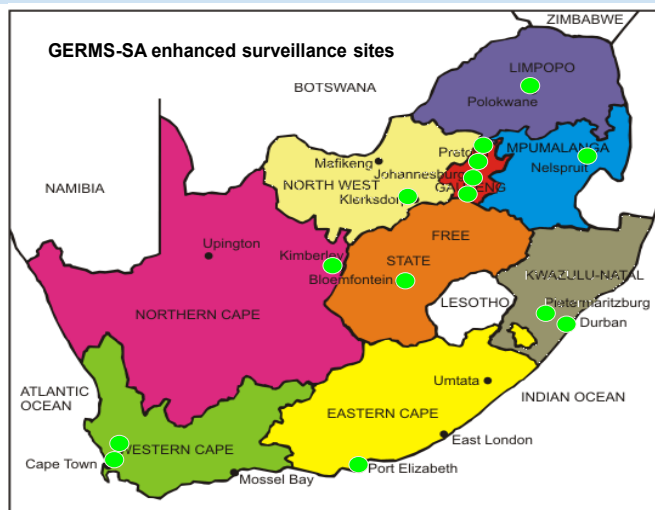




Volume 56, December 2018



## May to December happenings

After 15 years of GERMS-SA surveillance newsletters, this will be the final one. We started in 2003 as an information leaflet (it was only 2 pages long, contained 2 tables and had no photo's). Now the Link is a booklet and this last edition more of a photobook. From 2019 GERMS-SA will integrate fully with pneumonia surveillance and there will be a laboratory-based surveillance arm and a syndromic surveillance arm (made up primarily of pneumonia surveillance and diarrhea surveillance). Our activities will be reported through the NICD communications. Happy reading, happy holidays and be safe ..... Vanessa

In this edition we highlighting interesting activities, some exciting and some sad but hey, that is part of life.....

The first quarter of the year was hectic and we had to focus on setting objectives for the staff and making sure everyone knows what is expected of them. Now we are focusing on making sure that the objectives are met. Well done to our FPCs in making sure that our objectives for 2018/2019 are SMART. We also focused on launching new projects within GERMS-SA such as the WHO study on STI point of care tests in Mpumalanga and KZN and that reflects growth and expansion of our projects.

**In this edition** you can read about what's happening at the NICD. Page 2 covers: ANDEMIA overview, Pages 3 and 4: Clinic-based evaluations of STI POCTs, Page 5: Update on virulence of pneumococcal serotypes, Page 6: REDCAP Training for SOs, Page 7: Trainings attended, Page 8: World Pneumonia Day, Pages 9 -11: GERMS-SA site visits, Page 12: Welcome to Azwi Mathunjwa, Page 13: Farewell to our beloved colleagues, Page 14: Sunnieboy running the Comrades Marathon, Page 15: GERMS-SA Birthday celebrations, Page 16: Baby boom, Page 17: GERMS-SA poster for 2019 organisms that we are asking the labs to submit. You will notice that the enteric diseases surveillance has been revived. .... Tiisetso

## ANDEMIA Project: Overview

Ophtia Koaho and Refiloe Sedulanoshi

**The African Network improved Diagnostics, Epidemiology and Management of common Infectious Agents (ANDEMIA).**

Africa has a disproportionately high morbidity and mortality related to infectious diseases. While traditional vertical programmes funded by international organizations tend to focus on HIV, TB and malaria, they rarely support programmes on common infectious diseases. These common infectious diseases include acute respiratory tract (RTI) and gastrointestinal (GI) infections and acute febrile disease of unknown cause (AFDUC), including antimicrobial resistant (AMR) pathogens.

The ANDEMIA project aims to address some of these gaps and has hospital-based sentinel sites in Cote d'Ivoire, Burkina Faso, Democratic Republic of Congo and South Africa. The project funded by the German Federal Ministry of Education and Research (BMBF), will enrol 350 patients (all ages) per year per syndrome [per sentinel site and screen specimens for infectious agents associated with RTI, GTI and AFDUC.

