

NICD
PULSE



NATIONAL INSTITUTE FOR
COMMUNICABLE DISEASES
Division of the National Health Laboratory Service

Around the
WORLD
FOR PUBLIC HEALTH
WITH THE NICD



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Kigali: Harnessing Local Institutional & Community Support for the Elimination of Vector-Borne Diseases (Image Source: Dr Jaishree Raman).

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Five Keys, for Food Safety,
during Holidays Festive
Season



Jinal Bhiman at the Goalkeepers Conference 2022, September New York USA.



Womi Eteng (Africa CDC) and Nevshan Govender (NICD) and a huge Mosquito in Abuja, Nigeria.



Khuliso Ravhuhali at the 11th TEPHINET Conference in Panama City. The Panama sign is located in the Cinta Costera, near the Anayansi fountain. Cinta Costera is on Balboa Avenue, and it is a beautiful path along the Pacific Coast, where people can walk, cycle and run.



MESSAGE FROM

THE EXECUTIVE DIRECTOR

This edition's theme is **“Around the World for Public Health.”**

One of modern humanity's most pressing challenges is global population health. This does not refer to a single country or a group of countries but to all humanity.

The NICD community plays a vital role in global health and placing communities at the heart of what we do. In this Issue, we give you a glimpse of where some of our staff members have been for the sake of public health. If you would like to share photos of where you have been, please email sinenhlanhlaj@nicd.ac.za.

Even though year-end exhaustion is approaching, I want to thank you for your excellent work. This issue emphasises the significant contributions that every one of you makes to promoting health in our country and the world. We are

responsible for contributing to our country's well-being, and as the stories in this publication show, we are moving on the right path.

In the opening piece of this edition, the NICD received a worth-mentioning nod of approval for being a Trusted Vaccine Source by the Vaccine Safety Net Project (VSN). Added to the many NICD achievements this quarter, SAFETP frontline graduate Dr Thendo Ndo received an award in the category of “Best Oral Presentation by an FETP Frontline Fellow or Recent Graduate” at the 11th Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) conference.

As we head to the malaria season, Dr Jaishree Raman outlined the first steps in an innovative multi-country malaria genomic project to enhance malaria

elimination in all contributing countries. In this issue we also focus on putting the public back in public health with the CoughWatchSA Surveillance App, we can all play a role and benefit from resolving outbreaks more effectively. This reduces the impact of diseases by contributing data that we wouldn't ordinarily get from our existing surveillance platforms.

The CHIVSTI's Mandla and Shane deserve congratulations for finishing the Comrades 2022 Marathon.

Finally, if you have been fatigued by the end of the year, read this edition at least once. I certainly have been inspired to keep moving forward...

Enjoy the read...

Prof Adrian Puren



MEET OUR EDITORIAL TEAM



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A Trusted Vaccine Source

THE NICD GETS THE STAMP OF APPROVAL

By Puseletso Kobedi



As the world responded to the COVID-19 pandemic, we faced the challenge of an overabundance of information related to the virus, more especially the COVID-19 vaccine. It is almost without saying that inaccurate information spreads widely and rapidly, making it more difficult for the public to identify verified facts and advice from trusted sources. Recognising that there was a great deal of misleading and potentially harmful information, the World Health Organization (WHO) initiated the Vaccine Safety Net Project (VSN). The VSN is a network of a diverse group of digital information resources

(websites and social media), located in countries around the world that provides scientifically-based information on vaccine safety. It is with the utmost excitement to announce that the National Institute for Communicable Diseases (NICD), through a rigorous evaluation, has qualified to be part of the Vaccine Safety Net. As a public health institute, the NICD is proud to be part of a global network of institutions that provide reliable, science-based information. This is with the goal of increasing awareness about vaccines, reducing vaccine hesitancy and strengthening confidence in vaccines. NICD Senior Communications Manager Sinenhlanhla Jimoh commented,

“Leading a team of communicators to ensure that the information we disseminate is pragmatically written and to safeguard the institution’s image has been the cornerstone of our communication strategy. Resolving damage on social media is a fundamental obligation of the communication unit, and being recognized for what we do every day is immensely rewarding.”

To learn more about the Vaccine Safety Net, click on the link below.

