

COVID-19: Local historical data on respiratory pathogen transmission & mathematical models of viral transmission

The TruFM midday frequency show is hosting Epidemiologist, Prof Refilwe Nancy Phaswana-Mafuya



Although COVID-19 is an immunologically new virus, it is still a lipid-enveloped virus. It is critical to consider historical data in South Africa to estimate what will happen in the country in few months to come. A sustained COVID-19 response requires better understanding of context-specific data that may potentiate or reduce COVID-19 risks and these should be used to inform parameters of our mathematical models of viral transmission. We cannot parameterize our models based on data from elsewhere and neither can we afford to exclude critical parameters that we have not yet explored.

Prof Refilwe Phaswana-Mafuya's epidemiological research brought about new views on health, which are especially relevant today as we face the COVID-19 pandemic.

She won the prestigious 2016/2017 TW Kambule-NSTF Award: Research and its outputs up to 15 years after obtaining a PhD, for her contribution to science, engineering and technology (SET) and innovation in South Africa.

At the time of winning the National Science and Technology Forum (NSTF) award, Prof Phaswana-Mafuya was based at the Human Sciences Research Council (HSRC). She was principal investigator of a ground-breaking population based epidemiological study on global AGEing and adult health in collaboration with the National Department of Health and World Health Organization. The study used rigorous scientific methods which were never used in combination in any South African (SA) ageing survey before (with 23 new indicators) and was conducted concurrently in China, Mexico, India, Ghana, and Russia to allow cross-country comparisons. HIV co-morbidities and respiratory diseases were also explored in this study. She also collaborated with leading epidemiologists from Johns Hopkins (Baltimore, USA), Emory (Atlanta, Georgia, USA) universities as well as Kwame Nkrumah University of Science and Technology and Desmond Tutu HIV Foundation (UCT) on HIV studies among key populations.

Prof Phaswana-Mafuya is a National Research Foundation (NRF) rated scientist, Academy of Science of South Africa (ASSAf) merited scientist and African Academy of Science Fellow. She also obtained Wellcome Trust (UK) and London Nagasaki (UK) Fellowships for her epidemiological work. She is currently Deputy Vice-Chancellor Research & Innovation at North West University and also serves as a panel member of the International Panel on Infectiology of Germany Research Foundation. Further, she is Council Member of ASSAf; board member of NRF Board and member of Higher Health Board (technical health expert). In June 2019, she served as chair of the second largest medical meeting in the world, the 9th SA AIDS Conference, which revived a sense of urgency on the response to HIV in the country.

Tune in to the radio interview with this award-winning scientist to hear more about the role that South African scientists are playing in fighting the COVID-19 pandemic.

Date: Thursday, 30 April 2020 at 14:10 pm (GMT+2)

Frequency: Tru FM station on 89.3 – 107.8 MHz FM

Podcasting: <http://iono.fm/p/223>

Audio bouquet: DSTV Channel 816

(Tru FM is a South African commercial radio station based in the Eastern Cape province. The station targets the youth with two languages of broadcast, IsiXhosa and English.)

Follow the social media conversations on the following NSTF platforms:

- Facebook: @NSTFSA
- Twitter: @NSTF_SA
- LinkedIn: National Science and Technology Forum (NSTF)
- Instagram: nstf_sa
- Hashtags: #COVID19 #coronavirus

Catch up on other COVID-19 radio interviews with NSTF Award winners in podcasts:

- Prof Stephen Tollman on Tru FM talking on what scientists in South Africa are doing in trying to provide solutions around the coronavirus and the research that he is currently busy with.
- Prof Refilwe Nancy Phaswana-Mafuya on Ikwewezi FM talking about her research on complex ageing issues.
- Prof Anne Grobler on OFM and Smile FM talking about collaborative research by institutions towards producing local diagnostic tests.

About the NSTF

The National Science and Technology Forum (NSTF), established in 1995, is a broadly-representative stakeholder body for all SET and innovation organisations in South Africa, which seeks to influence policy formulation and delivery.

The NSTF Awards are unique in SA, recognising the outstanding contributions of individuals and groups to SET and innovation.

The science [bursaries](#) page provides information on bursaries and bursary providers for science, engineering and related studies.

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