The South African hospitals selected for participation in this project are Mapulaneng and Matikwane in Mpumalanga as the rural site and Kalafong Hospital in Gauteng as the urban site. Patients meeting the case definition are enrolled after giving consent and appropriate specimens (NPA/OPA, stool and blood) are taken along with completion of a case investigation form. The study started in July 2018 and will continue for two years with controls enrolled during the second surveillance year (2019/2020)



**Above: Sisters Refiloe Sedulanoshi and Ophtia Koaho work on the ANDEMIA project.**



## Clinic-based evaluations of STI POCTs

Katherine Calver

The STI Section of the Centre for HIV & STI (CHIVSTI) at NICD, in collaboration with the World Health Organisation (WHO), has recently commenced the implementation phase of two studies based at primary healthcare facilities in three South African provinces.

The studies are clinic-based evaluations of point-of care tests (POCTs) in terms of performance characteristics (such as sensitivity & specificity) compared to the current gold standard laboratory assays.

The operational characteristics of the POCTs such as ease of use in a clinic based setting, and acceptability of the test to both staff and patients will also be determined.



**Above from left to right:** Dr. Ranmini Kularatne (NICD), Prof. Ron Ballard (WHO), Ms. Bonile Madonsela (MP STI coordinator), Mr. Sunnieboy Njikho (NICD), Sr. Tumelo Tlhomelang (GERMS), Sr. Siphwe Khoza (Kabokweni Clinic), Karel Blondeel (WHO), Sr. Gladys Ndlovu (Kabokweni Clinic), Dr. Katherine Calver (NICD)



**Above left to right:** Sr. Bongeka Gebashe (East boom clinic), Dr. Katherine Calver (NICD), Sr. Duduzile Gwamanda (East boom clinic), Sr. Nelisiwe Buthelezi (NICD), Sunnieboy Njikho (NICD), Sr. Nomthandazo Zaca (Eastboom clinic), Karel Blondeel (WHO), Sthembile Khanyile (East boom clinic), Sr. Carmen Williams (East boom clinic), Prof. Ron Ballard (WHO).

The first of these is evaluating the use of WHO prequalified Dual HIV & Syphilis rapid tests (SD Bioline HIV/Syphilis Duo and Chembio DPP HIV/Syphilis Confirm) in pregnant women attending antenatal services at two GERMS sentinel surveillance sites: Eastboom Community Health Centre in Pietermaritzburg, KwaZulu-Natal, and Kabokweni clinic in White River, Mpumalanga. These rapid tests give an HIV and syphilis result within 20 minutes using capillary blood from a patient's finger prick. Provided the dual tests perform adequately, they may be useful in the same day testing and treating of these two vertically transmitted STIs, thereby enabling us to move closer to our goal of elimination of mother-to-child transmission of both HIV and syphilis.

The second study is evaluating the use of a near point of care test, Cepheid GeneXpert for the detection of genital infection with *Neisseria gonorrhoeae*, *Chlamydia trachomatis* and *Trichomonas vaginalis*. This study is based at Site C youth clinic in Khayelitsha, where adolescent girls and young women who are at risk of having STIs are enrolled and provide self-collected vaginal swabs for testing. Studies show that STIs can manifest as silent infections. These cases are largely missed in South Africa as only patients presenting with symptoms of an STI syndrome will be treated using syndromic management. In screening asymptomatic, yet high risk woman, it affords the opportunity to diagnose and appropriately treat these infections to reduce complications such as infertility, ectopic pregnancy and HIV acquisition and transmission.

In July 2018, all three study sites were visited by a team comprising staff from WHO and STI Section and GERMS-SA NICD. During these visits the clinics were introduced to the study protocol and the nursing staff received hands-on training from the study team and also the local distributors of the test kits.

In early October, the STI Section and GERMS team were again on site to commence the implementation phase of all three studies after receiving ethics approval and the go-ahead from the WHO. Thus far around 300 participants have been recruited in total with an envisioned 6-9 months of recruiting still to go. There will be ongoing site visits, with further training as necessary and monitoring and evaluation of study progress.

The outcomes of the two studies will be pivotal in informing future national STI and antenatal care guidelines with the aim of reducing the prevalence of these STIs in the South African population.