<https://vaccinesafetynet.org/vsn/vaccine-safety-net>

ENHANCING SOUTHERN AFRICA’S MALARIA ELIMINATION EFFORTS THROUGH GENOMICS

Dr Jaishree Raman

NICD’s Laboratory for Antimalarial Resistance Monitoring and Malaria Operational Research (ARMOR), in collaboration with the University of California-San Francisco (UCSF) and Elimination 8 (E8), a regional malaria elimination initiative, is implementing a multi-country malaria genomic surveillance program. The Gene8 project, funded by the Bill and Melinda Gates Foundation, aims to generate malaria parasite genomic data that will be used by national malaria control programmes (NMCPs) to improve intervention selection and targeting, ultimately assisting the southern African region to stop the local transmission of malaria.

An extensive capacity-building component is included in the Gene8 Project to ensure that NMCPs are able to utilize the genomic data generated by the project. Two different streams of capacity building will be undertaken by the project. One training stream targets malaria

control managers and aims to improve their understanding of and utility of genomic data. The second, more intensive training stream, will focus on building sustainable genomic and bioinformatics capacity within the NMCPs.

Project Fellows, selected by the NMCPs from the seven participating countries (Angola, Botswana, Eswatini, Mozambique, Namibia, South Africa and Zambia), will be trained on generating, analysing and translating parasite genomic data for operational programmatic use. During the second week of September this year, the first training session for both the NMCPs members and fellows was held in Johannesburg.

The training, facilitated by technical experts from UCSF, ARMOR, E8, John Hopkins University, KEMRI and the London School of Tropical Medicine and Hygiene, included modules on amplicon sequencing, cleaning and interpreting

sequencing data as well as analysing genomic data using Excel and R. The trainees and technical experts also visited the NICD’s Sequencing Core, where all the sequencing for this project will be conducted, and the insectaries and mass-rearing facility.

This training marks the first step in this innovative multi-country malaria genomic project, which aims to assist all participating countries to accelerate malaria elimination.



GLOBAL ACHIEVEMENT OF ONE, REPRESENTING ALL | SAFETP

By Lesego Sibilanga



Global Science Conference Awards

Residents (trainees) of the SAFETP got the opportunity to share their field project findings on this prestigious platform in the form of oral and poster presentations. These entail weeks of preparation with the help of supervisors and relevant experts. During the awards and closing ceremony, the SAFETP frontline graduate, Dr Thendo Ndou, received an award for the category of “Best Oral Presentation by an FETP Frontline Fellow or Recent Graduate” for her abstract on Epidemiology of ESKAPE Pathogens at a Tertiary Care Hospital, South Africa, January 2019 to August 2021. The key results included a high proportion of cases in the neonatal intensive care unit (NICU) and the establishment of an antimicrobial stewardship programme was one of the public health actions taken. This is an astounding achievement for all of the SAFETP and the NICD.

As part of commemoration activities towards the second annual World Field Epidemiology Day, the South African Field Epidemiology Training Programme (SAFETP) staff and two residents (one Frontline graduate and one Advanced Tier resident) attended the 11th Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) Global Scientific Conference from 4-9 September 2022, in Panama City, Panama. Joining them were SAFETP alumni, representatives from the University of Pretoria, WITS University, the US CDC South Africa, Gauteng Department of Health Public Health Directorate, and colleagues from the National Institute for Communicable Diseases (NICD). As part of the global TEPHINET network partners that offers training in the areas of field epidemiology, disease surveillance and emergency preparedness,



SAFETP

YOU CAN VISIT **THE SAFETP SOCIAL MEDIA PAGES TO VIEW** SOME OF THE **WORLD FIELD EPIDEMIOLOGY** PICTURES FROM THE EVENT.



[https://twitter.com/SA_FETP,](https://twitter.com/SA_FETP)



[https://www.facebook.com/NICDSAFETP/,](https://www.facebook.com/NICDSAFETP/)



[https://linkedin.com/in/sa-field-epidemiology-training-programme-fetp-60365623a,](https://linkedin.com/in/sa-field-epidemiology-training-programme-fetp-60365623a)



[https://www.instagram.com/sa_fetp/.](https://www.instagram.com/sa_fetp/)

In Pursuit Of Healthy Communities



**10 RCC
COUNTRIES**



**ESWATINI
VISIT**

By Nileen Gale

A country's ability to effectively prevent, detect and respond to public health threats is greatly enhanced by a National Public Health Institute (NPHI), and in the absence thereof a valuable opportunity is presented to establish one. With this in mind, the NICD recently had the honour of hosting 10 Member States from the Regional Collaborating Centre at a conference where Executive Director, Prof Adrian Puren, and Deputy Director, Dr Natalie Mayet, imparted key learnings about the National Public Health Institute of South African (NAPHISA). Dr Lazarus Kuonza, Head of SAFETP, also shared highlights and successes, while stressing the significant role that Field Epidemiologists play in improving public health.

