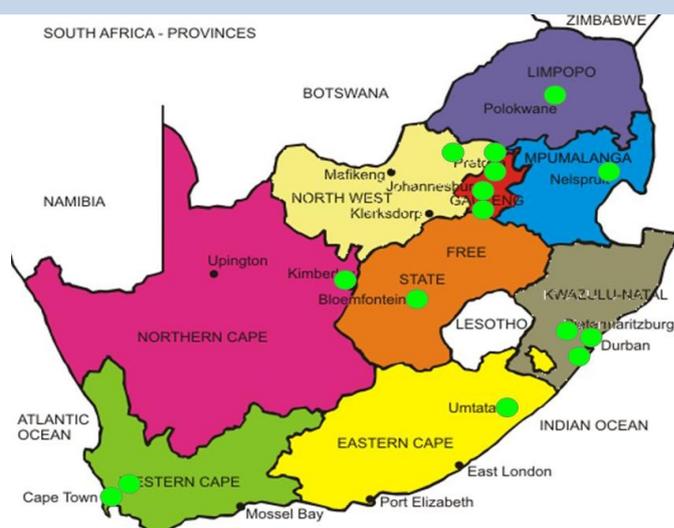




Volume 47 September 2015



Third Quarter Summary

Welcome to our 3rd edition of the LINK for 2015.

This edition of our newsletter highlights some of the activities of the DPHSR team and all the other GERMS-SA partners, as we bring you feedback and updates on what kept us going as we ending the 3rd quarter of 2015. We are looking forward to our upcoming PI Meeting (27 - 28 October) and SO Meeting (19 - 20 November) and updates will be in our next edition.

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Cryptococcal disease screen-and-treat activities

Charlotte Sriruttan

Reflex laboratory screening for cryptococcal antigenaemia has been operational at 199 health-care facilities in Gauteng and Free State since September 2012, as part of phased national implementation of the intervention.

Cryptococcal antigen (CrAg) screen-and-treat is now recommended in the National HIV guideline 2015. The guideline can be accessed at <http://www.health.gov.za/index.php/2014-03-17-09-09-38/policies-and-guidelines/category/230-2015p>

Reflex laboratory screening is currently offered (for selected healthcare facilities) by 4 NHLS CD4 labs (Charlotte Maxeke Academic, Tambo Memorial, Bongani and Prince Mshiyeni Memorial). Provider-initiated screening is available at all other facilities.

As part of ongoing support and quality assurance for the programme, two laboratory visits were conducted by members of the NICD cryptococcal disease screen-and-treat team, and the NHLS NPP CD4 team.

Ms. Sherry Drury (NHLS NPP CD4 Project trainer) visited the Welkom NHLS CD4 laboratory and 6 surrounding screening healthcare facilities from 6-8 July 2015. Assessment of sample collection, testing and reporting, patient tracing, adherence to clinical algorithm and outcomes revealed that the programme was running smoothly at these sites. On 12 August 2015, the NICD team visited Welkom lab to discuss quality assurance of CrAg testing and support monitoring and evaluation activities (M&E) for the 2 districts of Lejweleputswa and Fezile Dabi.

NICD cryptococcal screening staff completing CRFs at Bongani NHLS laboratory office
Sr Busiswe Zungu, Sr Deborah du Plessis, Sr Amanda Shilubane, Stephanie Jacobs



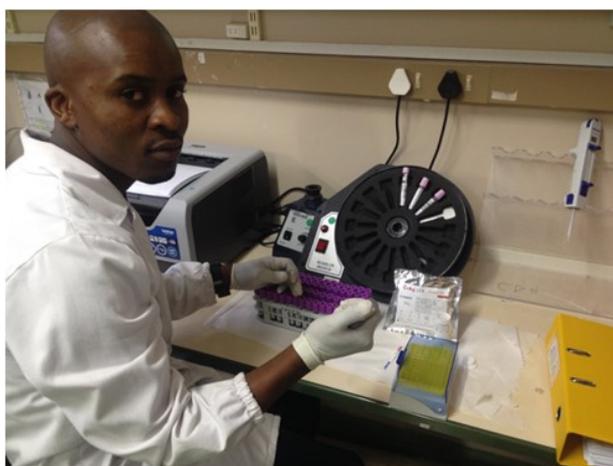
Cryptococcal disease screen and treat activities: Continued

