



NATIONAL INSTITUTE FOR
COMMUNICABLE DISEASES

Division of the National Health Laboratory Service

SCIENCE FOCUS

A quarterly nexus of scientific insights

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The Science Focus publication acknowledges NICD staff members who have published articles in peer-reviewed journals.

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MR VUYO SABANI
SENIOR COMMUNICATIONS MANAGER

Driving scientific excellence

The National Institute for Communicable Diseases (NICD) has once again delivered an outstanding peer-reviewed publication output for the 2025/2026 financial year. A total of 175 publications were produced during the year, almost matching the previous year's impressive total of 174 publications.

Producing high-quality research year after year is no easy feat. It requires dedication and hard work. To gain insight into what drives such achievement, I spoke to Prof. Penny Moore, one of the NICD's leading scientists based at the Centre for HIV and STIs. Working closely with local and international collaborators, Prof. Moore has consistently produced impactful research on a range of diseases, including HIV, SARS-CoV-2, and respiratory syncytial virus.



PROF. PENNY MOORE

I wanted to find out three things: what motivates her, which publication stood out for her during the past financial year, and what advice she would offer to young and upcoming researchers. Prof. Moore holds several distinguished leadership positions. She is the South African Research Chair of Virus-Host Dynamics and a Research Professor at Wits University.

She also serves as Director of the Antibody Immunity Research Unit, an extramural unit of the South African Medical Research Council, and is a Research Fellow at the Infectious Diseases and Oncology Research Institute, among other roles.

Reflecting on what drives her, Prof. Moore said: "We work on HIV, SARS-CoV-2, and respiratory syncytial virus – we see the impact of

these viruses daily, and so it's easy to stay motivated to do useful research." On which publication or study stood out for her during the past financial year, she stated that selecting just one was not easy: "Difficult question – so much cool science! The highlight has been small clinical trials of HIV vaccines in both HIV-naïve volunteers and people living with HIV. These Discovery Medicine trials have the potential to dramatically accelerate the pace of HIV vaccine development. They involve only 20–30 participants but include unprecedented immunological 'deep dives' that are teaching us a huge amount about HIV. It has been immensely challenging to establish these platforms and define measures of success, and the data that will emerge next year will be fascinating and important."

Her advice for young and aspiring researchers is to find mentors who care and are passionate. "Find a mentor who truly cares about your success. My mentors were (and still are) the people who helped shape my career. Surround yourself with curious, fun people who are generous with their insight, ideas, and time, and who are as passionate about science as you are."

For profiles of other leading NICD scientists with National Research Foundation ratings, turn to page 5. We trust you will find this edition both insightful and inspiring.

On behalf of the team,

Vuyo Sabani
Senior Communications Manager

PEER REVIEWED PUBLICATION STATISTICS

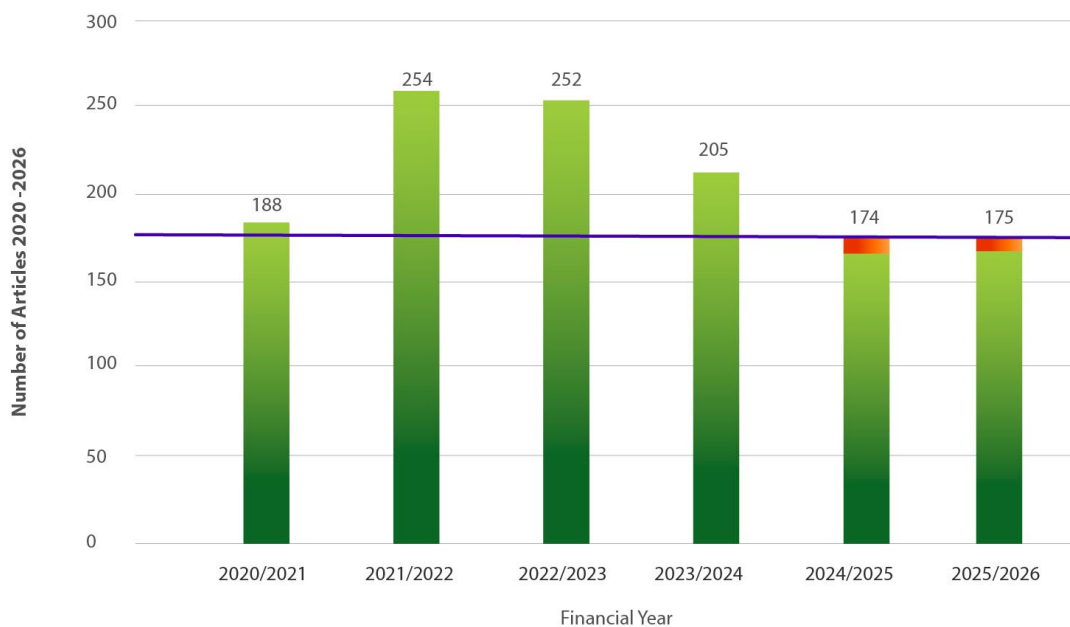


Figure 1: The peer-reviewed publications from the 2020/2021 fiscal year through to the 2025/2026 fiscal year are compared in the figure above. Based on this comparison, the annual objective of 140 publications (for the period 2020/2021 to 2022/2023), as well as the annual objective of 180 publications (for the period 2023/2024 to 2025/2026), shows that publication output has increased over the period.

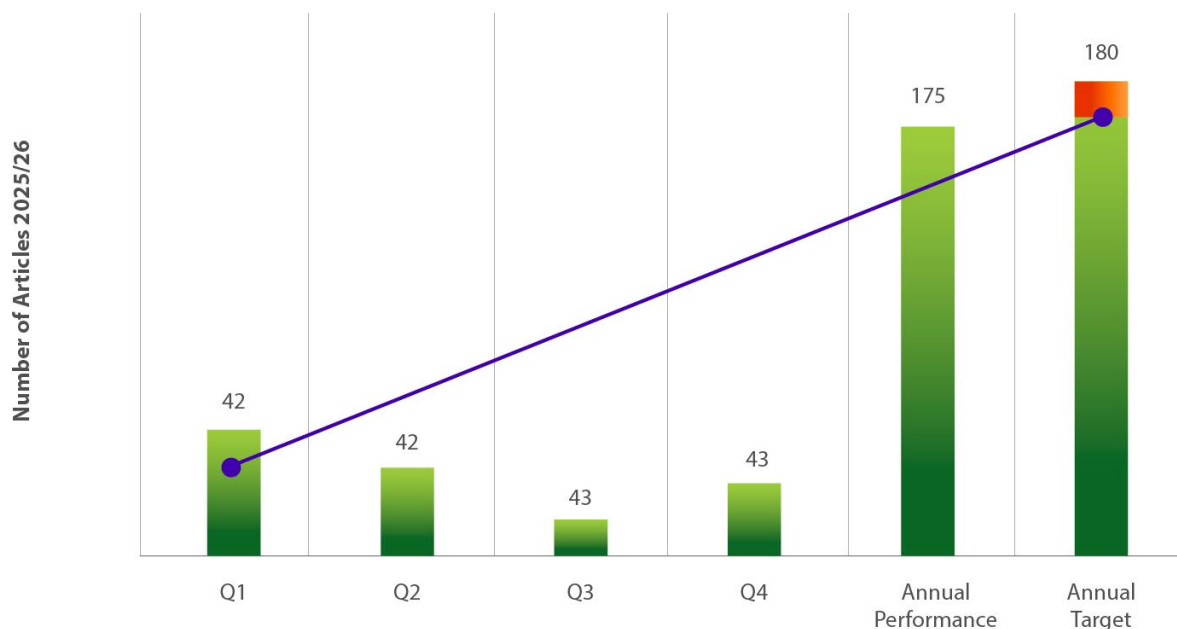


Figure 2: This illustration shows the Institute’s performance over the 2025–2026 financial year, with quarterly results from Quarter 1 to Quarter 4 measured against the set target of 180 publications.

Although the quarterly figures above total 170 publications, the NICD produced 175 peer-reviewed publications in the 2025/26 financial year. The additional five publications were not included in the quarterly reports due to late submission by centres and were therefore added to the annual publication count.