In support of the Africa Centres for Disease Control and Prevention's (Africa CDC) strategic goals to establish and strengthen NPHIs, delegates enjoyed exclusive access to key areas at the NICD, including the Emergency Operations Centre, Core Sequencing Facility, and Biosafety Level 3 and 4 laboratories.

Honoured to host the delegates from various Ministries of Health, including Namibia, Zimbabwe, Mozambique and Botswana, Prof

Puren shared that: "NPHIs typically initiate and coordinate crucial public health functions, while providing key data insights and recommendations on how to improve public health programmes." He added that organised and engaged public health activities equip countries to sustain public health systems and to better manage disease outbreaks, all of which contribute to healthy communities. "We thank the delegates for joining us and wish them all the best as they journey back to their home countries to establish these critical public health institutes," Puren concluded.

Following the visit of the Member States, we were pleased to host six representatives from the Eswatini National Public Health Institute on September 9. Enhancing public health continues to be the theme of the visit.

“ NPHIs typically initiate and coordinate crucial public health functions, while providing key data insights and recommendations on how to improve public health programmes. ”

Putting The Public Back In Public Health

With The CoughWatchSA Surveillance App

By Nande Harmans

Mvuyo Makhasi MSc (Eng) Data Manager for the Centre for Respiratory Diseases and Meningitis (CRDM) who is the project lead for CoughWatchSA, takes us through the journey of the pilot CoughWatchSA Surveillance App pilot.

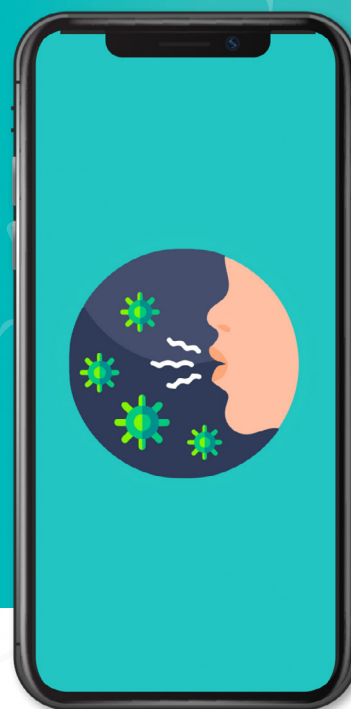
“CoughWatchSA (CWSA) is a community-based surveillance mobile app, which uses an online survey. Members of the community may utilize this App when they present the following symptoms: (List the symptom’s).

In turn, a team of specialists would analyse the data on the back-end to determine if it is a case or not. The app collects weekly reports on symptoms that are related to influenza and influenza-like illnesses, with Covid-19 included.”

The app survey questionnaire asks participants if they have any flu-associated symptoms that they have encountered during that particular week. If they do they are then asked a series of follow-up questions such as what symptoms they have . The combination of symptoms reported, is used to determine if this is a suspected case of influenza-like illness or COVID-19. Which is then used as a surveillance platform to quantify suspected cases in the community as reported by the participants through the platform.

Makhasi, added “there’s a lot to look forward to with the second phase of the pilot of CoughWatchSA. Taking into account the learnings from this year and refining what works. We are completely changing the interface and technology used in the pilot. It will no longer be a survey and will now be a website where there’s editorial content featured and videos on the home page and a tab for FAQ’s. One of the key features that we look forward to is building a monitoring tool to monitor the symptoms reported over time. Featuring content that will engage and educate the community.”

Growing and retaining enrolments on the platform is of key importance for the success of the app. It will be an official platform next year in March that is integrated with our facility-based surveillance system and will no longer run as a standalone pilot.



The long term plan is to deploy the platform for three years and assess the utility and define the parameters that tell us, from the CWSA app when the influenza season begins from the three years of data collected. Which will inform the parameters of health-seeking and what is associated with it, what options the community is using more frequently, and define more quantitatively the burden of non-medically attended cases. And see how much of that is missing from our symptoms surveillance.