Charlotte Sriruttan

Dr Charlotte Sriruttan also visited the NHLS CD4 laboratory at Prince Mshiyeni Memorial Hospital (PMMH) on the 28th August 2015. This is the first laboratory in KwaZulu-Natal Province to perform reflex testing for CrAg. Review of the workflow processes and adherence to the SOP was performed. A visit to the PMMH ARV clinic, together with the PMMH NHLS clinical microbiologist, Dr Yogandree Ramsamy, was conducted. The HIV clinicians working at the clinic were very supportive of CrAg reflex testing, and there was good awareness of and adherence to the clinical algorithm.



Above: Bongani Hospital NHLS laboratory technologists, Chantelle Rossouw and Dipuo Modupe, performing the CrAg LFA test



Above: CD4 laboratory technician, Buhle Vilakazi and technologist Ncamisile Mbhele, performing the CrAg LFA on remnant CD4<100 bloods PMMH NHLS CD4 lab

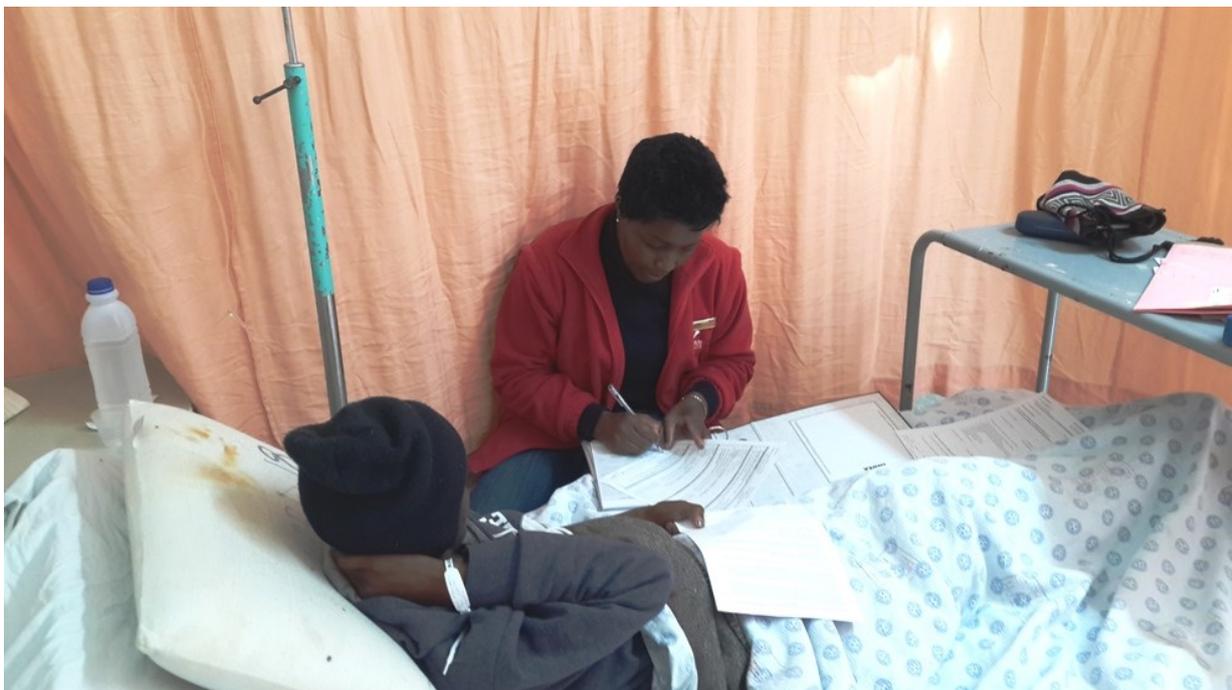
Update on CryptoPath Study

Verushka Chetty

The CryptoPATH study is nested within the GERMS-SA surveillance programme for cryptococcal meningitis (CM). The aims of the study are:

1. To evaluate pathways to accessing care and outcomes among patients with CM during phased-in national implementation of the cryptococcal disease screen-and-treat intervention in South Africa.
2. To estimate the costs attributed to CM care from both a patient and provider perspective.