Site visit to Kabokweni: WHO representatives Ron Ballard and Karel Blondeed, Sunnieboy, Tumelo and Kabokweni ANC staff looking all excited for the new project



## Virulence of pneumococcal serotypes: Study update

Annelies Müller

After a challenging start due to the administrative work to get ethical approval for this project, my PhD project took off and the progress is promising. Following ethics approval, the next challenge was to implement the cerebrospinal fluid (CSF) collection at the chosen sites.

In April this year, I was able to visit South Africa for the second time and had the opportunity to present my project at the SO meeting in Johannesburg. Additionally, logistics and details of how the samples should be collected were discussed. The organization of material, writing of SOP (standard operating procedures) instructions and other aspects concerning the set-up of collection has taught me valuable skills as a PhD student.

A year after I started my PhD project, the ethics approvals are in place and the collection of residual CSF has started in 13 of the 15 chosen sites. So far, more than 30 samples have been collected and several sites have already been able to send the CSF samples to Linda at the NICD in Johannesburg. A big thanks to the SOs and everyone involved for making this possible! If the CSF sample collection continues to be this successful then there should be enough to complete the first analysis towards the second half of 2019!

Meanwhile in the laboratory in Switzerland, parallel to the sample collection, I have been busy testing different serotypes of *S. pneumoniae* strains in their ability to grow in different media. What we have found so far is that in certain media, *S. pneumoniae* strains which are more common in healthy colonization and less commonly seen in invasive disease have a growth advantage over other serotypes. Why this is the case and what this means for the disease they cause is something we are investigating. The results are promising and if all goes well, hopefully we will be able to publish soon. I will keep you updated as things happen!

Contact for questions/remarks on project: [annelies.mueller@ifik.unibe.ch](mailto:annelies.mueller@ifik.unibe.ch)



Photographs: impressions from my second visit in South Africa and SO meeting: top left - from left to right: Nazila, Sharon and Molly testing the pipette; top right - how to pipette CSF (photo taken by Olga Hattingh); bottom left - Nazila, Cheryl and Sharon; bottom right - me and Olga.

## REDCAP training attended by GP SO's

Zodwa, Molly, Hazel, Nthabiseng and Vusi

REDCAP was introduced to standardise how we capture and record cases meeting the cases definition. One of the advantages of REDCAP is that it enables anyone to create reports, raise queries and track progress. You can also monitor rate of interviews, crf submissions, vaccination histories and two-month follow ups.

HJH/RMMCH was the first place where REDCAP was piloted. Feedback given was that it was user friendly though it had its ups and downs. Jackie has been there to give the SOs full support. So far Gauteng, WC and NW have been trained on REDCAP. Training will continue for MP, LP and KZN. Training was also provided for project managers, FPCs in GP and database administrator.



Gauteng SO's attended REDCAP training at NICD...in the middle of winter. From left to right Zodwa Kgaphola, Molly Morapeli, Vusi Ndlovu, Hazel Mzolo and Nthabiseng Motati.



Jackie giving her presentation and SOs paying attention



## Data Analysis Course Using Stata: CESAR

Tiisetso Lebaka

The STATA course that took place on 22nd - 24th of August 2018 was offered by CESAR a world-class training and consultancy organisation based in Johannesburg. We learned STATA, Data Management, Descriptive Statistics and Inferential Statistics in One Course. The facilitators were very friendly and knowledgeable on study material. We were offered top class and valuable training and they managed to meet all my training needs.



Below: from left a group selfie and group session with facilitator.





## World Pneumonia Day 2018: Fact walk

On Monday the 12th of November 2018, Centre for Respiratory Diseases and Meningitis (CRDM) invited us to take part in a fun Pneumonia fact walk around the NICD campus. The aim of the walk was to raise awareness of pneumonia disease, it included visiting stations that shared information about pneumonia and the role of the NICD in the fight against pneumonia. Prizes were given upon completion of the walk.



**Name:** Buhle Chiliza

**What did you enjoy the most about the walk?**

- Walking around the campus visiting various information stations made me understand the role of CRDM in NICD.

**What is your take home message?**

- When you are sick don't prescribe antibiotics for yourself without seeking medical advice.
- Exercise regularly so you can improve your quality of life.



