

FROM STABLE TO SOCIETY

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CONTENTS

01

Message from the Executive Director
Editorial Team

02

From Stable to Society

03

Beyond Communicable Diseases, the
First Public Health Bulletin in
South Africa

04

South Africa's Remarkable Progress
in Tackling TB: A Cause for
Celebration

Call of Duty! Giving our Hearts and
Souls to Good Causes for Society

05

Building Microbiology Laboratory
Capacity to Improve Surveillance
for AMR in the WHO African
Region

06

Relatable and Reliable Health
Messaging Matters

07

Prepared to Beat Malaria

Building Malaria Genomic Capacity

08

Achievements

Verified and Certified

09

Training and Development

10

A Cancer Partnership to Close
the Surveillance Data Gap

What are People Saying?



“
We remain **committed** to
our **mission** of **protecting**
and **promoting**
public health. ”

Prof Adrian Puren

Message From **THE EXECUTIVE DIRECTOR**

Our pulse may have skipped a beat, but we're back and stronger than ever! The theme for this edition of the NICD Pulse Newsletter is 'Stable to Society.' This theme encapsulates our commitment to ensuring that the important work we do at our beautiful campus at the National Institute for Communicable Diseases (NICD) contributes to the well-being of society.

In this issue, you can look forward to reading articles about our contribution to society from advancing public health through research and data-driven solutions, to creating relatable health messaging, which leads to increased understanding, engagement and behaviour change.

I'm excited to announce the recent appointments of three exceptional individuals who have strengthened our organisation: Dr Weyer Jacqueline as the Centre Head of the Centre for Emerging Zoonotic and Parasitic Diseases, Dr Prabdial Sing Nishi as Centre Head of the Centre for Vaccines and Immunology and Dr Muchengeti Mazvita as the Head of the National Cancer Registry.

I am delighted to celebrate the success of Dr Harry Moultrie, who has been recognised and awarded a



Recognition of Success Certificate by The International Association of National Public Health Institutes (IANPHI) for his outstanding efforts in partnership with the South African COVID-19 Modelling Consortium.

In line with achievements, a group of biosafety professionals completed training and have earned their stamp of approval and have been certified by the International Federation of Biosafety Associations (IFBA). Prepare to be impressed by a blurb on the ISO 9001 certification, as it is sure to leave you feeling inspired and excited about the NICD's commitment to excellence in public health.

As we continue to navigate the complex and evolving landscape of communicable diseases, we remain committed to our mission of protecting and promoting public health.

Please continue to share activities within your departments and centres with our Senior Communications Manager, Sinenhlanhla@nicd.ac.za

Thank you for your ongoing support and commitment, Enjoy the edition!

MEET OUR EDITORIAL TEAM



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From Stable to Society

Efforts to Improve Public Health require Accurate and Reliable Data Analysis and need to be Measured before they can be addressed



By Nande Harmans

We hear from Dr Trevor Bell about the work he and his team do in support of data-driven interventions. He begins by quoting the British physicist and mathematician, William Thomson Kelvin, who said: "What is not defined cannot be measured." What is not measured cannot be improved. What is not improved is always degraded."

Efforts to improve public health require accurate and reliable data and analyses - diseases and illnesses need to be measured before they can be addressed. The Surveillance Data Warehouse (SDW) provides a selection of comprehensive data to centres and Notifiable Medical Condition (NMC).

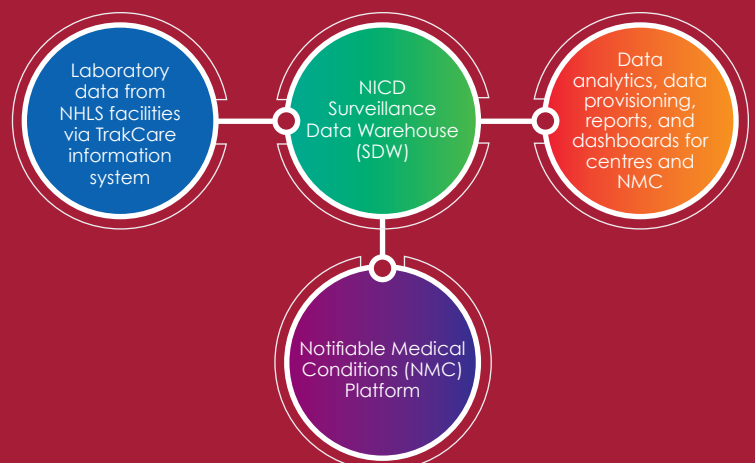
One of the mandates of the NICD is the surveillance of infectious diseases of public health interest. This includes NMC and outbreaks of diseases. NHLS test results from public health hospitals and clinics nationwide are collected in the NICD SDW. These data are provided to NICD centres and the NMC group to facilitate their surveillance and response activities. Additionally, clinical surveillance data for NMC and other conditions are captured via Apps, which provide access to these data for provincial epidemiologists, field workers, and nurses.

