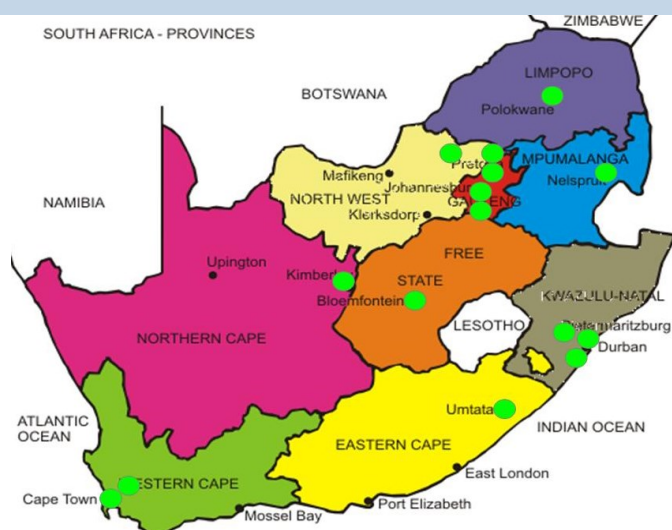




Volume 48, December 2015



Fourth Quarter



GERMS-SA/SARI surveillance officers' and data clerks' meeting, Lagoon Beach Hotel, Cape Town, 18-20 November 2015

Read this issue and stand to win a prize.

We wish all our readers a wonderful festive season, safe travels and a healthy 2016! Thanks to all the laboratories for your ongoing participation—without your isolates there would be no interesting surveillance results to report. Let's improve participation for 2016.

GERMS-SA: her story so far

Vanessa Quan

This was probably the busiest year of our GERMS life! In 2002 a few big *magas* conceived GERMS, the baby sister to the CDC ABCs network. Her godparents had visions of her growing up to be similar to her sister—a national laboratory-based surveillance programme.

In the first few years of her life she contracted the usual childhood diseases (pneumonia, diarrhoea... she even had a meningitis episode!). Fortunately she was already eligible for the Hib vaccine and never got ill with this. [See photo above of the first SO meeting](#)



(the whole GERMS team: site coordinators, surveillance officers, lab team, data team) and coordinating unit).

In 2005, she had an episode of cryptococcosis (she was however HIV negative) and then in 2007 we worried about PCP although it was never laboratory-confirmed; we retested her and she was still HIV negative. We all rejoiced when the pneumococcal conjugate vaccine was put into the EPI in 2009 but GERMS was already too old and no catch-up doses were given. In 2010 she was hospitalised with a *S. aureus* bacteraemia, probably community-acquired and since 2012 the problems have started—typical pre-teen! She was diagnosed with rif-resistant TB (on Xpert) and completed her course of treatment, this was a very anxious time for all those who pamper her. This was also when she started growing up and visiting clinics and getting around a bit. She met a boy called SARI at the clinics and they have become closer over the last few years ([see cover page photo - how GERMS and SARI are growing up](#)).

Perhaps we should have halted her growth but how else are we supposed to let our children develop? And this year I do believe she has become sexually active, she has been seen at the clinics for STI syndromic treatment. Good thing is that she was vaccinated for human papilloma virus. She hasn't disclosed yet but I think she probably has HIV too now. Once we know we can start her on ART and make sure she is tested for TB. All this in such a short 13 years! We wish her and SARI well and hope they make the right choices.

GERMS-SA/NICD Annual Surveillance Review: 28-29 October

Vanessa Quan

This year we were not short of numbers. There were 240 responses and a full PRF auditorium (additional chairs were added!). We had representation by Provincial as well as National DOH, CDC, laboratorians and clinicians throughout the country. It was a full programme and gave a snapshot of all the surveillance work (laboratory and clinic) done at NICD using the GERMS platform (including SARI). It was an opportunity for discussion about the relevance of what we cover in GERMS-SA and a good information-sharing platform.



First Principal Investigators' meeting (2004) - there were 15 attendees, 12 at dinner here.



Oh how we've expanded! October 2015 meeting; we no longer offer dinner.

Surveillance officers' and data clerks' meeting: 19-20 November

Vanessa Quan

As an experiment we had a joint GERMS/SARI meeting at Lagoon Beach, Cape Town. It was a JAM-PACKED two days with discussions, feedback and training on quality over split sessions for the two groups. As usual we ran out of time. From our debriefing session came these lovely short stories.