According to the lead for CoughWatchSA, “the pilot would not have been successful without the collaboration of researchers, communications team, legal team and the participants themselves.”

We need to put the Public Back in Public Health and share a collective responsibility for public health in order to improve our surveillance effort. We can all play a role and benefit from resolving outbreaks more timeously which reduces the impact of the diseases by contributing data that we wouldn’t ordinarily get from our already existing surveillance platforms.

We can then make more informed decisions about the actions we need to take. CWSA is the tool for that, to give power back to the public in terms of how we can improve surveillance and research which informs all the work we do to minimise diseases, hospitalisations and save lives.”

Let’s get the word out about the second phase of the pilot in March 2023 and encourage enrollments.

“ there’s a lot to look forward to with the second phase of the pilot of CoughWatchSA... ”

CELEBRATING WORLD FIELD EPIDEMIOLOGY DAY



By Lesego Sibilanga, Nqobile Ngoma

The 7th of September 2022 marked the second World Epidemiology Day. In commemoration, the NICD's South African Field Epidemiology Training Programme (SAFETP) held a celebratory event where speakers like Dr Gelting Richard from the US CDC South Africa region, Ms Refilwe Mokgetle from the Gauteng Department of Health, and Jackie Kleynhans from the NICD shared their experiences by acknowledging advancements that have been made so far.

Field Epidemiologists were at the forefront of the fight against the COVID-19 pandemic, increasing awareness of their significance.

Housed at the National Institute for Communicable Diseases (NICD), a division of the National Health Laboratory Service, SAFETP is one of the global

Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) network partners that offers training in the areas of field epidemiology, disease surveillance and emergency preparedness. The three-tiered training model comprises of an advanced 2-year programme, a 9-month intermediate programme and a 3-month frontline programme.

"The emphasis on the FETP training model is field-based experiential learning. As participants are training, they also provide a service.

Furthermore, the information provided by Field Epidemiologists helps policy and decision makers to develop informed health programmes and interventions," comments Dr Lazarus Kuonza, SAFETP Programme Director. Colloquially referred to as disease detectives, Field Epidemiologists are considered the boots on the ground and the cornerstone of

public health preparedness and response. "These individuals normally work long hours, while completing arduous tasks to identify disease trends and determine risk factors and causes. The information they collect serves as recommendations for effective prevention and treatment measures," Dr Kuonza adds.

The daily activities of a field epidemiologist include outbreak investigation and control, community engagement, epidemiological teaching, data collection and analysis, designing and implementing research studies, and designing and evaluating disease surveillance systems.

Despite the attention the profession has recently gained, there is still a lot of work required to better understand the importance of field epidemiology. Enhancing public health systems to enable rapid detection and response to future outbreaks.

NICD ACHIEVEMENTS

Nominated for AG OETTLÉ MEMORIAL AWARD 2022, The late Dr Elvira Singh was nominated and the recipient of the AG OETTLÉ MEMORIAL AWARD 2022. The late, Dr Singh was recognised as an excellent, committed researcher who has made significant contributions to cancer control in South Africa and her extraordinary efforts in cancer registration. CANSA honours this distinguished scientist for advancing cancer research and understanding a devastating disease. The event was held on the 25th of October 2022

SAFETP: 11th TEPHINET Global Scientific Conference held in Panama City. FETP Frontline graduate, Dr **Thendo Ndou**, was awarded the "Best Oral Presentation by a Frontline FETP Fellow or Recent Graduate" for her presentation titled, "Epidemiology of ESKAPE Pathogens at a Tertiary Care Hospital in South Africa, January 2019-August 2021".

SEPTEMBER 2022 - CEZPD: Vector Control:

The VCRL has been nominated by the Secretariat of the **International Atomic Energy Agency (IAEA)** to host the training of a fellow in the field of insect control via their fellowship programme under the tutelage of Dr Givemore Munhenga. This is a significant honour for the Sterile Insect Technique (SIT) project. Congratulations to Dr Givemore and his team.