Laboratory data is sourced directly from the TrakCare Laboratory Information System (LIS) and stored in a dedicated data warehouse appliance (server). The quality and integrity of these data are routinely reviewed and improved.

The NICD SDW provides data on request to NICD centres and requires the approval of the Head of the Centre. It is a requirement that all data provided be encrypted. In most cases, the requester is provided with a provisional data extract so that they can verify it, thereafter, a full data extract will be made available. The NICD receives private sector data for Cancer which will be integrated into the SDW once the facility codes for the private sector are finalised.

Data are used by centres for surveillance, informing public health decision-making, tracking and responding to outbreaks.

SDW FLOWCHART





BEYOND COMMUNICABLE DISEASES, THE FIRST PUBLIC HEALTH BULLETIN IN SOUTH AFRICA

By Koketso Matjane, Sinenhlanhla Jimoh

Since November 2003, the National Institute for Communicable Diseases' Public Health Surveillance Bulletin (PHSB) has provided communicable diseases information on current and actionable disease surveillance relevant to South Africa and the Southern African Development Community (SADC).

The expansion of the PHSB is set to move beyond its current approach, which focuses solely on communicable diseases. Instead, the publication will now be known as the Public Health Bulletin South Africa (PHBSA) and will consist of an array of Public Health Bulletin expansion research across the fields and sub-fields of communicable and non-communicable diseases, environmental health, occupational health and others.

As a result, the PHBSA will serve as one of many tools needed to realise the country-wide objective of a unified reporting system on communicable and non-communicable disease, cancer, occupational health and safety, injuries and other conditions under surveillance, that are currently lacking.

As South Africa's first all-encompassing Public Health Bulletin, the PHBSA website is expected to garner a fair amount of attention from various stakeholders in the field of public health.

Follow the PHBSA on [Facebook](#), [LinkedIn](#), and [Twitter](#) under the handles @TheBulletin_SA and @PublicHealthBulletinSouthAfrica to stay up to date on the [website](#)'s launch and the first calls for manuscript submissions.

Pro-tip: Once the website has been launched, researchers are urged to familiarise themselves with the following documents before commencing with their research:

- Publishing guidelines
- Criteria for authors
- Author submission checklist
- Review process



“
A platform for publishing
and sharing information
about communicable
and non-communicable
diseases in South Africa.
”



South Africa's Remarkable Progress in Tackling TB: A Cause for Celebration



By Koketso Matjane

Every year on the 24th of March, World Tuberculosis Day is observed. On this day, the National Institute for Communicable Diseases (NICD), in collaboration with the international community's commemorates the struggle against Tuberculosis. The international community's call for action is drawn from the **#YesWeCanEndTB** theme. This year, the NICD honoured Tuberculosis Awareness Day by highlighting the South Africa's achievements in the fight against Tuberculosis.

The Centre for Tuberculosis, with the support of the Global Fund, has developed a TB dashboard in order to facilitate access to TB surveillance data for programme management in an effort to achieve the **#ENDTB** goals of 2035. Keep your eyes peeled on the NICD website for the new, updated dashboard. **#YesWeCanEndTB #WorldTBDay #EndTB.**

Did you know?

South Africa was the first country to introduce the all-oral short drug-resistant TB treatment regimen as of June 2018. The national implementation of the shorter 6-month DR-TB regimen is imminent.

CALL OF DUTY!

Giving our Hearts and Souls to Good Causes for Society

By Lesego Sibilanga

The staff of the National Institute for Communicable Diseases (NICD) extend themselves beyond the call of duty and give their hearts and "soles" to good causes.