B - Internationally acclaimed researchers



PROF. ADRIAN PUREN



PROF. ANNE VON GOTTBERG



PROF. ANTHONY SMITH



PROF. PENNY MOORE



PROF. BASIL BROOKE



PROF. CHERYL COHEN



PROF. CAROLINE TIEMESSEN



PROF. NELESH GOVENDER

C - Established researchers



PROF. NICOLE PAGE



DR NICOLE WOLTER



DR MIGNON DU PLESSIS



DR NISHI PRABDIAL-SING



DR JAISHREE RAMAN



DR ETIENNE MÜLLER



DR JACQUELINE WEYER



DR GIVEMORE MUNHENGA



DR SIBONGILE WALAZA



DR HALIMA SAID

Y - Promising young researchers



DR SHUNE OLIVER



DR JESSICA COERTSE



DR MUKHLID YOUSIF



DR SUSAN MEIRING



PROF. NELESH P. GOVENDER

Pathogen aetiology and risk factors for death among neonates with bloodstream infections at lower-tier South African hospitals: a cross-sectional study

Susan Meiring, Vanessa Quan, Rudzani Mashau, Olga Perovic, Rindidzani Magobo, Marshagne Smith, Ruth Mpmembe, Anne von Gottberg, Linda de Gouveia, Sibongile Walaza, Prof Cheryl Cohen, Constance Kapongo, Cheryl Mackay, Mphekwa Thomas Mailula, Omphile Mekgoe, Lerato Motjale, Rose Phayane, Angela Dramowski, Nelesh P Govender, on behalf of Baby GERMS-SA

The Lancet Microbe

IMPACT FACTOR: 20.4

<https://doi.org/10.1016/j.lanmic.2024.100989>

THE LANCET
Microbe



Background: Infections are among the top causes of neonatal mortality, particularly in low-income and middle-income countries. We aimed to describe the clinical characteristics of neonates diagnosed with culture-confirmed bloodstream infections at six lower-tier hospitals in South Africa.

Methods: We did a cross-sectional study of culture-confirmed bloodstream infections among neonates (aged 0-27 days) at six lower-tier hospitals in South Africa. Clinical, demographic, and pathogen data from sick, hospitalised neonates were analysed and bloodstream infections were categorised as early-onset sepsis (EOS; 0-2 days of life) or late-onset sepsis (LOS; 3-27 days of life). Incidence of bloodstream infection and crude in-hospital mortality in neonates with bloodstream infection were calculated and factors associated with death were analysed using multivariable logistic regression models.

Findings: From Oct 1, 2019 to Sept 30, 2020, we identified 907 neonatal bloodstream infection episodes. Incidence was 6.4 cases per 1000 patient-days. Most neonates were

preterm (median gestation 33 weeks [IQR 29-37]), with 30.5% (n=277) of bloodstream infections classified as EOS and 69.5% (n=630) as LOS. Gram-negative pathogens dominated (63.2% [n=573]), including *Klebsiella pneumoniae* (25.7% [n=233]) and *Acinetobacter baumannii* (19.2% [n=174]). Crude in-hospital mortality in neonates with bloodstream infection was 25.5% (n=231), accounting for 21.4% (231 of 1078 cases) of all in-hospital neonatal deaths. Increased all-cause mortality was associated with Gram-negative bloodstream infection (vs Gram-positive pathogens, adjusted odds ratio 3.70 [95% CI 1.46-9.39]; p=0.0059), inborn LOS (vs EOS, 2.42 [1.11-5.29]; p=0.027), preterm birth (5.00 [2.16-11.59]; p=0.0002), and neonatal intensive care unit admission (3.26 [1.51-7.03]; p=0.0026).

Interpretation: Hospitalised, preterm neonates who developed Gram-negative bloodstream infections had high in-hospital mortality. Many small vulnerable newborns require prolonged stays in lower-tier hospitals and acquire life-threatening bloodstream infection; appropriate resources are needed at this level of care to prevent infections and save lives.



DR NOSIPHO SHANGASE



DR TENDESAYI KUFA

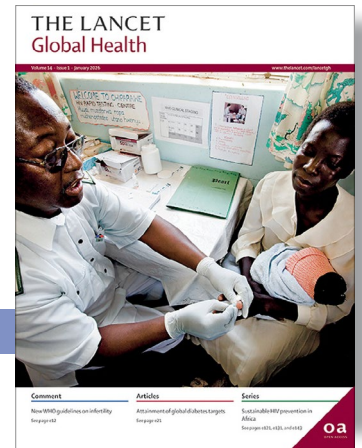
A home away from home? HIV outcomes among refugees and host country nationals

Shangase Nosipho, Kufa Tendesayi

The Lancet Global Health

IMPACT FACTOR: 18

[https://doi.org/10.1016/s2214-109x\(25\)00432-2](https://doi.org/10.1016/s2214-109x(25)00432-2)



ABSTRACT

In 2024, the UN High Commissioner for Refugees estimated that there were 123 million people who were forcibly displaced because of persecution, conflict, violence, human rights violations, or events seriously disturbing public order.¹ Of this population, 36.8 million were refugees living in 169 countries host countries.¹ Refugees and people fleeing from conflict who are not living with HIV could be at a higher risk of HIV acquisition due to sexual violence, sexual exploitation, and no access to prevention services.² Refugees living with HIV could be at risk from sub-optimal care and treatment outcomes because of disruption of services, no access, experienced and perceived negative attitudes, and stigma from host communities.^{3–5} Access to HIV care and treatment services for refugees may be limited due to a lack of services in refugee settlements, application of user-fees, travel costs, or

language and cultural barriers.^{6,7} The UN High Commissioner for Refugees recommends integration and inclusion when providing health services for refugees. In the context of refugee health services, integration means access to national health systems and services under the same conditions as host country nationals while inclusion refers to ensuring refugees in all their diversity are included in a non-discriminatory way into national health policies, strategies, and plans.^{8,9} Although there has been small scale research showing that refugees and cross-border populations in sub-Saharan Africa were less likely to know their HIV status, to be on antiretroviral therapy, or to be virally suppressed than host populations,^{3–5} there has not been large scale and rigorous studies comparing HIV care and treatment outcomes between the two populations.



DR MAZVITA MUCHENGETI

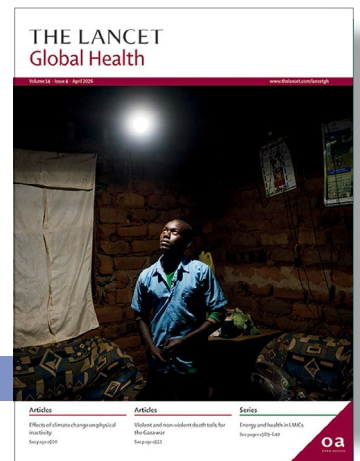
HPV vaccination impact in South Africa: evidence and next steps

Cari van Schalkwyk, **Mazvita Muchengeti**

The Lancet Global Health

IMPACT FACTOR: 18

[https://doi.org/10.1016/S2214-109X\(26\)00026-4](https://doi.org/10.1016/S2214-109X(26)00026-4)



ABSTRACT

Scaling up human papillomavirus (HPV) vaccination is fundamental to South Africa's cervical cancer elimination agenda, particularly in the context of the world's largest HIV epidemic. School-based HPV vaccination represented a major policy achievement; however, sustained programme confidence requires real-world evidence that vaccination reduces oncogenic HPV prevalence across heterogeneous immune profiles and health-system contexts. Updated data on HPV prevalence among young

women, stratified by HIV status, are therefore essential for tracking progress towards elimination. In The Lancet Global Health, Dorothy A Machalek and colleagues' repeat cross-sectional study provides timely population-level evidence that South Africa's bivalent HPV vaccination programme has substantially reduced vaccine-type HPV prevalence, including among adolescent girls and young women (aged 17–18 years) living with HIV.1



MS TSHIAMA M. MWAMBA



PROF. NELESH P. GOVENDER

Cryptococcal antigen titers and semi-quantitative assay scores among people with HIV-associated cryptococcal antigenemia

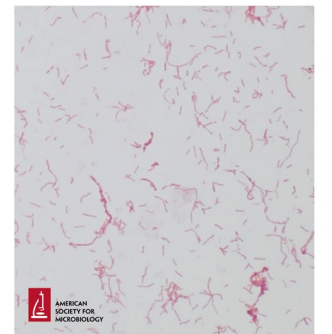
Tshiamo M. Mwamba, Nozuko P. Blasich, Lindi M. Coetzee, Ruzdani Mashauorg, Nelesh P. Govender

Journal of Clinical Microbiology

IMPACT FACTOR: 5.4

<https://doi.org/10.1128/jcm.00886-25>

Journal of
Clinical Microbiology



ABSTRACT

While South African guidelines recommend a lumbar puncture (LP) to exclude cryptococcal meningitis (CM) among all people with a newly positive cryptococcal antigen (CrAg) test, irrespective of CM symptoms, this is not always feasible. High blood CrAg lateral flow assay (LFA) titers are associated with concurrent CM and increased mortality. Single-strip CrAg semi-quantitative (SQ) tests could risk-stratify people with antigenemia. Consecutive fresh LFA-positive remnant plasma samples from a CD4 laboratory network collected between April and July 2021 were retested. We described LFA titers, CrAgSQ scores, and the proportion with cerebrospinal fluid (CSF) collected 28 days before or after a positive CrAg screening test. Of 2,240 re-tested plasma samples from unique patients, 2,166 (97%) were confirmed LFA-positive. The median LFA titer was 640 (IQR, 40-5,120), 63% (1,354/2,166) had a titer of ≥ 160 , and 52% (1,124/2,166) had SQ scores of $\geq 3+$. Only 31% (662/2,166) had a CSF sample collected 28 days before or after a CrAg LFA-positive test; 60% (398/662) had confirmed CM. More than half of the people with cryptococcal antigenemia had a blood CrAg titer of

≥ 160 or a CrAgSQ score of $\geq 3+$, both previously shown to confer a high risk of concurrent CM. Of 3 in 10 who had an LP, most had CM, suggesting that meningitis symptoms prompted LP. Healthcare worker support/training is required to improve adherence to the universal LP recommendation. When immediate LP is not feasible, blood CrAgSQ testing can rapidly identify people at the highest risk of CM who require urgent referral for LP.