The study, which began in May 2015, includes a consortium of researchers from NICD (COTHI and DPHRS/ GERMS-SA), the Aurum Institute and the London School of Hygiene and Tropical Medicine. Surveillance officers based at sentinel hospitals in Gauteng Province (Chris Hani Baragwanath, Helen Joseph, Natalspruit, Tambo Memorial and Zola Jabulani) have enrolled patients according to the studies data flow chart. To date, 155 patients have been screened for the study; 85 patients have been enrolled. The first part of the study will end once 100 patients have been enrolled. Updates will be presented at the upcoming NICD/GERMS Annual Surveillance Review, 28 October 2015.



Above: Sr Soneni interviewing a patient for CryptoPath study

GERMS-SA: ROTA Surveillance Update

Nicola Page

Diarrhoeal surveillance is coming to a GERMS-SA site near you!

Diarrhoeal surveillance has been included at three GERMS-SA sites including Kimberley Hospital in the Northern Cape (September 2014), Pelonomi Hospital in the Free State (April 2015) and Polokwane Hospital (May 2015). Surveillance officers actively recruit children less than five years of age who are admitted to these sites for the treatment of diarrhoea. They complete standardized questionnaires, take stool samples (raw and Cary & Blair) and dried blood spots (if the HIV status is unknown). The surveillance officers send the data sheets and samples to the NICD for further scrutiny. The Centre for Enteric Diseases (CED) tests for the enteric viruses and bacteria and the Centre for Opportunistic, Tropical and Hospital (COTHI) tests for parasites.

Thus far, these sites (and the awesome surveillance officers that hustle on the rotavirus surveillance behalf) have enrolled and collected samples from 166 children under five years of age. Welcome to the warm (and squishy?!) diarrhoea family and keep up the good work!



Left: Tebogo screening for ROTA cases at Mankweng hospital

GERMS-SA: Site visits around the country

Cecilia Miller

The start of the second half of the year is where we get ourselves ready and geared up to do our usual site visits. During the months of July and September site visits have been conducted at various provinces. Some of the site visits were conducted in conjunction with COTHI AMRL staff. The objectives were to launch the New CRE Surveillance, to do CRF audits, to orientate and support staff who have relocated to another province, to re-orientate staff who just needed guidance in their daily function as an SO and to feed-back to participating NHLS laboratories.



Left: 13-15 July visited PE-Sandisiwe Joyi (SO) (4th from left) relocated from Mthatha. Here she is with the Wellness Clinic staff at PE Provincial hospital



Above: 10-11 September visited Kimberley. Back row 3rd from left Matsheko Siyaka (SO) and NHLS staff

Left: 20-21 August visited Bloemfontein. Cecilia Miller, Thandeka Kosana (SO) and Khasiane Mawasha (SO)

GERMS-SA: Site visits around the country: continued

Sites visits for the new CRE surveillance: COTHI, AMRL

Samantha Iyaloo

GERMS-SA and COTHI conducted eleven site visits in three provinces in August and September. Site visits to Tygerberg and Grootte Schuur Hospitals in the Western Cape are still to be done and are scheduled for November. The following sites were visited:

| | |
|---|---|
| <p>Steve Biko Academic Hospital Charlotte Maxeke Johannesburg Academic Hospital Dr George Mukhari Hospital Steve Biko Academic Hospital Helen Joseph Hospital Chris Hani Baragwanath Hospital</p> | <p>King Edward VIII Hospital Addington Hospital Greys' Hospital complex RK Khan Hospital Inkosi Albert Luthuli Hospital Universitas/Pelonomi Hospital</p> |
|---|---|

The main objectives of the site visits were to present the newly launched Carbapenem-Resistant Enterobacteriaceae (CRE) enhanced surveillance on blood cultures and to reinforce the laboratory site's participation in the GERMS-SA surveillance programme. A brief background on the importance of conducting CRE surveillance, the case definition, inclusion and exclusion criteria were discussed. We received positive feedback on the site visits conducted and the laboratory staff understood the importance of the GERMS-SA platform and their role in the surveillance system which was needed for the successful implementation of the CRE surveillance .

