



CAPRISA

CENTRE FOR THE AIDS PROGRAMME OF RESEARCH IN SOUTH AFRICA

Newsletter

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Evolving Epidemiology of Mpox in Africa in 2024

In this Issue

On Page 1, we feature an article on the evolving epidemiology of Mpox in Africa in 2024.

On Page 2, we look back at Professor Quarraisha Abdool Karim’s support for developing young women in STEMI.

On Page 3, we share the latest from our Community Outreach team in the Umgungundlovu district.

On Page 4, we remember the life and legacy of Pope Francis.

On August 13, 2024, mpox was declared a Public Health Emergency of Continental Security (PHECS) by the Africa Centers for Disease Control and Prevention (Africa CDC), a notice that was followed the next day by a declaration of a Public Health Emergency of International Concern (PHEIC) by the World Health Organization.

For decades after the identification of mpox in humans in the Democratic Republic of Congo (DRC) in 1970, the disease was largely confined to the rural areas of Central and West Africa and thus did not garner broad attention.

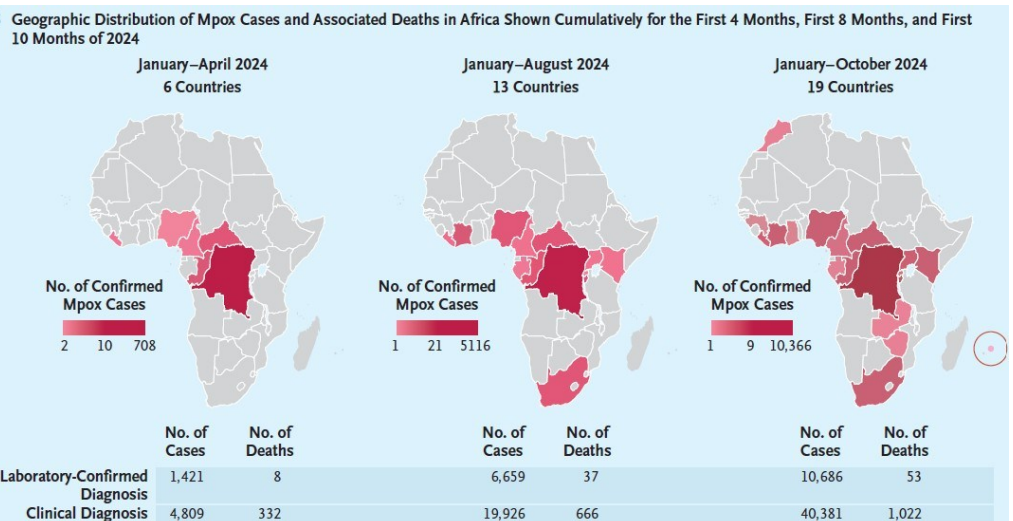
In this study, the Africa CDC team and CAPRISA jointly analyzed all mpox cases and deaths, based on clinical or laboratory diagnosis, reported to the Africa CDC from January 1, 2022, to October 30, 2024, to identify temporal variations, geographic distributions and epidemiologic trends.

From 2022 to 2024, weekly laboratory-confirmed mpox cases increased by a factor of 2.8, whereas all weekly reported cases (including those with a clinical diagnosis) increased by a factor of 4.3.

The DRC, which had reported approximately 88% of mpox cases in Africa in 2024, had 19,513 cases before the emergency declaration, with a CFR of 3.1% — a weekly average of 591 cases as compared with 281 in 2023. In 2024, six African countries reported their first imported mpox infections, with Burundi also reporting local transmission.

The high mpox disease burden in Africa, especially in the DRC — with a rising number of cases, high CFR, and high degree of spread to other previously mpox-free African countries — is cause for increased international concern.