Importance: A majority of patients with HIV-associated cryptococcal antigenemia identified through a large screening program in South Africa had high cryptococcal antigen titers and thus an elevated risk of concurrent meningitis and death. Despite this, a relatively small proportion had a lumbar puncture to definitively exclude meningitis. Routine CrAg semi-quantification can help to stratify patients at higher risk for meningitis and guide clinicians' management, but performing a full range of titers for all CrAg-positive blood samples increases costs and is labor-intensive. An alternative approach is to use a single test strip, which yields a semi-quantitative score.



DR MAZVITA MUCHENGETI

Race-specific temporal trends of HPV-related cancers in South Africa: An analysis of the South African National Cancer Registry, 2011-2022

Adino T. Tsegaye, **Sizeka A. Mashele**, Jaimie Z. Shing, **Judith Mwansa-Kambafwile**, Aimée R. Kreimer, **Carole Metekoua**, Meredith S. Shiels, **Mazvita Muchengeti**

International Journal of Cancer

IMPACT FACTOR: 4.7

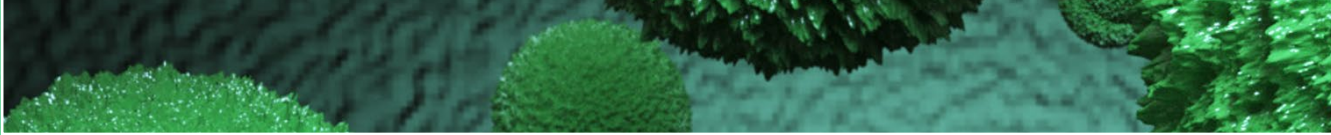
<https://doi.org/10.1002/ijc.70323>



ABSTRACT

Evaluating trends in HPV-related cancer rates by race is essential for identifying highrisk populations and improving prevention efforts. Using 2011–2022 South African National Cancer Registry data, we analyzed age-standardized incidence rates by race and sex across three periods (2011–2014, 2015–2018, 2019–2022) using linear regression. Significant increases were observed for oropharyngeal squamous cell carcinoma (SCC) among White females ($p < .01$), vulvar SCC among Asian ($p < .01$) and Black ($p = .02$) females, and anal SCC among Colored females and Black males

($p < .01$). Cervical carcinoma rates remained stable for most racial groups, except for the annual trends showing a 1.9% increase per year (95% CI = 1.0, 2.7) among White females. These findings suggest rising incidence rates for some HPV-related cancers across racial groups in South Africa. Further research is needed to explore the constellation of risk factors contributing to these trends and to guide targeted interventions.



MS KATE BISHOP



DR SIBONGILE WALAZA

Comparing respiratory illness surveillance case definitions to detect *Bordetella pertussis* in children aged <5 years with respiratory illness in South Africa, 2017-2023

Kate Bishop, Fahima Moosa, Mvuyo Makhasi, Jackie Kleynhans, Fathima Naby, Mignon du Plessis, Gary Reubenson, Halima Dawood, Heather J. Zar, Susan Meiring, Vanessa Quan, Nicole Wolter, Anne von Gottberg, Cheryl Cohen, Alex de Voux, and Sibongile Walaza

The Journal of Infectious Diseases

IMPACT FACTOR: 4.5

<https://doi.org/10.1093/infdis/jiaf501>



Background: Pertussis is vaccine preventable, and surveillance can guide interventions. Assessing the performance of syndromic surveillance and the World Health Organization (WHO) pertussis case definitions can identify improvements to enhance detection and monitoring of *Bordetella pertussis*.

Methods: We analyzed respiratory illness sentinel surveillance data among children aged <5 years from January 2017 through December 2023. Participants were enrolled for surveillance as outpatients with influenza-like illness (ILI) or in-patients with severe respiratory illness (SRI). Nasopharyngeal swabs were tested for *B pertussis* via polymerase chain reaction (PCR). Sensitivity and specificity, and performance indicators of case definitions were evaluated against PCR results.

Results: Of 23 642 participants with PCR results, *B pertussis* was detected in 0.7% from ILI and 1.6% from SRI. When compared with the WHO pertussis case definition, a modified definition (including apnea, omitting cough duration) improved sensitivity (ILI, 30.0% vs 43.3%; SRI, 55.7% vs 60.2%) but reduced specificity (ILI, 90.5% vs 75.8%; SRI, 88.3% vs 80.9%). WHO and modified pertussis case definitions missed a large proportion of true pertussis cases (ILI, 70.0% vs 56.7%; SRI, 44.3% vs 39.8%).

Conclusions: Current pertussis case definitions likely underestimate disease burden. Revising the WHO pertussis case definition and integrating pertussis into syndromic surveillance could improve detection while leveraging existing resources.



MS FRANCES AYRES



DR THANDEKA MOYO-GWETE

Defining the mechanism of cross-reactivity for a SARS-CoV-2 beta-elicited antibody toward Omicron sub-lineages

Frances Ayres, Bronwen Lambson, Nonhlanhla N. Mkhize, Zanele Makhado, Donald Mhlanga, Rudolph Serage, Penny L. Moore, Constantinos Kurt Wibmer, Thandeka Moyo-Gwete



Structure

IMPACT FACTOR: 4.3

<https://doi.org/10.1016/j.str.2026.01.006>

ABSTRACT

Despite the continual emergence of SARS-CoV-2 variants and increasing diversity within the receptor binding domain (RBD), some antibody responses that are directed to conserved regions can display cross-reactivity against variants. We previously isolated an RBD-directed monoclonal antibody (084-7D) from a Beta-infected donor that neutralized Beta and emerging Omicron variants. Here, we solved a high-resolution crystal structure of the 084-7D Fab in complex with the Beta RBD. These data revealed an epitope overlapping both the ACE2 binding site and those of other class 1 antibodies.

Furthermore, the epitope includes highly conserved residues, Q409, D420, and Y489, that are present in recent Omicron variants. The N417 residue that emerged with Beta and has since persisted is tolerated within the epitope of 084-7D, explaining the preferential neutralization of contemporaneous N417-containing variants. These structural data defined the mechanism for cross-reactivity of a Beta-elicited neutralizing antibody, potentially informing the design of future broadly reactive SARS-CoV-2 therapeutics.



DR SIBONGILE WALAZA



PROF. CHERYL COHEN

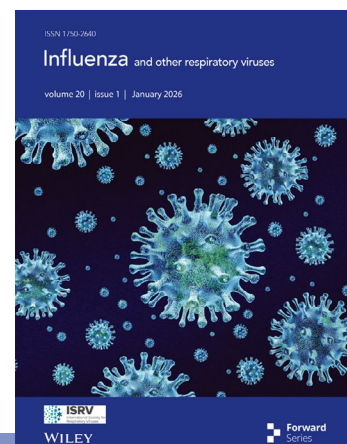
Changes in the epidemiology of influenza and respiratory syncytial virus during 2020-2022 relative to the pre-COVID-19 pandemic period (2017-2020) from systematic sentinel syndromic surveillance in South Africa

Sibongile Walaza, Jocelyn Moyes, Anne von Gottberg, Nicole Wolter, Amelia Buys, Fahima Moosa, Mignon du Plessis, Gary Reubenson, Jeremy Nel, Heather J Zar, Halima Dawood, Ebrahim Variava, Mvuyo Makhasi, Omphile Mekgoe, Fathima Nabby, Neydis Baute, Jackie Kleynhans, Susan Meiring, Vanessa Quan, Cheryl Cohen

Influenza and Other Respiratory Viruses

IMPACT FACTOR: 4.2

<https://doi.org/10.1111/irv.70207>



Background: Nonpharmaceutical interventions, implemented during the COVID-19 pandemic, affected the transmission of other respiratory pathogens.

Methods: Systematically collected respiratory illness surveillance data and consistent case definitions were used to describe changes in influenza and respiratory syncytial virus (RSV)-associated outpatient visits and hospitalisations in South Africa during the first 3 years of the COVID-19 pandemic relative to a pre-COVID-19 pandemic period (2017-2019).