NICD STAFF IN THE ULTIMATE HUMAN RACE, OUTSIDE PIETERMARITZBURG CITY HALL

By Nande Harmans

Sunday, August 28th 2022, at 05h30 outside Pietermaritzburg City Hall. 11 709 of the 13 213 runners who participated in the 2022 Comrades Marathon made it to the finish line of this year's down-run. Two of our colleagues were part of the 11 709 that completed the 90.2km finishing at the Moses Mabhida Stadium in Durban. Like golden threads, Mandla Phillemon Nyembe and Shane Redelinghuys from the Centre for HIV and STIs, personified the words of Nelson Mandela, "Running through the struggle like a golden thread was the indomitable human spirit and a capacity for self-sacrifice and discipline."

Shane remarked, "My journey to Comrades had been a long one. I had entered for the ultra-marathon twice before, but went in with a run injury both times and could not complete the race on both occasions. However, for the 2022 edition, I decided to approach Yolande Maclean, 9-times gold medallist, for a training program. With proper guidance from an elite athlete, I managed to run a time of 9h06 for the 90km race. I wasn't sure what to expect in terms of the weather as the race had been shifted from early June to late August. But luckily the weather played along as it was overcast for a big chunk of the day and it wasn't too hot. Everything else also fell into place on the day; I just executed my race plan and absorbed the crowd support along the route as much as I could. With 10kms to go my legs could feel the jarring of the past 80kms, but I hung tough and was excited to step onto the green carpet to finish strong. All in all it was an enjoyable day in the office. Needless to say, the following two days I could not walk properly but that was a minor price to pay for a successful race!"

"Due to the two year break of the marathon because of Covid-19 training was affected. On the day of the marathon, 29 km towards the finishing mark, I started experiencing muscle pull and fatigue, but I managed to finish in 10 hours 17 minutes. This is my second time participating in the comrades and I am also looking forward to the third," Nyembe speaks on his journey with the race.

Both the words of our colleagues may resonate with you, because they describe the journey one takes in any race of life...



Shane Redelinghuys
Comrades Marathon



Mandla Nyembe
Comrades Marathon



MONKEYPOX VIDEO SHOOT LET'S TALK

By Puseletso Kobedi

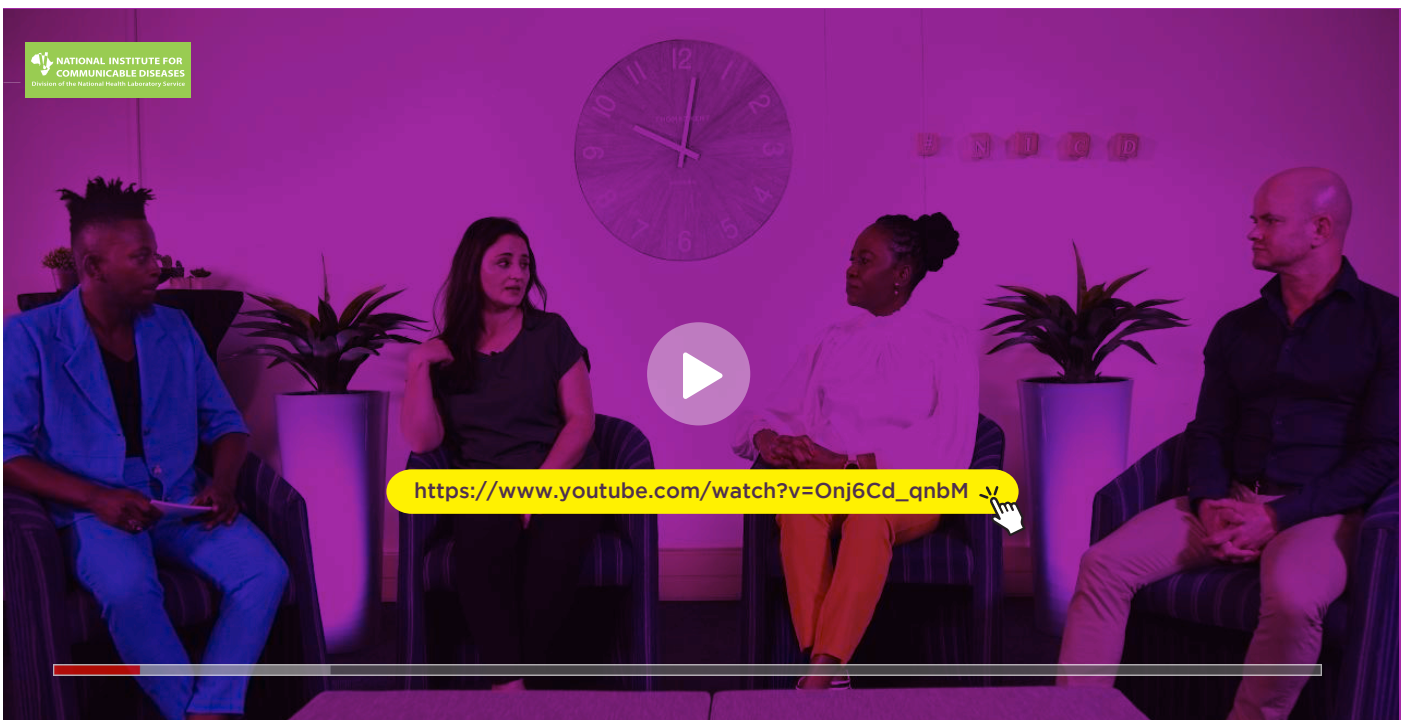
From 22 June 2022 to date (Oct 2022), there have been five unlinked laboratory-confirmed monkeypox cases reported in South Africa with no deaths. Although anyone can get monkeypox, the outbreak appears to have largely affected men who have sex with other men (MSM) and this has led to misinformation and widespread fear for the LGBTQ community.

