaining the scientific basis for the government's response to the pandemic,"



"In the course of both the HIV and COVID-19 pandemics, I have personally witnessed the importance of staying true to science and evidence," said Abdool Karim.

Dr Cathrine Scheepers receives a NHLS Research Trust Award

Dr Cathrine Scheepers from the NICD recently received a 3-year research grant from the NHLS Research Trust entitled: "**Sequence characteristics of antibodies to SARS-CoV-2 Beta variant**".

Many antibodies that target the ancestral SARS-CoV-2 use specific germline genes (such as IGHV3-53 and IGHV3-66) which encode a crucial SXXS motif. However, vari-

ants of concern (VOC), such as Beta and Delta, which dominated South Africa's second and third waves, have evolved to escape such antibody responses.

Furthermore, previous work from the NICD group has shown that Beta triggers more cross-reactive neutralizing antibodies (Moyo-Gwete et al, NEJM, 2021). This raises the question of whether VOCs trigger distinct antibody re-

sponses. This grant, therefore, seeks to understand the sequence characteristics of antibodies specific to the Beta and Delta variants and to characterise monoclonal antibodies to these VOCs, for potential future use as therapeutics.





SAVE THE DATE WORLD AIDS DAY WEBINAR

Monday 29th November 2021



Peter Hayward
Editor-in-Chief of *The Lancet HIV*

Moderator



Professor Adeeba Kamarulzaman

Professor of Medicine and Infectious Diseases at the University of Malaya and President of the International AIDS Society.

Topic

HIV: Follow the science



Professor Peter Piot

Handa Professor of Global Health at the London School of Hygiene and Tropical Medicine, and Special Advisor on Covid-19 to the President of the European Commission.

Topic

AIDS: From epidemic to endemic - the importance of a long term perspective



Professor George Gao

Director General of the Chinese Centre for Disease Control and Prevention.

Topic

HIV in China



Dr John Nkengasong

Director of the Africa Centres for Disease Control and Prevention (Africa CDC) and a Special Envoy on COVID-19 Preparedness and Response of the WHO Director-General.

Topic

HIV in Africa



Ms Sibongile Tshabalala

Chairperson of the Treatment Action Campaign (TAC) South Africa.

Topic

HIV challenges in the time of the Covid-19 pandemic



Professor Salim S. Abdool Karim

Director, Centre for the AIDS Programme of Research in South Africa (CAPRISA) and CAPRISA Professor of Global Health, Columbia University.

Topic

Covid-19 has made HIV control even more critical: Mapping a path forward



Professor Mengjie Han

Director National Centre for AIDS/STD Control and Prevention, at the China CDC.

Concluding Remarks



Professor Quarraisha Abdool Karim

Associate Scientific Director, CAPRISA & Professor in Clinical Epidemiology, Columbia University.

Vote of Thanks



Scientific papers published in 2021

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59 Phillips A, Cambiano V, Johnson L, Nakagawa F, Homan R, Meyer-Rath G, Rehle T, **Tanser F**, Moyo S, Shahmanesh M, Castor D, Russell E, Jamieson L, Bansi-Matharu L, Shroufi A, Barnabas R, Parikh UM, Mellors JW, Revill P. Potential impact and cost-effectiveness of condomless-sex-concentrated PrEP in KwaZulu-Natal accounting for drug resistance. *Journal of Infectious Diseases* 2021; 223(8):1345-1355.

60 Montgomery ET, Katz AWK, Duby Z, **Mansoor LE**, Morar NS, **Naidoo K**, Tsidya M, Chitukuta M, Guma V, Tenza S, Leslie J, Garcia M, Naidoo S. Men's Sexual Experiences with the Dapivirine Vaginal Ring in Malawi, South Africa, Uganda and Zimbabwe. *AIDS Behavior* 2021; 25(6):1890-1900.

61 Singh R, **Ramsuran V**, **Naranbhai V**, **Yende-Zuma N**, **Garrett N**, Mlisana K, Dong KL, Walker BD, **Abdool Karim SS**, Carrington M, Ndung'u T. Epigenetic Regulation of BST-2 Expression Levels and the Effect on HIV-1 Pathogenesis. *Frontiers in Immunology* 2021; 12:669241. doi: 10.3389/fimmu.2021.669241

62 Gebrebrhan H, Kambaran C, **Sivro A**, Adhiambo W, Siele N, Becker MG, Li J, Choi S, Mwatelah RS, Reyes NV, Akolo M, Njogu P, Cholette F, Ho J, Kim J, Peterson SW, Martin I, Sandstrom P, Mehta SD, Lorway RR, Ball TB, Kimani J, McLaren PJ, Ji H, **Mckinnon LR**. Rectal microbiota diversity in Kenyan men who have sex with men (MSM) is inversely associated with frequency of receptive anal sex, independent of HIV status. *AIDS* 2021; 35(7):1091-1101.

63 **Sunpath H**, Pillay S, Hatlen T, Murphy RA, Marconi VC, Moosa MS, **Naidoo K**, Siedner MJ. A nurse-led intervention to improve management of virological failure in public sector HIV clinics in Durban, South Africa: A pre- and post-implementation evaluation. *South African Medical Journal* 2021; 111(4):299-303.

64 **Humphries H**, Knight L, **Mehou-Loko C**, **Mdladla M**, **Phakathi S**, **Mazibuko S**, **Abdool Karim Q**. Exploring discrepant knowledge of partner sexual behaviour to inform self-risk assessment in a high HIV burdened district in rural KwaZulu-Natal. *Global Public Health* 2021. doi: 10.1080/17441692.2021.1969672.

CAPRISA engages with communities



CAPRISA hosted two educational and informative stakeholders' engagement workshops in KwaZulu Natal Province, on the 7th of October in uMlazi and another on the 13th October in Pietermaritzburg. In attendance of these workshop were healthcare professionals, local Traditional leaders, local NGOs, civil society and youth groups. These workshops aimed at strengthening CAPRISA's partnership with communities and provide information on new research studies. Mr Patrick Mdletshe, head of the CAPRISA Community Programmes (*fourth in the photo from the left in the back row*), hosted the event.


 CAPRISA hosts a DSI-NRF Centre of Excellence in HIV Prevention
 
 National Research Foundation
 
 CAPRISA is the UNAIDS Collaborating Centre for HIV Research and Policy
 
 CAPRISA hosts a MRC HIV-TB Pathogenesis and Treatment Research Unit

Partner Institutions:
 
 UNIVERSITY OF KWAZULU-NATAL
 
 COLUMBIA UNIVERSITY
 
 MAILMAN SCHOOL of PUBLIC HEALTH
 
 NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES
 
 UNIVERSITY OF CAPE TOWN
 
 UNIVERSITY of the WESTERN CAPE