Results: In 2020, influenza circulation almost ceased. In 2021 an out-of-season circulation was observed with a return to prepandemic timing, albeit with a higher peak in 2022. During the pandemic period, influenza-associated influenza-like illness (ILI) was more common in those aged ≥ 5 years compared to <

6 months. Patients with influenza-associated severe respiratory illness (SRI) were less likely to be ≥ 45 years versus < 6 months and less likely to be admitted to ICU (aOR 0.2, 95% CI 0.04-0.8). RSV circulation declined at the start of the pandemic, with an out-of-season spring resurgence in 2020 followed by a return to prepandemic timing in 2021 and a higher peak in 2022. During the pandemic, compared to the prepandemic period, patients with RSV-associated SRI were more likely to be aged 1-4 years (aOR 1.5, 95% CI 1.2-1.8) versus < 6 months and less likely to be admitted to ICU (aOR 0.5, 95% CI 0.3-0.8).

Conclusion: We report low levels of influenza circulation and out-of-season RSV circulation in 2020 with changes in the age distribution of cases and risk of ICU admission. Return to prepandemic timing was earlier for RSV, with higher seasonal peaks for influenza-associated ILI and RSV-associated SRI in 2022.



MR MVUYO MAKHASI



PROF. CHERYL COHEN

Feasibility of a pilot crowdsourced syndromic and virological surveillance platform for respiratory illness in South Africa, CoughWatchSA, 2022

Mvuyo Makhasi, Jocelyn Moyes, Daniela Paolotti, Mignon du Plessis, Fahima Moosa, Nicole Wolter, Phiwokuhle Ntombela, Siyabonga Mazibuko, Noluthando Duma, Jackie Kleynhans, Anne von Gottberg, Stefano Tempia, Sibongile Walaza, Cheryl Cohen

Influenza and Other Respiratory Viruses

IMPACT FACTOR: 4.2

<https://doi.org/10.1111/irv.70225>

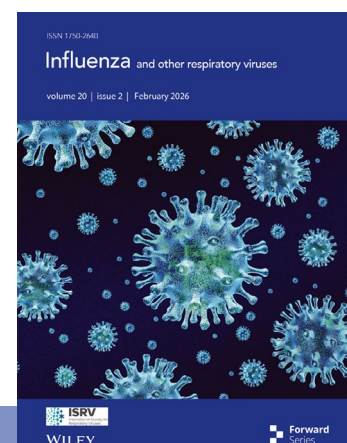
Background: Digital participatory surveillance (DPS) may provide information on reported influenza-like illnesses (ILI). Combining DPS with laboratory testing allows pathogen identification. We assessed the feasibility of DPS and home-based self-swabbing (HBSS) in South Africa.

Methods: We enrolled a cohort of individuals aged ≥ 18 years who completed weekly respiratory symptoms questionnaires from March to October 2022. We calculated the weekly percentage of reported ILI and COVID-19 and compared it with weekly private sector respiratory consultations (WPSRC). Symptomatic participants were offered HBSS for influenza and SARS-CoV-2 detection by polymerase chain reaction (PCR). We assessed six feasibility indicators.

Results: Recruitment capability: Twenty-six percent (249/954) of participants accessed the platform and enrolled, and 92% (81/88) of participants eligible for HBSS were enrolled. Acceptability: Fifteen

percent (32/249) completed the acceptability questionnaire with 100% (32/32) willing to participate in future studies, and 16% (39/249) withdrew from the study. Representativeness: Fifty percent (125/249) were aged 18-39 years, predominantly female 71%, and 79% had a tertiary qualification. Reliability: Thirty-eight percent (80/210) were active participants, median weekly active participation of 23% (interquartile range [IQR]: 19%-29%). Accuracy: Two percent (31/1440) and 25% (359/1440) of reports met ILI and COVID-19, respectively. Influenza and SARS-CoV-2 were detected in 7% (6/81) and 32% (26/81) of tested samples, respectively. There was low correlation with WPSRC (0.08, 95% CI, 0.27-0.43) for ILI and (0.36, 95% CI, 0.11-0.62) for COVID-19. Usefulness: Symptoms were reported in 32% (459/1440) of reports, and 11% (49/459) sought medical care.

Conclusion: The study was feasible; however, low enrolment numbers limit power. Linkage to HBSS was successful and demonstrates the potential for pathogen confirmation.





DR WENLONG C. CHEN

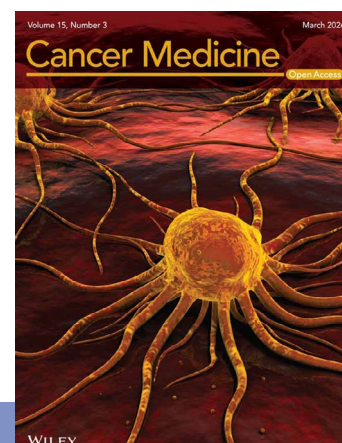
Factors associated with risk stratification and overall survival of black South African men with non-metastatic prostate cancer

Raylton P. Chikwati, Monica Ewomazino Akokuwebe, Olaide O. Ojoniyi, Rebaone Petlele, Shane A. Norris, Audrey Pentz, Maureen Joffe, Sean Doherty, Timothy R. Rebbeck, **Wenlong C. Chen**

Cancer Medicine

IMPACT FACTOR: 3.1

<https://doi.org/10.1002/cam4.71628>



Background: Emerging evidence indicates significantly poorer overall survival for men with metastatic prostate cancer in resource-limited settings than in high-income countries. However, there is less understanding of the overall survival of non-metastatic disease, which could inform early treatment strategies.

Objective: To prospectively examine factors associated with the National Comprehensive Cancer Network (NCCN) risk stratification and overall survival in 741 Black South African men with non-metastatic prostate cancer, some of whom also had comorbidities (≥ 2 other chronic conditions).

Methods: Baseline data on social and health factors were collected. Follow-up of participants monitored overall survival over a median of 4.3 (3.5–5.0) years. We used multivariable proportional ordinal regression to examine factors associated with non-metastatic prostate cancer risk stratification. Kaplan-Meier, Cox proportional hazards regression, and Pohar-Perme

methods were used to calculate overall survival and assess associations.

Results: Our findings showed a generally favourable prognosis of non-metastatic prostate cancer with a 5-year overall survival of 79.0% (75.6–82.6) while the 5-year age-standardised net survival was 91.0% (95% CI 86.0–97.0). Overall survival differed significantly by the different NCCN risk groups, emerging early and widening over time, with the lowest survival in the high-risk groups. Only older age at diagnosis (Hazard Ratio per one-year increase: 1.05 (95% CI: 1.02–1.08)), diabetes (HR: 1.70 (95% CI: 1.08–2.67)), and depression (HR: 1.67 (95% CI: 1.09–2.57)) at study recruitment were associated with poorer overall survival. Furthermore, only older age at diagnosis (HR: 1.04 (95% CI: 1.02–1.07)) was associated with higher non-metastatic prostate cancer risk.

Conclusions: These findings emphasise the need to address early diagnosis and comorbidities in non-metastatic prostate cancer, which could improve overall survival.



MS CAROLE METEKOUA



DR MAZVITA MUCHENGETI

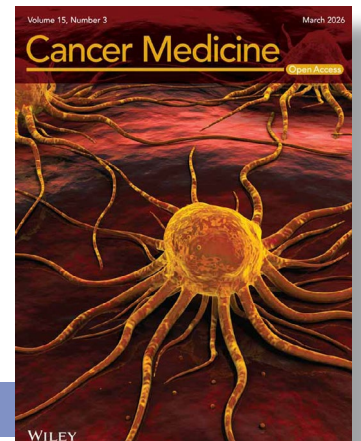
Integration of HIV status in cancer surveillance in South Africa: A call for action

Carole Metekoua, Tracey Wiggill, **Tinashe Tombe-Nyahuma**, Yann Ruffieux, **Judith Mwansa-Kambafwile**, Stanford Kwenda, Tafadzwa G. Dhokotera, Julia Bohlius, Eliane Rohner, **Mazvita Muchengeti**

Cancer Medicine

IMPACT FACTOR: 3.1

<https://doi.org/10.1002/cam4.71661>



Background: Human immunodeficiency virus (HIV) increases the risk of developing cancer. We aimed to assign HIV status to cancers diagnosed in public laboratories recorded in the National Cancer Registry (NCR) in South Africa, guided by HIV counselling and testing guidelines.

Methods: We used natural language processing to extract HIV-related information from free-text reports and probabilistic record linkage to match cancers diagnosed between 2004 and 2021 to HIV-related tests from the National Health Laboratory Service Corporate Data Warehouse. We assigned HIV status based on the results of the HIV-related tests and their timing relative to cancer diagnosis. We used descriptive statistics and logistic regression to examine HIV status documentation patterns and HIV prevalence in cancer patients.

Results: Of the 496,517 cancers reported to the NCR, 41% ($n = 203,937$) had a documented HIV status. Documentation increased from 29% in 2004–2009 to 52% in 2016–2021. The odds of having a documented HIV status were 20% higher in females than in males and 16%–28% lower in other population groups compared with Black Africans. Patients with infection-related cancers had almost threefold higher odds of having a documented HIV status than patients with infection-unrelated cancers. Among cancer patients with documented HIV status, HIV prevalence was 75% for infection-related and 32% for infection-unrelated cancers.