For further reading see: *N Engl J Med.* 2025; 392 (7):666-76. doi: <https://www.nejm.org/doi/full/10.1056/NEJMoa2411368>



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It all “STEMS” from mentoring young women



Photo (left): Prof Quarraisha Abdool Karim with mentee Kiesha Morgan Moodley from Raisethorpe Secondary School and her mentor Dr Cerene Rathilal (UKZN Mathematics). Photo (right): Prof Quarraisha Abdool Karim with mentee Tahlia Govender from Danville Park Girls' High School and her mentor Prof Nishani Harinarain (UKZN Engineering)

Professor Quarraisha Abdool Karim spoke to young female learners as part of the STEM mentHER programme at the School of Mathematics, Statistics and Engineering at the University of KwaZulu-Natal. The aim of the programme is to support female learners to pursue careers in Science, Technology, Engineering and Mathematics (STEM) fields. Based on the mentorship approach, it pairs a learner with a female mentor who aligns their interests and strengths in carefully curated programmes. Professor Quarraisha Abdool Karim’s keynote address was entitled Preventing HIV in women: Three decades of trials and tribulations. As an infectious diseases epidemiologist and CAPRISA’s Associate Scientific Director, her work has specifically impacted HIV prevention interventions for women.

Among the objectives of STEM mentHER, is to bridge the school-university gap and to inspire learners to pursue STEM careers with in-person interaction with inspiring female leaders. The UKZN is among seven South African partner universities.



The Academy of Science South Africa and the South African National Chapter of the Organisation for Women in Science for the Developing World (OWSD) hosted an event in Pretoria on April 9th. Professor Quarraisha Abdool Karim was part of a panel discussion with the theme, Breaking Barriers, Leading and Building the Future in STEAMI (Science, Technology, Engineering, Arts, Mathematics, and Innovation).

The panel comprised of Professor Vanessa Steenkamp from the University of Pretoria, Doctor Mutsa Takunda from the Council for Scientific and Industrial Research, Doctor Nomhle Ngwenya from WITS University and Professor Mmaki Jantjies from Telkom. Panelists explored critical aspects of overcoming challenges, advancing leadership in science, and shaping the future of STEAMI.



Photo: Prof Quarraisha Abdool Karim speaks as part of a panel of leading experts on Science, Technology, Engineering Arts, Mathematics, and Innovation (STEAMI)



Breaking down the science: Empowering communities

CAPRISA's Community Programme team held a stakeholder engagement session in Pietermaritzburg. This aligns with the purpose of building strong partnerships with communities and to empower them to understand and participate in research. Research clinician Doctor Sidelisiwe Msane from CAPRISA's Vulindlela Clinical Research Site shared updates on the following studies; CAPRISA 002 Acute Infection Study, STREAM HIV, CAP012C, PURPOSE 1, VIBRANT, CoVPN 3008 (Ubuntu) TB sub-study, MERCK, RENEW-CAP, ENGAGE and MATRIX-003. Research assistant Makhosazana Mdladla and Senior Socio-Behavioural Scientist Cecilia Milford updated stakeholders on the socio-behavioural findings of these studies.

Head of the Community Programme Patrick Mdletshe also shared feedback from a recent youth session. According to Mdletshe, there is a need to create policy that speaks to young people and specifically young women who continue to bear the brunt of HIV infections. Participants at the session in Pietermaritzburg called for information around HIV to be communicated more simply, ongoing concerns around non-adherence to ARVs and shared several questions around PrEP and HIV interventions for young women. Social issues of unemployment and the so-called blesser phenomenon were also raised.



Photo (left): Community members from the Umgungundlovu District. Photo (top right): Research clinician, Dr Sidelisiwe Msane from CAPRISA's Vulindlela Clinical Research Site shares updates on several key CAPRISA studies. Photo (bottom right): Head of CAPRISA's Community Programme speaks to why young women remain the most infected by HIV.