**Name:** Stephina Shokane

**What did you enjoy the most about the walk?**

- Seeing bacteria under the microscope and learning the importance of vaccination.
- Also, winning the prizes at end of race, the cupcakes were so yummy.

**What is your take home message?**

- As parents we need to protect our children from serious illnesses by vaccinating them.

**Congratulations to us,  
we made it to the finish line!!!**

**MAMA WE MADE IT!!!!**





## Up and About: GERMS-SA Site Visits



Above: Neo Legare, Vusi Ndlovu and Dikeledi Leshaba with laboratory staff from Steve Biko Academic Hospital on the 8th of August 2018.



Left to right: Nkosinathi Mbhele, Mokupi Manaka, Nokuthula Nzuza, Sunnieboy Njikho and Thobeka Shandu at Addington Hospital from 6th to 8th of June 2018.



Left to right: Tiisetso Lebaka, Frans Radebe and Neo Legare attended the Limpopo research day on the 12th of October 2018.





**Tshepong hospital site visit on the 11th of September 2018, left to right: Neo Legare, Busisiwe Zungu, Sesing Tsabane, Thandeka Kosana and Sibongile Rasmeni-Quariva.**



**GERMS-SA Lab presentation at Polokwane NHLS on the 19th of September 2018**



**Site visit to Mitchells Plain Hospital on the 20th - 23rd of November 2018. L-R: Priscilla Mouton, Zama Mfundisi, Cheryl Mentot; front: Cecilia Miller, Mokupi Manaka, Nazila Shalabi**



### **GERMS site visits by Centre for Respiratory Diseases and Meningitis (CRDM/NICD) - to 3 Mpumalanga NHLS laboratories, August 2018**

Three NHLS laboratories (Ermelo, Rob Ferreira and Witbank) in Mpumalanga were visited on the 13<sup>th</sup>, 14<sup>th</sup> and 17<sup>th</sup> August 2018 respectively.

The objectives of the visits were to provide ongoing GERMS-SA surveillance feedback to the lab staff, to remind lab staff of the need to send all isolates that meet the current GERMS-SA case definition/s to NICD and to identify and discuss obstacles labs are experiencing which may affect their sending isolates/samples.

Site specific data was shared with lab staff. Laboratory staff were reminded of the role CRDM can play in identifying pathogens (by PCR) of culture-negative samples. Finally, a brief overview of the recently rolled out NMC was done.

The 3 site visits/presentations were well attended by mostly technologists and technicians. We would like to thank Mr. Tebogo Lebudi (Area Manager Limpopo/Mpumalanga) and the senior staff at the 3 different labs for the arrangements as well as all the staff who participated in the presentation and discussions.



**13 laboratory staff at Ermelo NHLS hospital attended the hour-long presentation, 13<sup>th</sup> August 2018**

**A mixture of technologists/technicians/the GERMS nurse and the pathologist attended the presentation at Rob Ferreira, 14<sup>th</sup> August 2018**



**10 Laboratory staff at Witbank NHLS laboratory attended the presentation, 17<sup>th</sup> August 2018**

**Welcome to our GERMS-SA family Azwifariwi Mathunjwa, the new FPC for CRDM.**

**WE HOPE THAT YOUR EXPERIENCE HERE WILL BE CHALLENGING, ENJOYABLE AND REWARDING!!!**



**Who is Azwifariwi?**

- I am a qualified nurse with Diploma in Nursing (General, community, psychiatry and Midwifery) from Ann Latsky Nursing college on 2007. I am currently working as a GERMS-SA Field Project Coordinator for CRDM.

**My work experience?**

- I spent 3 years working with neonates and paediatrics at a public hospitals in JHB.
- I joined RMPRU as a research nurse under Prof Shabir Madhi and later a study coordinator.
- Worked as a study coordinator for Pneumonia Etiology Research for Child Health conducted in 7 international sites.
- Moved on to become a study coordinator for Bill and Melinda Gates for a paediatrics admissions and mortality surveillance study at CHBAH.
- My responsibilities included planning and executing enrolment strategies, training and supervision.
- I was also involved in a study evaluating minimally invasive autopsies in paediatrics deaths.
- I joined NICD in 2016 as a field project coordinator for PHIRST study and MATflue and this involved overseeing sites in Mpumalanga.
- I was appointed as GERMS-SA FPC for CRDM in July 2018.