Conclusion: HIV status documentation among people with cancer has improved over time, but it is still suboptimal. Clinicians and pathologists in HIV endemic areas need to improve HIV ascertainment at cancer diagnosis and reporting to cancer registries to inform patient care and guide cancer control efforts.



DR JENNIFER ROSSOUW



PROF. JOHN FREAN

Emergence of human and animal melioidosis in Southern Africa, 2018- 2021

Jennifer Rossouw, Hermanus D. W. Geyer, Monica Birkhead, Douglas Wilson, Jeremy Nel, Alan S. Karstaedt, Carel E. Haumann, Annelize Jonker, Jeson W. Sahl, David M. Wagner, **John A. Freen.**

Tropical Medicine and Infectious Disease

IMPACT FACTOR: 2.6

https://doi.org/10.3390/tropicalmed11020060?urlappend=%3Futm_source%3Dresearchgate.net%26utm_medium%3Darticle



ABSTRACT

Melioidosis is increasingly recognised in tropical and subtropical regions worldwide as a serious and potentially fatal bacterial infection affecting humans and animals, acquired from the environment. Until now, human cases of melioidosis had not been reported in Southern Africa. Over a four-year period, we identified three human and two animal cases of melioidosis in South Africa and Namibia. *Burkholderia pseudomallei* isolates were investigated by matrix-assisted laser desorption/ionisation time-of-flight mass spectrometry (MALDI-TOF MS) and whole-genome sequencing (WGS). Phylogenetic analysis demonstrated

substantial diversity, suggesting long-term cryptic persistence of the bacterium in the Southern African region. Limited awareness of the disease and inadequate diagnostic capacity likely contribute to its apparent rarity in the region. These findings underscore the urgent need for increased surveillance, improved diagnostics, and greater awareness of melioidosis in Southern Africa to better understand its true epidemiological burden and prevent future cases.



PROF. NICOLA PAGE

Reviewing the review

Mark F. Cotton, Andrew C. Whitelaw, Ute Hallbauer, Colleen Bamford, Wolfgang Preiser, **Nishi Prabdial-Sing, Nicola Page**



Southern African Journal of Infectious Diseases

IMPACT FACTOR: 1.3

<https://doi.org/10.4102/sajid.v40i1.786>

ABSTRACT

The Southern African Journal of Infectious Diseases (SAJID) publishes manuscripts on infectious diseases especially those relevant to our region. With a Web of Science impact factor of 1.3 for 2024, SAJID is an appropriate journal for both emerging and established researchers. The integrity and excellence of our journal's output depend on the quality of the submitted manuscripts and the quality of the peer review process. For manuscript quality, we rely on the authors. While most work is usually undertaken by the first author, the supervision and input provided by the senior authors are vital, especially for manuscripts where the first author is a new or emerging researcher.

The first scientific journals, *Journal de sçavans* and *Philosophical Transactions of the Royal Society*, were published in 1665, without peer review. The history of pre-publication peer review

began in 1731. The editor of *Medical Essays and Observations*, published by the Royal Society of Edinburgh, submitted essays to individuals he considered most suitable to review. The journal stated that peer review did not guarantee truthfulness or accuracy, which depended on the authors. The adoption of peer review was somewhat haphazard. The Royal Society established a prepublication review committee to determine whether a manuscript should be published in 1752. The *Lancet* considered peer review unimportant until 1976, and the *Journal of the American Medical Association* mainly used internal review and only occasionally outside experts until the mid-1950s. The *British Medical Journal*, however, sent all submitted manuscripts to a recognised expert, starting in 1893. Only since the late 20th century was peer review adopted by most biomedical journals. We consider it of utmost importance.



DR KEEREN LUTCHMINARAIN



PROF. ANTHONY M. SMITH

The use of whole-genome sequencing to investigate a foodborne-associated outbreak in a mental healthcare institution

Keeren Lutchminarain, Phuti Sekwadi, Nomathamsanqa Ndhlovu, Nevashan Govender, Lehlohonolo Kumalo, Anthony M. Smith

Public Health Bulletin South Africa

IMPACT FACTOR: N/A

<https://www.phbsa.ac.za/whole-genome-sequencing-salmonella-outbreak-mental-healthcare/>



ABSTRACT

Salmonella enterica serotype *Enteritidis* (*Salmonella Enteritidis*) remains a leading cause of foodborne disease outbreaks globally and continues to pose a public health challenge in South Africa. Non-typhoidal *Salmonella* (NTS) infections account for a substantial proportion of foodborne illnesses worldwide, with the World Health Organization estimating that unsafe food causes approximately 600 million cases annually. The burden is particularly high in the African region, although it is under-reported in the literature. In South Africa, *Salmonella Enteritidis* has become the predominant cause of salmonellosis, representing the majority of clinical *Salmonella* isolates nationally. Infection generally presents with mild gastrointestinal symptoms, but children, older persons, and institutionalised populations are at risk of severe dehydration and life-threatening complications. Identifying outbreak sources is therefore critical to limit transmission and inform prevention strategies. Whole-genome sequencing (WGS) has increasingly transformed investigations of foodborne disease outbreaks by providing high-resolution characterisation of bacterial pathogens and enabling precise identification of transmission sources. Since 2017, the Centre for Enteric Diseases (CED) at the National Institute for Communicable Diseases (NICD) has used WGS routinely for diarrhoeal disease-associated outbreaks in South Africa, enhancing public health surveillance and response capacity. In July 2024, a foodborne disease outbreak was reported at a mental healthcare institution in Gauteng Province. Laboratory and epidemiological investigations were conducted to determine the outbreak source and assess the relatedness

of isolates. This report presents the full investigation, including laboratory methods, WGS analysis, results, and public health implications.

Materials and Methods: On 30 July 2024, the CED was notified by the provincial surveillance team of a potential foodborne disease outbreak at a mental healthcare institution in Gauteng. Patients presented to a private hospital with gastrointestinal symptoms occurring over a similar timeframe. Stool specimens or rectal swabs were initially processed at peripheral laboratories using standard microbiological methods. Cultured *Salmonella* isolates were referred to the CED, where confirmation was performed using standard serotyping techniques according to the White-Kauffmann-Le Minor scheme. Genomic DNA was extracted using the Invitrogen PureLink Microbiome DNA Purification Kit (Invitrogen, Waltham, Massachusetts, USA). WGS was performed on the Illumina NextSeq 2000, with DNA libraries prepared using the Illumina DNA Prep Kit with a 300–400 bp insert size, followed by 2 × 150 paired-end sequencing runs at approximately 80× coverage.

Results: A line list of 27 symptomatic individuals was provided to the CED, including 21 patients and six staff members. All isolates were confirmed as *Salmonella Enteritidis* through standard serotyping. Core genome multilocus sequence typing (cgMLST) indicated that all outbreak-associated isolates differed by two alleles or fewer, demonstrating high genetic relatedness. No antimicrobial resistance genes were detected through WGS, and all isolates were considered susceptible to tested antibiotics.

First and last authors published reviews



DR LILIWE SHUPING



PROF. GOVENDER P. NELESH

The burden and epidemiology of HIV-associated cryptococcal meningitis and culture-confirmed cryptococcosis in South Africa, 2018–2023

Liliwe Shuping, Ruth Mpembe, Serisha Naicker, Tsidiso Maphanga, Ernest Tsoetsi, Gift Sandhleni, Miriam Mwamba, Silondwiwe Nzimande, Denise Kyazze, Jeremy Nel, Halima Dawood, Douglas Wilson, Arifa Parker, Susan Meiring, Vindana Chibabhai, Caroline Maluleka, Vanessa Quan, Nelesh P. Govender for GERMS-SA

Public Health Bulletin South Africa

IMPACT FACTOR: N/A

<https://www.phbsa.ac.za/hiv-cryptococcal-meningitis-surveillance-trends-south-africa-2018-2023/>



ABSTRACT

HIV-associated cryptococcosis continues to contribute substantially to illness and death among people living with HIV in South Africa, despite important progress in expanding access to antiretroviral therapy (ART). Cryptococcosis is a serious opportunistic fungal infection caused by *Cryptococcus neoformans* or *Cryptococcus gattii*. It most commonly presents as cryptococcal meningitis but can also occur as pneumonia, fungaemia, or disseminated disease affecting multiple organs. The disease is most often seen in individuals with advanced HIV disease, particularly among those who are not yet on ART, have interrupted treatment, or experience challenges with sustained engagement in care. Globally, cryptococcal meningitis remains an important contributor to AIDS-related mortality, with a large proportion of cases occurring in low- and middle-income countries. In response, several national interventions have been introduced to support earlier detection and improved clinical outcomes. Since 2016, reflex cryptococcal antigen screening has been implemented to identify early cryptococcal infection among individuals with low CD4 cell counts and support timely pre-emptive treatment. In addition, updated treatment guidelines incorporating flucytosine, approved by the South African Health Products Regulatory Authority, have strengthened recommended treatment regimens for cryptococcal meningitis. Laboratory-confirmed cryptococcal disease has been monitored nationally through the GERMS-SA surveillance programme, coordinated by the National Institute for Communicable Diseases, since

2005. The following report describes national trends in HIV-associated cryptococcal meningitis and culture-confirmed cryptococcosis from 2018 to 2023, including incidence patterns, demographic characteristics, and factors associated with in-hospital mortality.