From a research assistant at Helen Joseph/Rahima Moosa:

'Whilst screening for SARI I asked a patient how she was and she proceeded to pour out her whole life story. Two hours later after much crying and listening I was able to move on to the next patient and continue screening for the morning - being careful how I worded my greetings.'

One from an enrolled nurse doing SARI:

'SARI surveillance is a scary business ... In March Nombulelo had only been with the team for a week when she called in and said that she was sick with pertussis. Then Phumelelo joined the team and also called in after a week and said that she had developed "SARI, no actually pertussis" and couldn't come in to work...'

Here's one from one of our oldest surveillance officers:

'A 4 month old baby was admitted with burns and ended up having an above-elbow amputation. I became very attached and emotional every time I saw this child. The mom told me that the child had fallen off the bed and onto the primus stove. The mom was very emotional but always silent when I was around the child. One day she looked at me and asked, with tears in her eyes, : "How am I going to dress this child and what am I going to tell her about how she lost her arm one day?" '

Our dedicated team of nurses may spend a tad too much time enrolling patients but they also fill the gap in our public health system of nurturing, communicating and spending time with patients; the role that they started out doing as bed-side nurses but left because of the demands and challenges of our healthcare system. We salute you!



Surveillance officers' and data clerks' meeting: 19-20 November cont.

Vanessa Quan



A time to talk....



A time to listen...



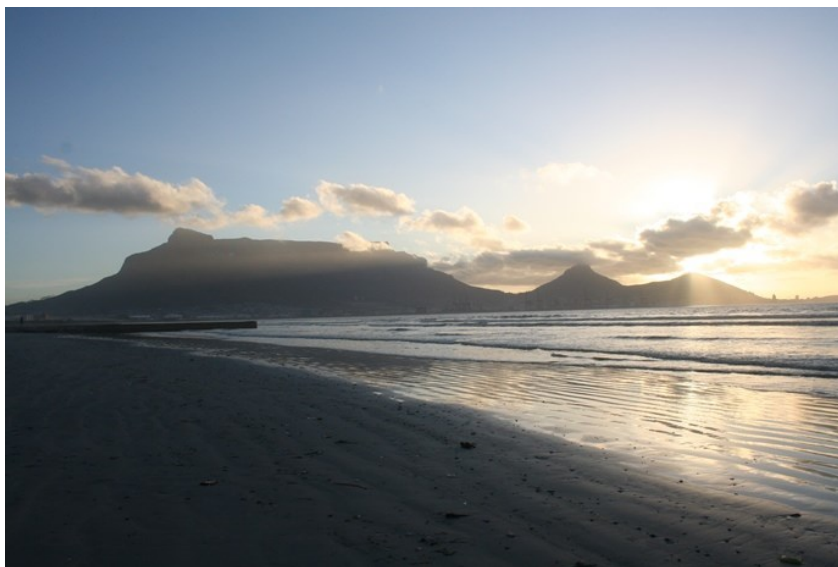
And a time to play...



Mini PI (principal investigators') meeting in the Western Cape - 20 November

Vanessa Quan

Since many in the WC could not get to our GERMS-SA/NICD annual surveillance review, we brought it to the mountain. This was a very useful meeting to discuss the collaborative projects happening in Cape Town and how to go forward with certain studies (mostly respiratory and meningitis as well as cryptococcosis). An exciting move forward is the existing NICD satellite virology laboratory which will be doing more of the Cape Town SARI laboratory work.



These are the current projects in Cape Town:

Effectiveness of maternal influenza vaccination on preventing influenza in infants <6months
Pneumonia surveillance in the Western Cape (WC)

And the future projects

Health Utilisation Survey for Red Cross drainage area
Meningococcal carriage survey in tertiary institutions
Influenza-like illness surveillance
CryptoPath at WC hospitals
Evaluation of WC reflex lab screening

Answer three simple questions in the [LINK](#) to put yourself in line to win a prize. 3 lucky winners will receive a surprise. Send your answers to the editor. Closing date is 9 January 2016.



World Pneumonia Day: *Push the pace. Fight pneumonia.*

Claire von Mollendorf



The Centre for Respiratory Diseases and Meningitis at the National Institute for Communicable Diseases, arranged a series of four lectures on World Pneumonia Day on the 12th of November 2015. The theme for World Pneumonia Day (<http://www.worldpneumoniaday.org/>) for this year was "Push the Pace. Fight Pneumonia." The focus for this day was on new innovations and solutions to end childhood pneumonia.