On February 17th, our staff kicked off their shoes for a day and slipped on a pair of flip-flops for CHOC's annual Flip Flop Day in support of the brave children and teenagers. CHOC Childhood Cancer Foundation is a non-profit organisation that advocates for the health and well-being of children and teenagers diagnosed with cancer or life-threatening blood disorders and their families.



Though not all laboratory staff could wear flip-flops due to safety reasons, they wore their sticker with pride, and together, contributions from staff amounted to a total of R2050. Thank you for taking a colourful stand to support CHOC Childhood Cancer Foundation.

We look forward in having you participate for future CSI causes, to help the NICD maintain their commitment to bringing hope to communities in need.

Building Microbiology Laboratory Capacity to Improve **Surveillance for AMR in the WHO African Region**

By Prof Olga Perovic

The Centre for Healthcare-Associated Infections, Antimicrobial Resistance and Mycoses (AMRL-CC/CHARM) is designated as the World Health Organization Collaborating Centre for Antimicrobial Resistance. One of its most important activities is the provision of External Quality Assessment Programs to the African region.

In July 2002, the World Health Organization (WHO) launched a regional microbiology External Quality Assessment Programme (EQAP) for National Public Health Laboratories (NPHLs) in the African region and enrolment was based on a WHO agreement with ministries of health in each country. The programme was streamlined to address antimicrobial resistance (AMR) according to the World Health Organization, Global Antimicrobial Surveillance System (WHO-GLASS) guideline. One of the objectives was to build a microbiology laboratory capacity and to improve surveillance for AMR in the WHO African region.

As from 2020, the UK's Fleming Fund supported laboratory capacity building in the African region with country and regional grants. The leading organisation that performed these activities is the African Society for Laboratory Medicine (ASLM), which functions as a pan-African society for laboratory professionals. Its mission is to advance professional laboratory practice,



ASLM visit to CHARM/ NICD, from the left Dr Talkmore Maruta, Director of the programs, A/Prof Olga Perovic, Principal Pathologist at CHARM/NICD, and ASLM CEO Nqobile Ndlovu.

science, systems and networks in Africa that is needed to support preventive medicine, quality care of patients, and disease control through partnerships and relevant organisations.

The External Quality Assessment Grant for Africa (EQuAFRICA), aims to strengthen the quality of diagnostics for Anti-microbial Resistance (AMR) across Africa with a One Health approach. NICD is a consortium partner and a member of the steering committee working in coordination with ASLM for the strengthening of in-country capacity for the coordination of national EQA and the selection and strengthening of centres of excellence for additional capacity for international/ regional EQA. Phase I of EQuAFRICA is complete and we are in transition to Phase II currently - to expand and build on the accomplishments achieved thus far. We used a 'design and build' approach to develop the programme.

On 10th May, ASLM CEO Nqobile Ndlovu and Director of the Programs Talkmore Maruta visited NICD and Centre for Healthcare-Associated Infections, Antimicrobial Resistance & Mycoses, to discuss way forward. in serving further development of the EQA programs.



Relatable and Reliable Health Messaging Matters

By Puseletso Kobedi

Through various health communication strategies, the NICD's messaging goal has been to empower and influence individuals and communities to make healthier life-saving choices.

With the aforementioned, the key to impactful public health messaging is relatability, usability and accuracy. While the NICD's messaging and communication are characterised as being formal, the communications unit wanted to share messaging that spoke to the current culture, which was humorous but most importantly, reliable and relatable. In December, the NICD ran a campaign titled "Ube grand this festive". Ube grand is a colloquial term, meaning "be good/be fine" when directly translated.

Some of the messaging for this campaign;

Even with a 55-minute warning, you can never be fully prepared for Stage 5 load shedding. However, when it comes to malaria, you can be prepared. Take your #antimalarial drugs to protect yourself from malaria if you'll be travelling to malaria-endemic areas.

#UbeGrandThisFestive

#KeDezemba Planning a family braai this Sunday? Don't give your in-laws salmonella this holiday season, make sure to wash your hands before impressing them with your braai skills.

#UbeGrandThisFestive
#BeJollyBeSafe

Does wearing a mask make you feel like the odd one out? If you or your loved ones have underlying conditions or you are feeling ill, then wearing a mask will keep you and your loved ones safe.

#KeDezemba
#UbeGrandThisFestive
#BeJollyBeSafe"



Overall, the campaign reached close to 95 000 followers on Twitter and 1.7 million users on Facebook.