As a public health institute, awareness must be raised about the spread of monkeypox without stigmatizing or discriminating against any population group. With the above goal in mind, the Communications Unit invited various experts in public health to have a panel discussion about monkeypox. This panel discussion was about how as a public health community, we can effectively share messaging without adding or promoting stigma.

The discussion was facilitated by Mvuyo Makhasi (Data Manager at the Centre for Respiratory Diseases and Meningitis (CRDM) and he sat down with three experts, Dr Jacqueline Weyer (Acting Head and Principal Medical Scientist at the Centre for Emerging Zoonotic and Parasitic Diseases), Dr Johan Hugo, (Senior Physician and master trainer for the Anova Health Institute) and last but not least, Venessa Maseko (laboratory technologist and manager at the Centre for HIV and STIs).

To kick off the discussion, Dr Weyer gives us a brief background on monkeypox. She shares how it is important to increase awareness about disease transmission, signs and symptoms, and how individuals can protect themselves and their loved ones. Lessons from research on past infectious disease outbreaks have taught us that stigma poses a significant hurdle to health and wellness during any pandemic. Maseko emphasises the importance of engaging with communities prior to outbreaks. Health education provides tools to build capacity and support behaviour change in an appropriate setting.

But the question still stands- "why is there a focus on a certain population group, if indeed anyone can contract monkeypox?" Dr Hugo shares that "the reason we need to know what population we are dealing with and who's the most at-risk population, is because we need to know who to target our education and messaging towards. Anyone can get monkeypox but the at-risk group right now are men having sex with men." He adds that "it's important to send out a communication to the general public but there shouldn't be a fear of communicating with the at-risk group." It goes without saying that as a public health institute it's critical to communicate science-based data but we also have a responsibility to not fuel social prejudices. To be part of the conversation and hear more of the discussion, click on the link below:



A CELEBRATION OF AFRICAN ULULATIONS, SONG, DANCE, CUISINE AND REGALIA

By Nande Harmans

A ray of vibrant textiles as you entered the boom gates of the NHLS office park, on a bright sunny Friday morning on the 23rd of September 2022, was a colourful sight. The NICD staff, draped in their African regalia, some carrying some African cuisine to share amongst themselves in the spirit of Ubuntu for Heritage Day festivities.

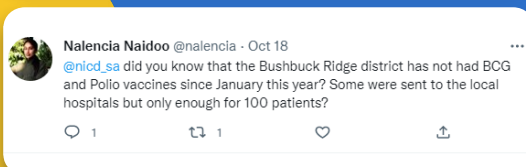
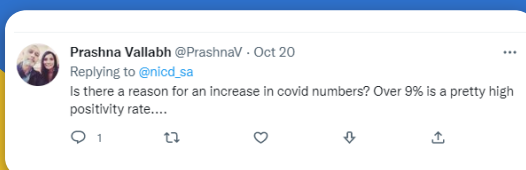
There was a merry energy in the air that morning, and the corridors hummed with ululations and songs. Heritage Day on 24 September recognises and celebrates the cultural wealth of our nation. South Africans celebrate the day by remembering the cultural heritage of the many cultures that make up the population of South Africa. In addition to fostering cultural diversity, social unity, reconciliation, peace, and economic development, living heritage has an invaluable role to play.