Materials and Methods: We conducted a cross-sectional analysis of the GERMS-SA nationwide laboratory-based surveillance for cryptococcosis in South Africa. To examine trends of cryptococcosis, we included all patients enrolled in GERMS-SA from 01 January 2018 to 31 December 2023. A demographic and clinical description of people with cryptococcosis was undertaken using information collected from laboratory records and through enhanced surveillance by nurse

surveillance officers at 30 public-sector sentinel hospitals, using standardised case report forms. This analysis incorporated incident cases of laboratory-confirmed CM, fungaemia (a positive blood culture), and other culture confirmed forms of cryptococcosis.

Results: We detected 31 701 cases of cryptococcosis, of which 29 601 were incident cases. Among incident cases, CM accounted for 95% (n=28 247), followed by fungaemia (4%; n=1 208). Overall, most incident cases were diagnosed in the KwaZulu-Natal (25%, n=7 383), Gauteng (23%, n=6 691), and Eastern Cape (16%, n=4 688) provinces.



DR TENDESAYI KUFO

The evolution of antenatal care HIV/syphilis sentinel surveillance in South Africa (1990–2022)

Tendesayi Kufa, Nosipho Shangase, Adrian Puren, Mireille Cheyip, Gillian Hunt, Rachel Joseph

Public Health Bulletin South Africa

IMPACT FACTOR: N/A

<https://www.phbsa.ac.za/the-evolution-of-antenatal-care-hiv-syphilis-sentinel-surveillance-in-south-africa/>

PHBSA Public Health Bulletin South Africa



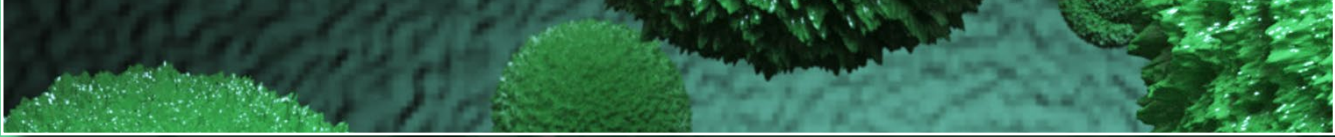
ABSTRACT

Antenatal care (ANC) services provide convenient access to healthy women who are sexually active and can serve as a proxy for the general population with respect to HIV surveillance. Since 1990, South Africa has conducted antenatal care HIV and syphilis sentinel surveillance (ANCHSS) surveys among pregnant women attending ANC services, which have become an important component of HIV surveillance in the country. The main aim of the annual–biennial surveys was to estimate HIV prevalence by age and location (province and district) over time and to generate input data for models used to produce national HIV prevalence and incidence estimates for planning and resource allocation. These models include Spectrum, Thembisa, and Naomi. Over time, the objectives, inclusion criteria, sampling procedures, and data collection methods have evolved in response to changes in surveillance needs and global HIV monitoring guidelines. This report reviews the objectives of past ANCHSS surveys and methodological changes over time, and discusses opportunities for using routine ANC and vertical transmission prevention data for HIV surveillance among pregnant women.

Results of past ANC surveys: At the national level, HIV prevalence measured in the survey increased rapidly from 0.8% in 1990 to

22.8% in 1998. Prevalence then rose more slowly, reaching 30.2% in 2005, and remained around 30% until 2022, when it declined to 27.5%. Syphilis seroprevalence decreased steadily from 11% in 1997 to 1.6% in 2004. It then fluctuated between 1.8% and 2.9% from 2005 to 2007, before stabilising between 1.5% and 1.8% from 2008 to 2011. Measurement of syphilis seroprevalence was paused until 2015, when it was recorded at 2.0%. Since then, seroprevalence has increased, reaching 2.6% in 2019 and 3.1% in 2022.

Future directions: Since the late 1990s, concerns have been raised about ANCHSS, including unlinked anonymous HIV testing, duplicate testing, lack of consent, survey costs, and limited integration with routine ANC and vertical transmission prevention (VTP) data systems. With near-universal HIV testing and increasing ANC coverage, there have been calls since 2013 to transition to HIV surveillance using routine ANC and VTP data, provided quality is sufficient. The 2017 assessments showed high agreement between survey and routine HIV results, but data completeness, quality assurance, and standardisation were sub-optimal. Further assessments and improvements are needed before a national transition can occur, while sentinel surveys remain useful for capturing indicators not available through routine data.



DR MOSHIBUDI P. PHAFANE



DR NAAZNEEN MOOLLA

Imported cases of Lassa fever in South Africa: clinical and public health aspects

Moshibudi Poncho Phafane, Lucille Blumberg, Nevashan Govender, Babongile Mhlongo, Veerle Msimang, Genevieve Ntshoe, Wayne Ramkrishna, Andronica Moipone Shonhiwa, Jacqueline Weyer, Antoinette Grobbelaar, Naazneen Moolla

Public Health Bulletin South Africa

IMPACT FACTOR: N/A

<https://www.phbsa.ac.za/imported-lassa-fever-in-south-africa-clinical-and-public-health-insights/>

PH Public Health Bulletin South Africa



ABSTRACT

Viral haemorrhagic fevers (VHFs) remain a significant public health concern due to their potential to cause severe disease and high mortality. In non-endemic countries, recognition can be challenging because early symptoms are often non-specific and resemble more common febrile illnesses, which may delay diagnosis and response. Lassa fever (LF) is an acute VHF caused by the Lassa virus, a member of the Arenaviridae family, and is endemic in several West African countries including Benin, Ghana, Guinea, Liberia, Mali, Nigeria, and Sierra Leone. Transmission to humans typically occurs through exposure to the urine, faeces, or saliva of infected *Mastomys natalensis* rodents, while human-to-human transmission through contact with infected bodily fluids can also occur. LF is the most frequently reported VHF among travellers returning from endemic regions. This report describes two imported cases of LF diagnosed in South Africa in 2007 and 2022, outlining the clinical presentations, diagnostic processes, and public health responses associated with each case. By examining these events, the report highlights key diagnostic challenges and lessons learned to strengthen preparedness, clinical awareness, and response to imported VHFs in non-endemic settings.

Materials and methods: A retrospective document review was conducted using data collected during routine investigations of VHF in SA. The National Institute for Communicable Diseases (NICD), a division of the National Health Laboratory Service, serves as the national reference laboratory for VHF in SA. The NICD curates a database for confirmed VHF cases, which was compiled through data collection from test request and submission forms, case investigation forms, field investigation reports by provincial Department of Health (DoH) Communicable Disease Clusters, emails and

electronic messaging from referring hospitals, and the NICD hotline phone calls received for medical advice, as available for each case.

Confirmed LF cases were defined as cases for which clinical samples tested positive by reverse transcription Polymerase Chain Reaction (RT-PCR)⁶ and/or anti-LASV IgM positive and/or a fourfold increase in anti-LASV IgG in serially collected blood samples.

Case descriptions:

Case 1: A 46-year-old male from Nigeria was evacuated to South Africa in February 2007 after developing fever, gastrointestinal symptoms, and later neurological and haemorrhagic manifestations with renal failure. Lassa virus infection was confirmed by RT-PCR and serology.

Case 2: A 60-year-old male with recent travel in Nigeria was admitted in May 2022 with fever, vomiting, and renal impairment. Initial focus on common febrile illnesses delayed diagnosis. LF was confirmed posthumously by RT-PCR.

Discussion: Both cases highlight diagnostic challenges in non-endemic settings, where early symptoms overlap with other infections. Management and infection control, including isolation and PPE, limited nosocomial transmission. The cases underscore the importance of travel history, rapid diagnostics, and clinician awareness. They also illustrate the epidemiological risk of LF importation via global travel and the need for integrated surveillance and preparedness in non-endemic countries.