Right: King Edward V111 NHLS Lab staff



Left: Samantha, Sonwabo and Dr George Mukhari NHLS staff

GERMS-SA: Site visits around the country: continued

Clinic surveillance

Vanessa Quan

Clinic surveillance for STI/TB and HIV on the GERMS platform is truly underway. We plan to finally have at least one selected clinic in each province and by the end of 2015 should be functioning in 5 provinces (E Cape, North West, Mpumalanga, KZN and Gauteng (TB/HIV only)). The reason behind clinic surveillance for STI, TB and HIV is as follows: Xpert MTB/RIF rapid testing is now used for all TB suspects. This test is used to diagnose TB infection and assess rifampicin (Rif) resistance, but cannot test for isoniazid (INH) resistance. INH mono-resistance is more common than rifampicin resistance and so surveillance for INH and other first line resistance has been identified as a priority need in the national TB control program.

For HIV-infected patients starting therapy it is important to do HIV drug resistance surveillance, since patients may have been exposed to ARV previously (for example women exposed to PMTCT, or patients returning to care after >3 months).

STIs have been treated using the syndromic management approach since the late 1990s so it is important to know what the actual aetiologies of STI syndromes (e.g. male urethritis syndrome (MUS), vaginal discharge syndrome (VDS), genital ulceration syndrome (GUS)) are. Resistance patterns of *N. gonorrhoeae* are important to monitor. Human papilloma virus (HPV) is the most common STI and vaccination against certain genotypes protects against cervical cancer and anogenital warts. The HPV vaccine was introduced last year through the school-health programme.

HPV surveillance will be conducted among eighteen to twenty year old women attending family planning clinics at our sites. HPV prevalence and genotype data will provide important pre-vaccination data and will enable future monitoring of trends in both the prevalence of HPV detection and the relative prevalence of vaccine-related HPV genotypes once HPV vaccine is fully introduced into South Africa. (ref NICD Communicable Diseases Surveillance Bulletin June 2015, vol 13 (2) pg 62-64)

GERMS-SA: Site visits around the country: continued

New clinic/ rural hospital surveillance sites:

Vanessa Quan

We have been conducting visits to clinics identified by the provinces to see whether they fit our requirements of sufficient numbers of newly initiated TB and HIV patients and STIs, whether they are happy to be part of the clinic surveillance and if they have space for us to house a nurse surveillance officer. All the clinic staff have been so generous at our unexpected visits and enthusiastic at being part of the surveillance but often lack the space at their facilities to house an additional staff member for our surveillance. We look forward to finalising the set up.



Left: Linda Erasmus with Durban surveillance officers (Thobeka Simelane, Nokuthula Nzuzza and Nkosinathi Mbelle) selecting a site for clinic surveillance in Durban.

Below: Linda Erasmus and Mbhekiseni Khumalo selecting a Nelspruit clinic.



Left: We popped into Themba NHLS Laboratory just to say "hello"

New Beginnings: New Staff

Cecilia Miller



Left: My name is Thami Ntuli, a qualified Professional Nurse since 2009. I worked in both public and private hospitals in my career, and I had an opportunity to interact with Research staff where I developed an interest in research. I started on 1 August at Helen Joseph/ Rahima Moosa Hospital and feel honoured to be part of the NICD surveillance team. I see this as an opportunity to learn and grow in my profession.

Right: My name is Patience Ngube. I started on 1 August as a surveillance officer at Helen Joseph/Rahima Moosa Hospitals. I am very excited to have joined the research fraternity. My interest in research grew immensely when I qualified as a professional nurse, I got interested in being part of the team that has done so much in treatment policies of diseases and their prevention thereof. I am so happy to have been given an opportunity to experience such great work.