In every community, there are living treasures who possess a high degree of knowledge, skills and history pertaining to different aspects of diverse living heritage. Throughout our lives, we are shaped by our past and create a future for ourselves. We are the product of generations

of culture and heritage that has been passed down to us and have shaped who we are today. Creating new cultures while preserving our heritage is now our responsibility.



What people are saying on social media?



KEYS






For Food Safety, During Holiday Festive Season

By Koketso Matjane

Many associate the holiday season with festivities. These festivities are in the form of weddings, traditional ceremonies, and parties, to name a few. While food may not be the sole reason for hosting these gatherings, its importance is undeniable.

According to the World Health Organisation (WHO), foodborne diseases are usually caused by bacteria, viruses, parasites, or chemicals that enter the body through contaminated food. The symptoms of food-borne diseases vary, which include nausea, vomiting, stomach cramps, and diarrhoea. Which can be severe and in some instances fatal.

With the holiday season fast approaching, it remains vital to educate food handlers about their responsibilities for food safety. The WHO's "Five Keys to Safe Food" provides food handlers with a step-by-step guide to the right measures to take during the holiday season and during all festive occasions.

				
KEEP CLEAN:	SEPARATE UNCOOKED AND COOKED FOODS:	ENSURE FOOD IS COOKED THOROUGHLY:	KEEP FOOD AT SAFE TEMPERATURE:	USE SAFE WATER AND RAW MATERIALS:
<p>Wash your hands often before handling food and during food preparation. Wash your hands after using the toilet. Clean all surfaces and equipment used for food preparation. Protect kitchen areas and food from insects, pests, and other animals.</p> <p>Reason: The vast majority of microorganisms do not cause disease, dangerous microorganisms are found in soil, water, animals, and humans. Contact with microorganisms on one's hands, wipes, or utensils, especially cutting boards, may cause them to be transferred to food and result in foodborne diseases.</p>	<p>Separate uncooked meat, poultry, and seafood from other foods. Use separate equipment and utensils such as knives and cutting boards for handling raw foods. Store food in containers to avoid contact between raw and cooked food.</p> <p>Reason: Food preparation and storage processes have the potential to spread dangerous microorganisms from raw food, particularly meat, poultry, and seafood and their juices.</p>	<p>Cook meat, poultry, eggs, and seafood thoroughly; bring soups and stews to a boil and make sure they reach 70°C. For meat and poultry, make sure that the juices are clear, not pink. Ideally, use a thermometer. Reheat the food thoroughly.</p> <p>Reason: Most dangerous microorganisms can be eliminated from food with proper food preparation. Minced meats, rolled roasts, large joints of meat, and whole poultry are among the foods that require special handling.</p>	<p>Do not leave food at room temperature for more than 2 hours. Refrigerate promptly all cooked and perishable food (preferably below 5°C). Keep cooked piping hot food (more than 60°C) prior to serving. Do not store food for too long even in the refrigerator. Do not defrost frozen food at room temperature.</p> <p>Reason: When food is stored at room temperature, microorganisms multiply rapidly. Holding at temperatures below 5°C or above 60°C slows or prevents microorganism growth; however, some dangerous microorganisms can grow below 5°C.</p>	<p>Use safe treated water. Select safe wholesome foods. Choose products that have been treated for safety, such as pasteurised milk. Wash fruits and vegetables. Do not use food past its expiration date.</p> <p>Reason: Raw materials, such as water and ice, may contain dangerous microorganisms and chemicals. Toxic chemicals can accumulate in spoiled and mouldy foods. Careful raw material selection and simple precautions like washing and peeling foods may help to reduce the risk.</p>

It is estimated that **over 40% of foodborne disease outbreaks** such as Salmonella occur during festivities like weddings, parties, and traditional ceremonies. To reduce this percentage, a concerted effort is required from everyone. This includes following the World Health Organisation's Five keys to safer food manual and informing people about the manual, especially food handlers. This holiday season, play your part in reducing the percentage of food-borne diseases by circulating the Five keys to safer food manual.