DR VEERLE DERMAUX-MSIMANG



DR JACQUELINE WEYER

One Health surveillance report for rabies, South Africa, 2021–2023

Veerle Dermaux-Msimang, Alicia Cloete, Kevin le Roux, **Naazneen Moolla**, Thomas Dlamini, **Antoinette Grobbelaar**, Babongile Mhlongo, Wayne Ramakrishna, **Lucille Blumberg**, **Ruvimbo Chingonzoh**, **Didi Claasen**, **Nosipho Gcabashe**, **Kamini Govender**, **Lehlohonolo Kumalo**, **Chantel le Roux**, Unarine Makungo, Nosipho Mgobo, Munangatire Mparamoto, Freda Ngobeni, Susan Nzenze, **Moshibudi Poncho Phafane**, Queen Ranoto, **Jacqueline Weyer**

Public Health Bulletin South Africa

IMPACT FACTOR: N/A

<https://www.phbsa.ac.za/one-health-surveillance-report-for-rabies-in-south-africa-2021-2023/>



ABSTRACT

Rabies, endemic in South Africa, is a fatal viral infection affecting livestock, wildlife, domestic animals, and humans through direct zoonotic exposure. Although rabies has been reported in numerous mammalian species, most human infections are associated with contact with rabid domestic dogs. Traditional surveillance systems that rely on sector-specific reporting may underestimate the true burden and distribution of disease, particularly where animal and human data are reviewed separately. A One Health surveillance approach provides an integrated framework to address these challenges by combining human and animal health data. In South Africa, human rabies is classified as a Category 1 Notifiable Medical Condition requiring immediate public health action, while animal rabies is designated a controlled animal disease under national legislation, with mandatory reporting and vaccination of domestic dogs and cats. Laboratory confirmation of cases is conducted through established national reference and veterinary laboratory networks, enabling systematic data collection across sectors. This report presents an integrated One Health surveillance overview of rabies in South Africa for the period 1 January 2021 to 31 December 2023, combining human and animal data to describe national trends and support rabies prevention and control efforts.

Materials and Methods: A retrospective review of documents was carried out using data collected during routine rabies surveillance in SA. Descriptive epidemiology was applied to characterise the occurrence of rabies in humans and animals in SA during the study period. For human rabies cases, data were extracted from the Notifiable Medical Conditions Surveillance System (NMCSS) and compared with data available from a database curated at the NICD. The latter database was compiled through data collected from test requests and submission forms, case investigation forms, and field investigation reports by provincial Department of Health (DoH) Communicable Disease Clusters (CDC) and SA Field Epidemiology Training Programme (FETP).

Results: A total of 54 human rabies cases were reported, comprising 44 laboratory-confirmed cases and 10 probable cases. These cases were reported from 17 municipalities in three provinces, namely the Eastern Cape (EC, n=27), KZN (n=18), and Limpopo (LP, n=9). Eighty-three per cent (n=45) of the cases were aged under 16 years, and 64.8% (n=35) were male.



DR JACQUELINE WEYER



DR LERATO SIKHOSANA

Reflections on the national guidelines for mpox in South Africa

Jacqueline Weyer, Nevashan Govender, Veerle Msimang, Susan Nzenze, Lerato Sikhosana

Public Health Bulletin South Africa

IMPACT FACTOR: N/A

<https://www.phbsa.ac.za/reflections-on-the-national-guidelines-for-mpox-in-south-africa/>



ABSTRACT

Mpox, historically a rare zoonosis confined to parts of Central and West Africa, has evolved into a global public health concern since 2022, with more than 175 000 confirmed cases reported across 142 countries by November 2025. South Africa reported its first cases in 2022 and has since strengthened its surveillance and response systems for mpox. In August 2025, the National Department of Health released the Guidelines for the Clinical Recognition, Diagnosis, and Management of Mpox in South Africa to enhance national preparedness and clinical management. The guidelines also address infection prevention and control, mental health impacts, and stigma reduction. Ongoing challenges include sustaining

laboratory readiness, ensuring consistent national implementation, strengthening integration with HIV and sexual health services, and expanding surveillance approaches, including wastewater monitoring. This reflection highlights the strengths, gaps, and implementation considerations of these guidelines. Key advances include standardised case definitions, improved clinical recognition of atypical presentations, integrated HIV/STI screening, clear diagnostic pathways centred on polymerase chain reaction testing, and risk-stratified clinical management guidance.



**Other publications highlighting
NICD staff contributions**

Other publications highlighting NICD staff contributions

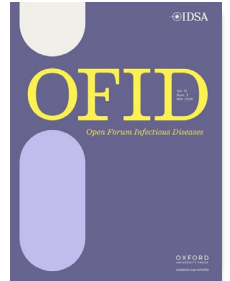


PROF. ANTHONY M. SMITH

From crisis to control: A study of typhoid conjugate vaccine efficacy in Harare, Zimbabwe (2017–2024)

Talent Bvochora, John Manyara, Gaetan Thilliez, Michael Vere, Innocent Mukeredzi, Denford Nhamo, Farai Chitiyo, Augustine Muzondo, Agnes Juru, Prosper Chonzi, Isaac Phiri, **Anthony M Smith**, Blessmore V Chaibva, Munyaradzi Mapingure, Walter Fuller, Pramila Shrestha, Parvati Nair, Robert A Kingsley, Ramanan Laxminarayan, Godfrey Musuka, Tapfumanei Mashe

Open Forum Infectious Diseases
<https://doi.org/10.1093/ofid/ofag091>



PROF. ANTHONY M. SMITH

Population structure and phylogenetic analysis of *Vibrio cholerae* non-O1/O139 by whole genome sequencing

Taylor Wells, Elizabeth González-Durán, **Anthony M. Smith**, Swapan K. Banerjee, Sandeep Tamber, Natalie Knox, Celine Nadon

PLOS One
<https://doi.org/10.1371/journal.pone.0343306>



PROF. BASIL BROOKE

Comparing three approaches to modelling the effects of temperature and rainfall on malaria incidence in different climate regions

Gladstone T. Madito, **Basil D. Brooke**, Sheetal P. Silal.

BMC Public Health
<https://doi.org/10.1186/s12889-026-26280-0>



PROF. VINDANA CHIBABHAI

Prevalence of multidrug-resistant organisms colonizing neonates at a tertiary hospital in Johannesburg, South Africa

Nonkululeko Mntla, **Vindana Chibabhai**, Trusha Nana

Journal of Tropical Pediatrics
<https://doi.org/10.1093/tropej/fmaf051>



Other publications highlighting NICD staff contributions



MS RUDZANI MASHAU



DR LILIWE SHUPING

Global perspectives on *Klebsiella* epidemiology and biology: conference report on the KLEBS 2024 symposium

Chiara Crestani, Kelly L. Wyres, Jabir Abdulahi, Archana Angrup, William Boateng, Chanté Brand, Arsène G. Djoko Nono, Teca C. Galvao, Devarshi Gajjar, Francisco Gonzalez-Espinosa, Mateusz Hasso-Agopsowicz, Yogesh Hooda, Sanika M. Kulkarni, **Rudzani Mashau**, Richael O. Mills, Geetha Nagaraj, Issa Ndiaye, Courtney P. Olwage, Lala Rafetrarivony, Andrianiaina Rakotondraso, Denasha L. Reddy, Varun Shamanna, **Liliwe Shuping**, Talyta Soares do Nascimento, Sylvain Brisse

NPJ Antimicrobials and Resistance

<https://doi.org/10.1038/s44259-025-00175-3>



Monitoring broadly neutralising HIV antibody concentrations using microsampling on dried blood spots in infants



DR NONHLANHLA N. MKHIZE



MS SASHKIA R. BALLA



MR MQONDISI TSHABALALA



MS FRANCES AYRES



PROF. PENNY L. MOORE

Rémi Latoura, **Nonhlanhla N. Mkhize**, Ségolène Debiecse, **Sashkia R. Balla**, **Mqondisi Tshabalala**, **Frances Ayres**, Zanele Makhado, Priscilla Biswas, Logashvari Naidoo, Stefania Dispineri, Trisha Ramraj, Nicolas Nagota, Lucio Gama, Ameena Goga, Gabriella Scarlatti, Yoann Cazaubon, Philippe Van de Perre, **Penny L. Moore**, Jean-Pierre Molès

Journal of Infection

<https://doi.org/10.1016/j.jinf.2026.106679>



PROF. PENNY L. MOORE

HLA typing of HLA-A, -B, -C, -DPB1, -DQB1 and -DRB1 loci of 226 individuals from three metropolitan areas in South Africa

Akiko Suzuki, Richard Baguma, Shobna Sawry, Katherine Gill, Jean Le Roux, Anusha Nana, Faezah Patel, Nigel Garrett, Alex Sigal, **Penny L. Moore**, Lee Fairlie, Catherine Riou, Wendy A. Burgers, Ziyaad Valley-Omar

Human Immunology

<https://doi.org/10.1016/j.humimm.2026.111677>



Other publications highlighting NICD staff contributions

Humoral and cellular immunogenicity of COVID-19 vaccine boosters in participants with advanced HIV disease



DR CAROL CROWTHER



DR SIMONE I. RICHARDSON



DR THANDEKA MOYO-GWETE



MS FAREED ABDULL



PROF. PENNY L. MOORE



Rofhiwa Nesamaria, **Carol Crowther**, **Dexter T. Chivetoa**, **Thanusha Pillay**, **Prudence Kgagudi**, **Nomcebo Shusha**, **Nelia Manamela**, Helen C. Steela, Mieke A. van der Meschta, Nevilene Slingersd, Lee-Ann Davidsd, Khanyisile Tshabalalag, Veronica Ueckermann, Ishen Seocharang, Tarylee Reddyh, **Simone I. Richardson**, **Thandeka Moyo-Gwete**, **Fareed Abdull**, **Penny L. Moore**, Theresa M. Rossouwa