In 2013, 905,059 children <5 years of age died from pneumonia; 60% of these deaths occurred in 10 countries in Africa and South Asia.

The four speakers in the World Pneumonia Day event were 1) Professor Shabir Madhi (National Institute for Communicable Diseases) who spoke about 'Innovations in pneumonia prevention' and discussed the importance of vaccines in the fight against pneumonia; 2) Dr Nicole Wolter (National Institute for Communicable Diseases) addressed the audience on 'Innovations in pneumonia diagnostics' through the use of molecular diagnostics and new technology; 3) Professor Charles Feldman (Charlotte Maxeke Johannesburg Academic Hospital) delivered a talk entitled 'Innovations in management of pneumonia' which focused on adjunctive therapies in pneumonia treatment; and 4) Professor Keith Klugman (Bill and Melinda Gates Foundation) who spoke about 'Funding innovations for pneumonia'. Prof Klugman discussed the novel funding approach of the Bill and Melinda Gates Foundation. The Foundation are currently funding a number of ground breaking technologies, from point of care rapid diagnostic instruments for pneumonia detection to thermal imaging on smart phones; vaccine trials such as the maternal respiratory syncytial virus vaccine trial and vaccine development (pneumococcal vaccine development at the Serum Institute in India) to name but a few.

To reduce pneumonia deaths in children <5 years of age in line with Millennium Development Goal 4 will require a number of diverse strategies and the effective use of not only current but also new innovative technologies (http://issuu.com/ihme/docs/policyreport_ihme_pushingthepace_20).

Out and about the countryside

Vanessa Quan

Site visits were done to introduce Carbapenem resistant Enterobacteriaceae (CRE) surveillance to the participating enhanced surveillance laboratories. Tygerberg and Groote Schuur laboratories are featured in these photo's (18 November).



Question 1: Name one technology that the Bill and Melinda Gates Foundation is funding.



Training on a pilot meningitis / encephalitis surveillance project was held at Steve Biko Academic Hospital/ Tshwane District Hospital and Kalafong Hospital on 10 December. This pilot project will enable NICD to start to determine the prevalence of viruses which may cause signs/symptoms of meningo-encephalitis in children under 5 years of age at these 3 hospitals. A long-term surveillance project may come out of this pilot.



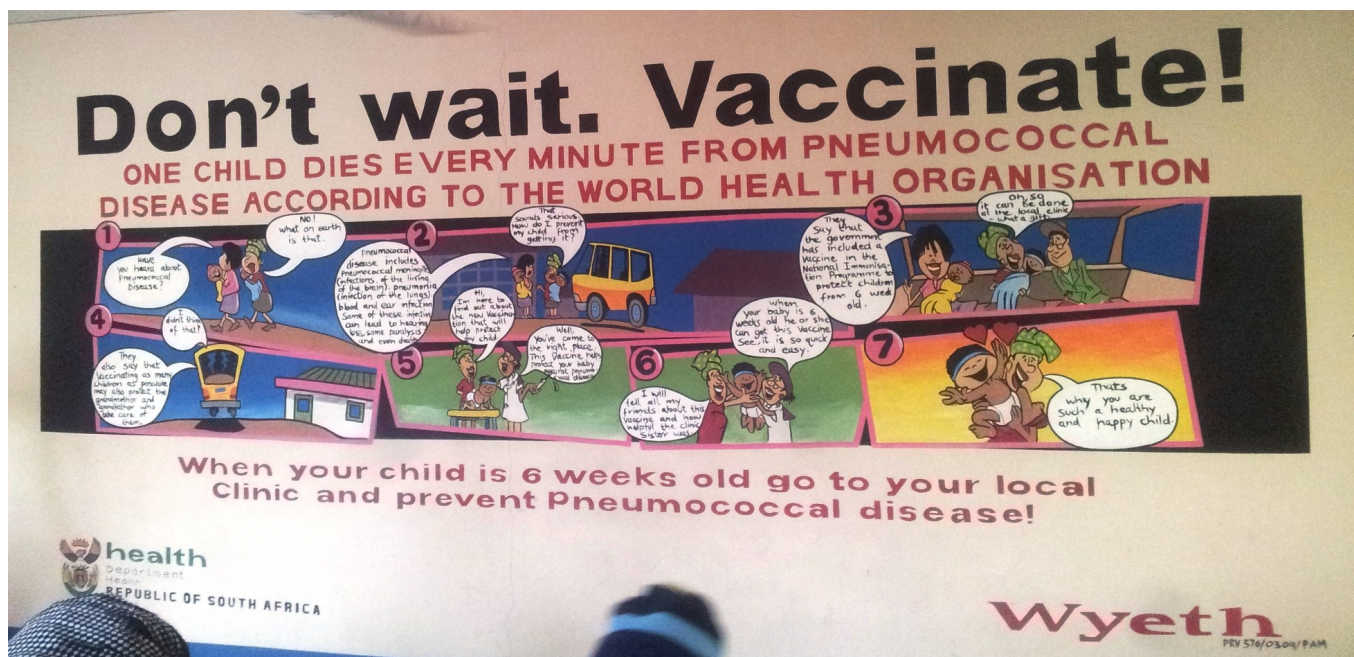
Out and about the countryside cont.