Through this campaign, we were able to build self-efficacy for a safe and happy holiday. As the NICD, we look forward to reaching as many South Africans as possible, and we can do this through you following our social media pages and sharing our messaging-let's all play our part in being advocates for reliable and relatable public health messaging.

Prepared to Beat Malaria

By Koketso Matjane, Bhavani Moodley

Malaria, a life-threatening parasitic disease transmitted by female Anopheles mosquitoes, claims approximately 600,000 lives annually, predominantly in Africa. Despite being preventable and treatable, malaria remains a significant global health challenge.

World Malaria Day, observed on April 25th each year, provides an opportunity for the global community to reinforce its dedication to combating malaria. This year, the Centre for Emerging, Zoonotic and Parasitic Diseases embraced the theme "Time to deliver zero malaria: invest, innovate, implement" and introduced engaging activities to raise awareness during the event.

Take a look at some of the feedback from the World Malaria Day event attendees:

"I loved that the sessions were interactive, this helps us to remember what was being taught, even after the event".

Nomsa Sello

"The sessions were very informative. I took much interest in the fieldwork conducted to establish malaria breeding sites". **Idah Jordaan**



Building Malaria Genomic Capacity

Within Seven Southern African National Malaria Control Programmes

By Dr Jaishree Raman

With funding from the Bill and Melinda Gates Foundation, NICD's Laboratory for Antimalarial Resistance Monitoring and Malaria Operational Research (ARMMOR), in collaboration with the University of California-San Francisco (USCF) and Elimination 8 (E8), a regional malaria elimination initiative, is developing malaria molecular surveillance (MMS) capacity within southern African national malaria control programmes (NMCPs).

A Translational-Genomic Fellow (TramGen) was selected by the NMCPs from each of the seven participating countries (Angola, Botswana, Eswatini, Mozambique, Namibia, South Africa, and Zambia), to participate in an intensive 18-month training programme. Over the 18 months, the fellows will receive training on generating, analysing and translating next-generation sequencing malaria parasite data for operational programmatic use, programming in R, scientific communication, and concept note development.

A two-day face-to-face training session with the TramGen fellows was held in Johannesburg this year over the third week of March. The training, facilitated by technical experts from UCSF, ARMMOR, E8, Johns Hopkins University, and the London School of Tropical Medicine and Hygiene, comprised theoretical and practical sessions. On the first day, the fellows had lectures on interpreting genomic data, sampling strategies, and concept note development. On day two, the fellow visited the NICD, where they received hands-on training on the Chelex-Tween extraction method, generating a standard curve, running and analysing qPCR data, and analysing data from the Tape Station.

At the end of the training, the fellows received an information pack containing copies of the standard operating procedures they were trained on for them to implement in their respective laboratories. This training marks the first concrete step in transferring molecular surveillance capacity to the seven participating NMCPs.

Achievements



SAFETP staff & alumni participated in the 'National Workshop on Integrated Disease Surveillance and Response (IDSR) Assessment & Action Planning'. The goal was to establish a baseline of national surveillance & response capacities to inform the National IDSR strategic plan.



Setting the Standard: Introducing the First Performance Evaluation Laboratory (PEL) for TB NAT Evaluation.



Recognising Excellence in Disease Research: The CEPZD Team's study on Malaria Risk and Insecticide Resistance nominated for the South African Journal of Science (SAJS) Outstanding Article Award 2022.



Breaking New Ground: The NICD listed as the First TB Laboratory for WHO Prequalification Unit's Performance Evaluation.



New Appointments: In pursuit of inclusion and representation, the institution has bolstered our organisation with deserving appointments: Dr Weyer Jacqueline as CEZPD's Centre Head, Dr Prabdiel Sing Nishi as CVI's Centre Head, and Dr Muchengeti Mazvita as the Head of the NCR.



Celebrating Academic Excellence: NCR proudly presents three new Cancer Epidemiology PhD Graduates, Dr Mwiza Singini, Dr Melitah Motlhale, and Dr Carl Chen.

Verified and Certified



Dr Harry Moultrie was recognised and awarded a Recognition of Success Certificate by The International Association of National Public Health Institutes (IANPHI).