**What can we expect?**

- Lets rather wait and see!!!!!! Who knows, the sky is not even the limit.



## Fare thee well.....Elizabeth, Nuraan and Matsheko.

**From GERMS-SA team:** We thank you for your contribution and appreciate everything you have done. Your work really spoke for itself, keep shining wherever you go and keep your lively personalities with you. We never say goodbye but see you around!!!

**Wish you ALL the best in your new endeavours!!!**

### Some words from Matsheko and Nuraan as they launch into new beginnings!!!

**Matsheko:** I have been with GERMS-SA for 6 and a half years. I still remember my first day as an SO vividly. I am leaving this position as an SO with a wealth of knowledge and skills which I am thankful for.

During my time here I learnt how to take criticism and compliments, value other peoples' opinions and remain professional at all times, hard working and assertive. It has been a pleasure working at GERMS-SA. I take with me a lot of memories especially those who put a smile on my face.

**Nuraan:** I remember when I first started with CTB in 2015 and felt my way around the job. I received a lot of support from Nazir and his team, I really enjoyed what I was doing. Change happened and I was absorbed by GERMS-SA to coordinate NW, NW and FS provinces. Initially the job appeared daunting with the new projects mushrooming but I embraced the change. The time came to coordinate lab-based pathogens in my province and I thought it to be overwhelming at first, but later discovered that it was actually a walk in the park. I thoroughly enjoyed learning new things.

There is a new season to be explored and I would like to take this opportunity to say THANK YOU to the entire GERMS-SA team including the SOs who worked under me, also management for everything I have learnt and the growth experienced (can not say names as there are too many of you).

A big thank you to all the centres that I worked with and those I just met at meetings i.e. STI, Centre for HIV, Brucellosis, CRDM- thank you for the support received with your respective projects.

May you all go from strength to strength and establish your true worth in the living GOD because what does it profit a man if he gains the whole world but he loses his soul!!!



Elizabeth Sharon Jerome



Nuraan Paulse



Matsheko Siyaka

## The experience of running the Comrades Marathon!!!!

Sunnieboy Njikhó

Sunnieboy Njikhó  
GERMS-SA FPC participated in this year's edition of the Comrades Marathon at KZN.

**Below is his living testimony on Comrades**

I have always been a staunch soccer player from the age of 6 and only took a liking to running in my 30s.

Running the Comrades has always been something I wanted to do. For the past couple of years I have been chickening out at the last minute but finally this year had the courage to enter. The atmosphere was vibrant and the immense support I got from spectators was fulfilling and encouraging. You do not run alone as there are people calling you by name and cheering you all the way and those are people you don't want to disappoint.

When I was left with about 75km to finish line, I sprained my ankle but I soldiered on up until the end and I finished after 11 hours 38 minutes, which was basically the entire day. After finishing the race with a swollen ankle I thought of calling it quits, then the next day I changed my mind. Maybe the Comrades bug has bitten me and now I am hooked.

To my colleagues I would like to say "Thank you and well done guys for showing that we are one family. We are not only concerned about work but also to encourage and motivate each other."



To my wonderful and beautiful wife "Thanks for your relentless support, I and our children are thankful and grateful for having you!!"

Picture above on the left in front, Sunnieboy in action and focused.

To support and cheer Sunnieboy: on the left, all the way from MP, is Sunnieboy's wife, our Durban SOs Thobeka and her daughter (front), Noks and her daughter (behind),



## GERMS-SA Birthday Celebrations:

**HAPPY BELATED BIRTHDAY TO ALL GERMS-SA STAFF AND WE WISH YOU A GREAT YEAR AHEAD!!!**



From left: Linda and Mokupi enjoying being VVIP'S for a day. Thanks to the GERMS-SA Team for always spoiling us.