Vanessa Quan

In addition clinic visits have been done at Gqebera and Zwide (Port Elizabeth), Chiawelo (Gauteng), Durban and Pietermaritzburg to formalise clinic surveillance in these areas.



Gqebera clinic, Port Elizabeth



Pneumococcal vaccine mural on the wall of a Port Elizabeth clinic

Meningitis Research Foundation conference: November 2015

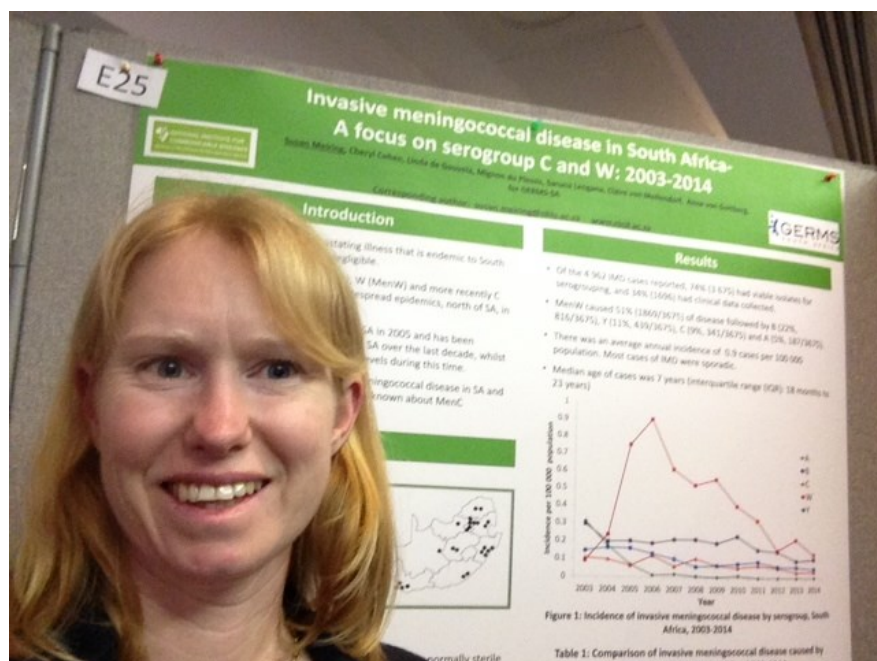
Susan Meiring

On 4-5 November 2015 I was fortunate to attend the Meningitis Research Foundation's conference on Meningitis and Septicaemia in Children and Adults at the Royal Society of Medicine, London, UK.

MRF are a registered charity that is at the forefront of the fight against meningitis and septicaemia in the UK and further afield. They invest in many research projects improving the prevention, diagnosis and treatment of meningitis and septicaemia. In addition they support many people affected by meningitis, raise public awareness and provide resources for health professionals.

It is definitely worth visiting their website at www.meningitis.org

The conference programme largely focused on meningococcal and pneumococcal disease and carriage, which was highly relevant to the work we are doing in South Africa through GERMS-SA. I was very proud to present our meningococcal surveillance data from South Africa comparing serogroups C and W during a poster session.



Some exciting public health developments in the UK were discussed regarding the implementation of a meningococcal serogroup B target vaccine (Bexsero) into the infant immunisation schedule (alongside the existing serogroup C conjugate vaccine). In addition a quadrivalent vaccine covering serogroups A, C, Y and W has been introduced into the UK national schedule for teenagers since August 2015. This was done in response to a recent increase in

a virulent strain of serogroup W disease - highlighting the importance of good routine surveillance systems even when disease incidence is low.

Meningitis Research Foundation conference: November 2015 cont.