Journal of Infection

<https://doi.org/10.1016/j.jinf.2026.106676>



DR THANDEKA MOYO-GWETE



PROF. PENNY L. MOORE

Safety and immunogenicity of a single dose of Ad26.COV2.S, BNT162b2 or SARS-CoV-2-rS-PN in previously vaccinated and unvaccinated adults living with and without HIV in South Africa: a phase 2a randomised, observer-blind trial



Vaneshree Govender, Tarylee Reddy, Pholo Maenetje, Trevor Beattie, Tania Adonis, Tanya Nielson, Jayajothi Moodley, John Mdluli, Aruna Bhoola, Stacey Angelo, Ravindre Panchia, Kathy Mngadi, Craig Innes, William Brumskine, Mandla Mlotshwa, Lindiwe Nhlangulela, Itai Ncube, **Thandeka Moyo-Gwete**, **Penny L Moore**, Roanne S Keeton, Wendy Burgers, Kapil Kumar, Neha Garg, Alok Tripathi, Sharfuddin Sayed, Katleho Matsimela, Nobuhle Mchunu, Robert Wallis, Vinodh A Edward, Gavin J Churchyard

Lancet HIV

[https://doi.org/10.1016/s2352-3018\(25\)00275-9](https://doi.org/10.1016/s2352-3018(25)00275-9)

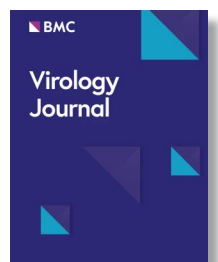


MR SHAYNE LOUBSER



PROF. CAROLINE T. TIEMESSEN

Prediction of recent HIV-1 infections using Shannon entropy analysis of HIV-1 group-specific antigen gene protein sequence



Tumelo L. Fortuin, Paballo Nkone, **Shayne Loubser**, **Caroline T. Tiemessen**, Simnikiwe H. Mayaphi

Virology Journal

<https://doi.org/10.1186/s12985-026-03080-x>

Other publications highlighting NICD staff contributions



DR ETIENNE MULLER



MS VENESSA MASEKO

High prevalence and genotypic diversity of persistent *chlamydia trachomatis* infections among South African adolescent girls and young women: A Tale of Two Cities

Smritee Dabee, Shaun Barnabas, Bart Versteeg, Brian Kullin, Shameem Z Jaumdally, Hoyam Gamiieldien, Nonhlanhla Mkhize, **Etienne Muller**, **Venessa Maseko**, Katherine Gill, Darren P Martin, Glenda Gray, Linda-Gail Bekker, David A Lewis, Heather B Jaspan, Sylvia M Bruisten, Jo-Ann S Passmore



The Journal of Infectious Diseases
<https://doi.org/10.1093/infdis/jiag023>



PROF. CHERYL COHEN



DR JOCELYN MOYES

The benefits and risks of maternal RSV vaccination on mortality in South Africa: A modeling study

Ayaka Monoi, Akira Endo, Simon R Procter, Sequoia I Leuba, Stefan Flasche, Mark Jit; **Maternal RSV Vaccine Benefit-Risk Advisory Group Collaborators:** Philippe Beutels, **Cheryl Cohen**, Daniel R. Feikin, Mihaly Koltai, Shabir A. Madhi, **Jocelyn Moyes**, Patrick K. Munywoki, Joyce Nyiro, Bryan O. Nyawanda, Erin Sparrow, Heather J Zar



PLOS Medicine
<https://doi.org/10.1371/journal.pmed.1004625>



MS LINDA DE GOUVEIA



PROF. ANNE VON GOTTBERG

Persistence of antibodies at three, four and five years of age to ten-valent pneumococcal polysaccharide protein D-conjugate vaccine in South African Children according to HIV status

Alane Izu, Anthonet Koen, Lisa Jose, Clare Cutland, **Linda de Gouveia**, **Anne von Gottberg**, Michelle J Groome, Stephanie Jones, Shabir A Madhi



The Pediatric Infectious Disease Journal
<https://doi.org/10.1097/inf.0000000000005050>

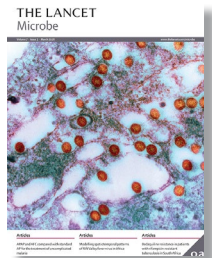
Other publications highlighting NICD staff contributions



PROF. ANNE VON GOTTBERG

Serotype-specific pneumococcal invasiveness: a global meta-analysis of paired estimates of disease incidence and carriage prevalence

Katherine E Gallagher, Fredrick Odiwour, Christian Bottomley, John Ojal, Aisha Adamu, Esther Muthumbi, Eunice W Kagucia, Laura L Hammitt, Sergio Massora, Betuel Sigaúque, Alberto Chaúque, Leocadia Vilanculos, Jennifer R Verani, Maria da Gloria Carvalho, **Anne von Gottberg**, Jackie Kleynhans, Shabir A Madhi, Courtney P Olwagen, Grant Mackenzie, Rasheed Salaudeen, Ryan Gierke, Miwako Kobayashi, Stephen Pelton, Inci Yildirim, Stepy Thomas, Amy Tunalı, Monica Farley, Todd D Swarthout, Akuzike Kalizang'oma, Robert S Heyderman, Neil French, Yoon Choi, Nick Andrews, Shamez Ladhani, Elizabeth Miller, J Anthony G Scott



The Lancet Microbe

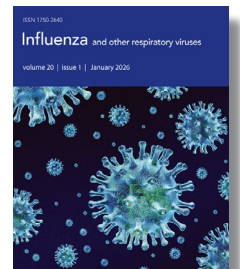
<https://doi.org/10.1016/j.lanmic.2025.101301>



DR NICOLE WOLTER

The development of global genomic surveillance of respiratory syncytial virus: Insights From 25 project countries, 2019-2023

Obadiah Kenji, Fernando Motta, Thomas Williams, **Nicole Wolter**, Ian G Barr, Clyde Dapat, Maria Zambon, Lucy Moss crop, Mei Shang, Sergejs Nikisins, Siddhivinayak Hirve, Wenqing Zhang; WHO RSV Surveillance Group



Influenza and other Respiratory Viruses

<https://doi.org/10.1111/irv.70195>



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Relationship between household attributes and contact patterns in urban and rural South Africa

Kausutua Tjikundi, Jackie Kleynhans, Stefano Tempia, **Cheryl Cohen**, Daniela Paolotti, Ciro Cattuto, Lorenzo Dall'Amico



PLOS One

<https://doi.org/10.1371/journal.pone.0344732>

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Virus Evolution

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Colleen F Hanrahan, Bareng Aletta Sanny Nonyane, Patrick Biche, Mbali Mohlamonyane, Matshidiso Morolo, **Shaheed V Omar**, Khatija Ahmed, Neil Martinson, David W Dowdy

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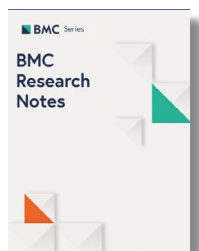
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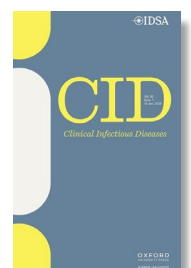
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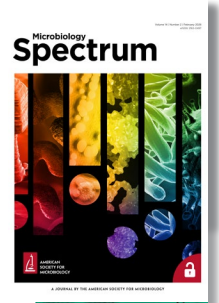
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Microbiology Spectrum

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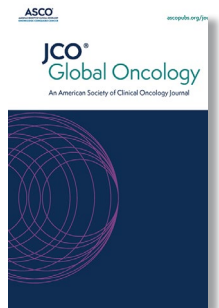
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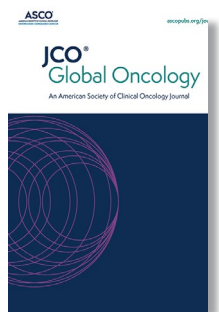
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Odole I, Andrews C, Agalliu I, Rohan T, Fernandez PW, Irusen H, Ntlaba SJ, Janivara R, Lachance J, Baichoo S, Mensah JE, Adjei AA, Abrahams AOD, Quarchie MN, Aisuodionoe-Shadrach OI, Nwegbu MM, Jamda MA, Oluwale PO, **Chen WC**, Joffe M, Adusei B, Doherty S, Pentz A, Adebisi A, Ogunbiyi O, Jalloh M, Rebbeck TR.

JCO Global Oncology

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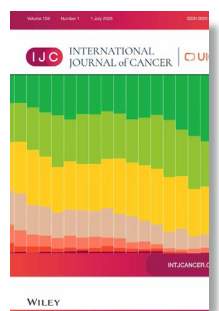
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