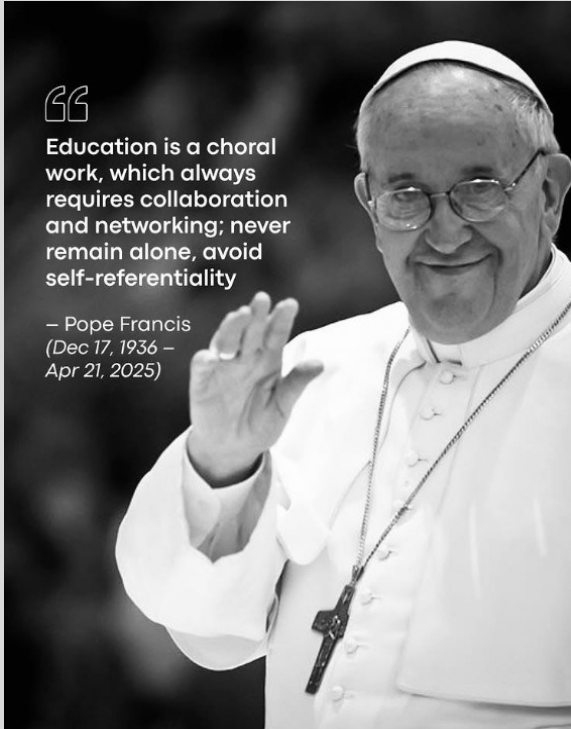
CAPRISA Football Club beat SAMRC FC 2-1 at the Hoy Park Sports Ground



Photo (left): CAPRISA FC. Photo (right): Teams SAMRC and CAPRISA FC ahead of kick-off.
Pic credit: Ayanda Kubheka/Mxolisi Mahlangu



CAPRISA remembers a champion for science Pope Francis of Assisi 1936-2025



Argentine born Pope Francis died at the age of 88 on Monday, April 21 at his residence in the Vatican's Casa Santa Marta in Rome, Italy. Following his election as Supreme Pontiff in 2013, he chose the name Francis in honor of St. Francis of Assisi.

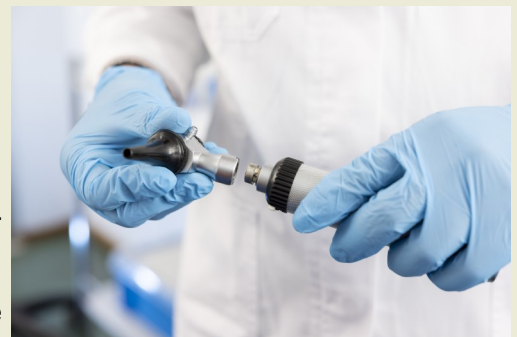
According to Vatican News, in 2024, in a discourse prepared for the Academy's Plenary Assembly, he said "The sciences, in their pursuit of knowledge and understanding of the physical world, must never lose sight of the importance of using knowledge to serve and enhance the dignity of individuals and of humanity as a whole."

More recently, last month, Pope Francis sent a message to the Pontifical Academy of Science for the Life 2025 General Assembly from his hospital bed at Rome's Gemelli Hospital. In it Pope Francis referred to what he termed, missed opportunities to learn from previous crises, such as the Covid-19 pandemic to transform consciences and social practices."

Funding update

Following the termination of US government funding, CAPRISA is bracing itself for a loss of \$6.2 million in NIH funding for this year alone. CAPRISA Director Professor Salim S. Abdool Karim says, "US contributions to global health have been impressive. Across Africa, between 2010-2023 HIV-related deaths dropped by 56% and new infections have been declining in most African countries. But these gains are now in jeopardy and are going to be reversed if AIDS funding from the US isn't restored or replaced."

In light of this, CAPRISA's HIV vaccine trials and most of its HIV treatment trials will be stopped as these are NIH funded. While there is no mortality associated with these trials being terminated, it will undoubtedly slow scientific progress on HIV vaccines and treatment. CAPRISA has so far been forced to halt at least 13 clinical trials. In light of this and in line with the approach being adopted by several scientific research organisations around the world, CAPRISA is forced to responsibly and implement risk mitigation measures for its studies and their participants.