Susan Meiring

There were many presentations on the importance of understanding meningococcal carriage in a population. This is necessary to understand transmission dynamics and to identify the best target group should meningococcal vaccine introduction need to be considered in any country. From 2016 GERMS-SA investigators will begin various studies looking into meningococcal carriage in the South African population.

A special guest at the conference was Aaron Phipps, MRF ambassador and London 2012 paralympic Wheelchair Rugby athlete. He shared his experiences of contracting meningococcal disease as a healthy active teenager and how he has dealt with the complications and gone on to represent his country in the Olympics. He



was very inspiring to listen to but as the conference programme turned more scientific it was good to keep his picture in my mind to realise that behind all the numbers of cases analysed are individuals and families affected by these devastating illnesses urging us on toward reaching our dreams of a world free from meningitis and septicaemia.



Question 2: which meningococcal vaccines are used in the UK?

World Antimicrobial Resistance Awareness Week- A WHO initiative to preserve antibiotics

Samantha Iyaloo

World Antibiotic Resistance Awareness Week was held from the 16-22 November 2015. This WHO global campaign entitled "Antibiotics: Handle with care", aimed to raise awareness and encourage the best practice among health and agriculture professionals, policy-makers and the public in order to avoid further emergence and spread of antibiotic resistance which is a threat to healthcare and patient safety worldwide by compromising empiric and directed antibiotic therapeutic options and increasing morbidity, hospital costs and the risk of death. It also weakens the modern advances in medicine such as the ability to prophylactically and therapeutically treat bacterial infections with new antibiotics and the ability to treat common illnesses such as urinary tract infections, pneumonias and skin and soft tissue infections. However, the inappropriate use of antibiotics in humans and food production has threatened our ability to continue with use of current antibiotics and prevent further development.



The Centre for Opportunistic, Tropical and Hospital Infections, Antimicrobial Resistance Laboratory at the NICD, was proud to host the NICDs first participation in the World Antibiotic Resistance Awareness Week on the 16th of November 2015. The Antibiotic Resistance Awareness Programme was chaired by Prof John Freaan and an opening address was provided by Prof. Shabir Madhi.

World Antimicrobial Resistance Awareness Week- A WHO initiative to preserve antibiotics cont.

Samantha Iyaloo

Invited speakers and representatives from the National Department of Health (Mr. Gavin Steele), Department of Agriculture, Forestry and Fisheries (Dr Marijke Henton), Charlotte Maxeke Johannesburg Academic Hospital (Prof Guy Richards), Pure Health Consulting (Dr Kim Faure) and NICD staff (Prof Olga Perovic and Dr Samantha Iyaloo), gave perceptive presentations and addressed concerns on the problem of antibiotic resistance.

The presentations consisted of an introduction to the problem of antibiotic resistance, an update on the state of the world's antibiotics, the Antimicrobial Resistance National Strategy-Policy Framework for South Africa, antimicrobial resistance surveillance and stewardship and an animal health perspective on antimicrobial resistance. The discussions that arose, established the need for a "one-health approach" to antimicrobial resistance, which ultimately promotes the integration of antibiotic resistance detection, control and preventative interventions in humans, animals and the environment. A delicious light finger-lunch was provided by the pharma sponsors who showcased their current antimicrobial product range and provided useful sponsored stationery. The event was successful in drawing attention to the problem of antimicrobial resistance and providing key pointers on how everyone can do their part in slowing the progression of antimicrobial resistance. Thank you to all the participating stakeholders and to the AMRL, COTHI team for hosting this important event.



General Information for Surveillance Laboratories: ALL laboratories to send ALL isolates below except for *S. aureus* (only participating labs). No cryptococcal isolates required—private labs to only send a lab form.

GERMS-SA: Non Enhanced (NESS) and 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 TrakCareLab report or send specimen tube/blood culture bottle if uncertain of identification and/or no isolate available (contact NICD 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 011 386 6234.

Pathogen	Specimen	Lab tests	NICD Centre/lab
<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> Enterohaemorrhagic <i>Escherichia coli</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 (all laboratories)	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>Cryptococcus</i> species (no need to send isolate)	Any specimen Private labs: Please only 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

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

††*Vibrio cholerae* isolates from human and non-human (environmental) specimens must be reported to NDOH

This newsletter was compiled and edited by Vanessa Quan,
Division of Public Health Surveillance and Response. Please send any queries, recommendations or contributions to: Vanessa Quan vanessaq@nicd.ac.za; Tel: 011 386 6012