Hello, I am Liza Rossi, a Medical Officer employed by the Centre for Respiratory Diseases and Meningitis, a branch of the National Institute for Communicable Diseases. I am currently based at the Red Cross Research Unit for Adolescent and Child Health.

Having worked in the General Paediatric setting for the last 4 years with experience in Acute Care, Medical Outpatients, as well as Medical Inpatient care; I can appreciate the importance of pathogen surveillance in a field where the pathology profile is constantly evolving. The majority of my experience has been at Red Cross Children's Hospital, but I have also worked at other Paediatric Units at various other hospitals in the Western Cape Province.

I have developed a great affinity to working with children and enjoy the dynamic that they add to what can be a very stressful environment. I have also recently developed a particular interest in research and am currently involved in the Pneumonia Surveillance Study - a National Syndromic Surveillance study investigating the most common pathogens responsible for pneumonia in our paediatric population. Another component is an Effectiveness Study of the Trivalent Maternal Influenza Vaccination, investigating the effect of Influenza vaccination on pregnant women, HIV positive women, birth outcomes associated, as well as whether maternal vaccination during pregnancy benefits those children <6 months old.

I have only recently joined this study and am very excited about it. It is a privilege to be working with such a great team.

General Information for Surveillance Laboratories

GERM-SA: Enhanced Surveillance Sites (ESS): Please submit the following bacterial and fungal pathogens to the National Institute for Communicable Diseases (NICD) on Dorset Transport Media with a DISA/TrakCare lab report or send specimen tube/blood culture bottle if uncertain and or no isolate available. (contact lab to discuss.) To order a new batch of Dorset Transport Media, please call CRDM at telephone 011-555 0315. For surveillance questions, please call GERMS-SA at telephone 011 3866234

| Pathogen | Specimen | Lab tests | NICD Unit |
|--|---|--|-----------------------------|
| <i>Streptococcus pneumoniae</i> <i>Haemophilus</i> spp. <i>Neisseria meningitidis</i> | All normally-sterile sites specimens, e.g. CSF, fluid, joint fluid, tissue, etc. | Culture positive OR Consistent Gram stain OR Latex positive | CRDM 011 555 0315 |
| <i>Salmonella</i> spp.(including Typhi) <i>Shigella</i> spp <i>Campylobacter</i> spp †† <i>Vibrio cholerae</i> | Any specimen | Culture positive | CED 011 555 0333/4 |
| Diarrhoeagenic <i>E.coli</i> | Gastrointestinal specimens, e.g. stools, rectal swabs, etc. | Culture positive | CED 011 555 0333/4 |
| † <i>Candida</i> spp | Blood culture only | Culture positive | COTHI-MRL 011 555 0384 |
| * <i>Staphylococcus aureus</i> | Blood culture only | Culture positive | COTHI-AMMRL 011 555 0342 |
| ** <i>Pseudomonas aeruginosa</i> | Blood culture only | Culture positive | COTHI-AMMRL 011 555 0342 |
| <i>Cryptococcus</i> species (no need to send isolate) | Any specimen Private labs: Please just send a Lab form to the laboratory for case counting ESS laboratories needs to inform the SO about cases (January -March inclusive) | Culture positive OR CrAg test positive OR CSF India ink positive | COTHI-MRL 011 555 0384 |

† Mthatha, Pelonomi/Universitas, Dr George Mukhari, RK Khan, Addington, KEH, Edendale, Greys', Northdale, Polokwane/Mankweng, Rob Ferreira, Themba, Kimberley, Tshepong.

* Charlotte Maxeke Johannesburg Academic, Steve Biko Pretoria Academic, Helen Joseph , Groote Schuur, Tygerberg

**Universitas, Chris Hani Baragwanath, Charlotte Maxeke Johannesburg Academic, Dr George Mukhari, Helen Joseph, Steve Biko Pretoria Academic, Tygerberg, Groote Schuur, Northdale, Inkosi Albert Luthuli, KEH, Mahatma Ghandi Memorial.

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