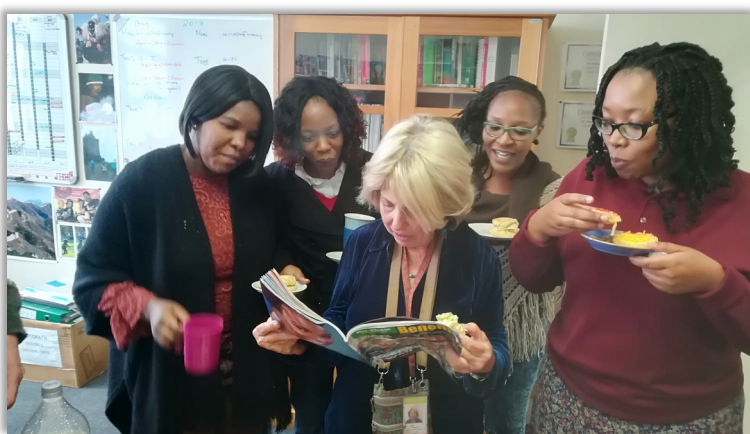
Who said working at NICD is boring!!!!



21st birthday for the twins Tiisetso and Emily!!!!



Mint green is the colour of the day: Mokupi, Tiisetso and Neo



Prof Blumberg sharing secrets on radishes with the rest of the team. See how everyone was paying attention!!!!

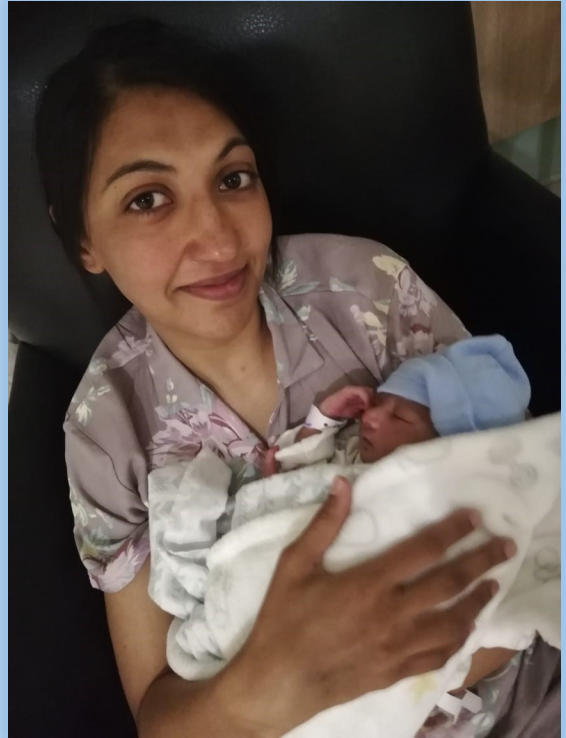


**From GERMS-SA:**

**"Congratulations on the arrival of your newest family members!! May your new role as parents be filled with lots of joyous memories".**



**Welcome baby to Sydney Mogokotleng .  
Name: Gofaene Mogokotleng  
Born :28 June 2018**



**Welcome baby to Nevashan Govender  
and Husna Ismail  
Name: Aaryan Govender  
Born: 06 November 2018, 07:06 am  
Birth weight: 2.75kg, height 50cm**



**Welcome baby to Tebogo Modiba  
Name: MyloJulia Modiba  
Born: 12 November 2018, 09:30 am  
Birth weight: 3360g**



**From left to right: Sr. Patience (SO), Lesedi (RA) and Chulumancho (RA) having a great time at Lesedi's baby shower (RMMCH).**



# **NICD GERMS-SA case definitions for isolate submission to Reference Laboratories for 2018. *Candida auris* added.**

Mokupi Manaka

**GERMS-SA: ALL laboratories please submit the following bacterial or fungal pathogens to the National Institute for Communicable Diseases (NICD) on Dorset transport media with a TrakCare Lab/private laboratory report or send specimen tube/blood culture bottle if uncertain of identification and/or no isolate available (contact lab).**