A selection of scientific papers published in 2025

- 1 **Naidoo K, Perumal R.** First data of a quabodepistat containing novel regimen for drug-susceptible tuberculosis. *Lancet Infect Dis.* 2025;25(4):366-367. doi: 10.1016/S1473-3099(24)00653-4.
- 2 **Naidoo A, Waalewijn H, Naidoo K, Letsoalo M, Cromhout G, Sewnarain L, Mosia NR, Osuala EC, Wiesner L, Wasmann RE, Denti P, Dooley KE, Archary M; ORCHID study team.** Pharmacokinetics and safety of dolutegravir in children receiving rifampicin tuberculosis treatment in South Africa (ORCHID): a prospective cohort study. *Lancet HIV.* 2025;12(4):e273-e282. doi: 10.1016/S2352-3018(24)00312-6.
- 3 **Naidoo K, Yende-Zuma N, Moodley M, Made F, Perumal R, Gengiah S, Ngozo J, Padayatchi N, Nunn A, Abdool Karim SS.** High mortality among patients with tuberculosis accessing primary care facilities: secondary analysis from an open-label cluster-randomised trial. *EClinicalMedicine.* 2025;82:103151. doi: 10.1016/j.eclinm.2025.103151.
- 4 **Asare K, Lewis L, van der Molen J, Sookrajh Y, Khubone T, Ngwenya T, Mkhize NS, Lessells RJ, Naidoo K, Sosibo P, Bottomley C, Garrett N, Dorward J.** Impact of increasing CD4 count threshold eligibility for antiretroviral therapy initiation on advanced HIV disease and tuberculosis prevalence and incidence in South Africa: an interrupted time series analysis. *BMJ Glob Health.* 2025;10(4):e016631. doi: 10.1136/bmjgh-2024-016631.
- 5 **Mkhize P, Mehoul-Loko C, Maphumulo N, Radzey N, Abrahams AG, Sibeko S, Harryparsad R, Manhanzva M, Meyer B, Radebe P, Liebenberg LJP, Ngcapu S, Ahmed N, Busakwe F, Mqaba N, Archary D, Sivro A, Samsunder N, Potloane D, Horsnell W, Jordan C, Abdool Karim Q, Bekker LG, Passmore JA, Jaspan H, Humphries H, Masson L.** Differences in HIV risk factors between South African adolescents and adult women and their association with sexually transmitted infections. *Sex Transm Infect.* 2025;101(3):174-182. doi: 10.1136/sextrans-2024-056260.
- 6 **Naicker N, Osman F, Naidoo K, Bodley N, Mbambo N, Madlala S, Mhlongo T, Mbatha N, Maphumulo A, Munatsi P, Radebe P, Liebenberg L, Dorward J, Drain PK, Garrett N.** High burden of human papillomavirus and premalignant cervical lesions among women starting HIV treatment in KwaZulu-Natal, South Africa. *Sex Transm Infect.* 2025 Apr 15;101(3):187-190. doi: 10.1136/sextrans-2024-056129.
- 7 **Rajagopalan S, Rourke AK, Asare E, Kohlerschmidt DJ, Das L, Ngema SL, Mulholland CV, Vilchèze C, Mahalingam V, Moodley S, Truebody B, Mackenzie J, Steyn AJC, Perumal R, Berney M, Larsen MH, O'Donnell MR, Escuyer VE, Jacobs WR Jr.** Engineered Mycobacteriophage TM4::GeNL Rapidly Determines Bedaquiline, Pretomanid, Linezolid, Rifampicin, and Clofazimine Sensitivity in Mycobacterium tuberculosis Clinical Isolates. *J Infect Dis.* 2025;231(4):859-870. doi: 10.1093/infdis/jiae438.
- 8 **Cohen P, Lambson BE, Mkhize NN, Moodley C, Yssel AEJ, Moyo-Gwete T, York T, Gwashu-Nyangiwe A, Ndabambi N, Thebus R, Juraska M, deCamp AC, Williamson BD, Magaret CA, Gilbert PB, Westfall D, Deng W, Mullins JI, Morris L, Williamson C, Moore PL.** Resistance mutations that distinguish HIV-1 envelopes with discordant VRC01 phenotypes from multi-lineage infections in the HVTN703/HPTN081 trial: implications for cross-resistance. *J Virol.* 2025;99(2):e0173024. doi: 10.1128/jvi.01730-24.
- 9 **Marsden AA, Corcoran M, Hedestam GK, Garrett N, Karim SS, Moore PL, Kitchin D, Morris L, Scheepers C.** Novel polymorphic and copy number diversity in the antibody IGH locus of South African individuals. *Immunogenetics.* 2025; 77:6. doi: 10.1007/s00251-024-01363-7.

For the complete list of publications see here: <https://www.caprisa.org/Publication/1/1>



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