Dr Harry Moultrie
Centre for Tuberculosis



ISO 9001 accreditation is crucial to our success as an organisation dedicated to quality management systems, customer satisfaction, risk management, and employee engagement. This year, we successfully expanded our accredited departments, including HR, IT, Finance, DBB, SBI, and the Communications Unit, with zero non-conformances.



We congratulate Kovashnee Naidoo, Lindy Gumede, Nicola Page, Thendo Netshilema, Wayne Howard, Zacharia Mabena, and Herman Geyer for successfully completing the online training and becoming certified biosafety professionals under the International Federation of Biosafety Associations (IFBA).

RDDC: A TRAJECTORY OF EXCELLENCE AND UNPRECEDENTED REACH IN AFRICA



Since its official opening, the **Regional Diagnostics Demonstration Centre (RDDC)** has transformed into a pioneering centre of excellence in the continent, marking a significant trajectory in training and outreach. **Serving as a benchmark for others, this state-of-the-art facility houses regional subject matter experts who provide invaluable mentorship and guidance for the establishment of similar excellence centres across Africa.**



The RDDC has garnered active participation from **over 440 individuals hailing from at least 33 countries, including Algeria, Morocco, Angola, and Botswana, among others.** These participants have immensely benefited from the centre's

comprehensive training programs. In a matter of just five months, the RDDC has achieved remarkable success, surpassing previous limits and reaching unprecedented levels of excellence.

NICD and China CDC Host Inaugural Technical Workshop on SARSCoV-2 Immunology and Biosecurity Advance:

The NICD and China CDC held their first technical workshop on the 17th of January 2023, after signing a memorandum of understanding. The 1 ½ hour conference was attended by participants from NICD, China CDC, and the Chinese embassy in South Africa via Zoom. The workshop consisted of four presentations, two of which focused on SARSCoV-2 immunology, and two that discussed China's Biosecurity advances, efforts to make guidelines available globally, and the NGS-SA network that is helping to sequence SARS-CoV-2. During a brief discussion period, participants exchanged ideas and paved the way for future conversations. The NICD is committed to fostering collaboration and implementing innovative ideas to address communicable diseases. By engaging in future conversations and incorporating shared ideas, the NICD can further enhance its efforts in disease prevention, surveillance, and control.



A Cancer Partnership to Close the Surveillance Data Gap

By **Sinenhlanhla Jimoh, Koketso Matjane**

The South African National Cancer Register (NCR), a division within the National Health Laboratory Services has effective from the 15th of March 2023, formalised its partnership with Living with Cancer South Africa (LWCSA); an organisation established to create a community for individuals diagnosed with cancer and establish the first-ever “patient-led cancer registry.

This agreement, as outlined in the Memorandum of Understanding (MoU), is expected to strengthen collaboration efforts between the NCR and the LWCSA. The aforementioned collaborative efforts will be realised through, but are not limited to, the following activities: working within the cancer community as a “Patient Advocacy Group”; creating a safe space for people living with cancer to connect with each

other and report their cancers to the NCR; and strengthening collaborations of the NCR with people living with cancer, civil society and the private sector.

“The global cancer community commemorated World Cancer Day on the 4th of February 2023. The theme for 2023 was #CloseTheCareGap and called for us to unite our voices and take action. In order to close the cancer surveillance gap, we need to unite as government, NGOs, people with cancer and the private sector, and take action. Accurate cancer statistics are critical to the fight against inequalities in cancer diagnosis and care.” Dr Mazvita Muchengeti, Head of Department, National Cancer Registry.

<https://livingwithcancersa.co.za/register/>

What are People Saying ?

Gail Boreham

Well done **National Institute for Communicable Diseases** , it looks like you have overcome the Measles outbreak. Keep up the good work. Take Care



Liza Tóth #FBPE @pattorneyliza

RT @Rajeev_The_King: Thanks to the **NICD** for collecting these data and preparing the weekly surveillance reports. All data can be found in the weekly reports <https://t.co/2GodmJ6OrM>

NICD



CHOC Childhood Cancer Foundation SA · Follow

We are incredibly humbled that the **National Institute for Communicable Diseases** joined us to support #flipflopday !



Masengwa @Mphephetwa28 · Mar 28

Replying to @UncensoredView1 @XhantiPayi and @lungile_mashele Dear @nicd_sa please run a campaign on immunisation and dangers of not doing so cc @HealthZA @HST_health