Pathogen	Specimen	Lab tests	NICD Centre
<ul style="list-style-type: none"> <li>• <i>Streptococcus pneumoniae</i></li> <li>• <i>Haemophilus</i> spp.</li> <li>• <i>Neisseria meningitidis</i></li> <li>• Group A streptococcus (<i>Streptococcus pyogenes</i>)</li> <li>• Group B streptococcus (<i>Streptococcus agalactiae</i>)</li> </ul>	All normally-sterile site specimens, e.g. CSF, blood, pleural fluid, peritoneal fluid, pericardial fluid, joint fluid, tissue, etc.	Culture positive <b>OR</b> Consistent Gram stain <b>OR</b> Latex positive	CRDM 011 555 0315
<ul style="list-style-type: none"> <li>• <i>Vibrio cholerae</i>††</li> <li>• <i>Salmonella</i> Typhi</li> <li>• <i>Salmonella enterica</i> serotype Paratyphi (A, B and C)</li> <li>• Nontyphoidal <i>Salmonella</i> spp.</li> <li>• <i>Shigella</i> spp.</li> <li>• <i>Listeria</i> spp.</li> <li>• <i>Campylobacter</i> spp.</li> <li>• Diarrhoeagenic <i>E. coli</i></li> </ul>	Any specimen	Culture positive	CED 011 555 0333
<ul style="list-style-type: none"> <li>• <i>Cryptococcus</i> spp. (<b>no need to send isolates or specimens</b>)</li> </ul>	Any specimen - enhanced surveillance laboratories need to inform the Surveillance Officers about cases (all year)	Culture positive <b>OR</b> CrAg test positive <b>OR</b> CSF India ink positive	CHARM – MRL 011 555 0384
<ul style="list-style-type: none"> <li>• <i>Candida auris</i></li> </ul>	Any specimen	Culture positive (confirmed or suspected <i>C. auris</i> )	CHARM – MRL 011 555 0384

†† *Vibrio cholerae* isolates from human and non-human (environmental) specimens, CRDM = Centre for Respiratory Diseases and Meningitis, CED = Centre for Enteric Diseases, CHARM-Centre for Healthcare-Associated Infections, Antimicrobial Resistance and Mycoses, MRL = Mycology Reference Laboratory, AMRL = Antimicrobial Resistance Laboratory.

**To order a new batch of Dorset transport media, please call CHARM (AMRL) at telephone: 011 555-0344/0342**

**In addition, the following labs please submit these organisms to respective surveillance laboratory.**

Pathogen	Specimen	Lab tests	NICD Centre
<ul style="list-style-type: none"> <li>• ^^Carbapenem-Resistant Enterobacteriaceae (CRE)</li> <li>• <i>Klebsiella</i> spp.</li> <li>• <i>Enterobacter</i> spp.</li> <li>• <i>Citrobacter</i> spp.</li> <li>• <i>Serratia</i> spp.</li> <li>• <i>E. coli</i></li> <li>• <i>Providentia</i> spp.</li> <li>• <i>Proteus</i> spp.</li> <li>• <i>Salmonella</i> spp.</li> <li>• <i>Morganella</i> spp.</li> </ul>	Blood culture only	Culture positive AND non-susceptible (intermediate or resistant) to any of the carbapenems: ertapenem, meropenem, imipenem and/or doripenem	CHARM – AMRL 011 555 0342
<ul style="list-style-type: none"> <li>• ^^<i>Acinetobacter baumannii</i></li> </ul>	Blood culture only	Culture positive	CHARM – AMRL 011 555 0342

^^ FS: Universitas/Pelonomi

GP: Chris Hani Baragwanath Academic, Charlotte Maxeke Johannesburg Academic, Helen Joseph/Rahima Moosa, Dr. George Mukhari and Steve Biko Pretoria Academic

KZN: Greys', Northdale/ Edendale, Inkosi Albert Luthuli/King Edward Hospital, Addington and RK Khan

WC: Groote Schuur and Tygerberg

**To order a new batch of Dorset transport media, please call CHARM (AMRL) at telephone: 011 555-0344/0342**

This newsletter was compiled by Mokupi Manaka and Tiisetso Lebaka, edited by Vanessa Quan, Division of Public Health Surveillance and Response. Please send any queries, recommendations or contributions to: Dr Vanessa Quan [vanessaq@nicd.ac.za](mailto:vanessaq@nicd.ac.za); Tel 011 386 6012