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FIDSSA Quarterly

Newsletter of the Federation of Infectious Diseases Societies of Southern Africa

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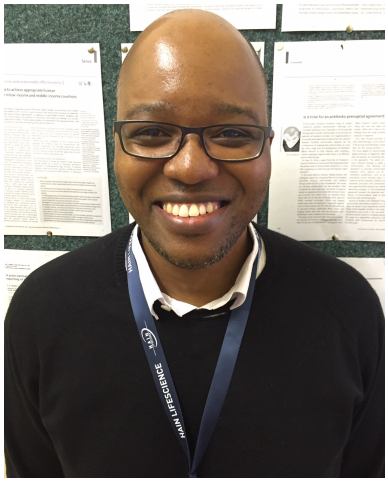
FIDSSA 7 - Century City Conference Centre, Cape Town, 9-11 November 2017

We are delighted to announce that the 2017 FIDSSA conference will be held at the new Century City Conference Centre in Cape Town. The new Centre has a dedicated hotel and there is ample accommodation around the venue to cater to a variety of tastes and budgets. The Cape Town CBD and the Cape Winelands are close by.



We are equally delighted that Dr Sipho Dlamini from University of Cape Town has agreed to be the chair for FIDSSA 7. Sipho will lead a scientific committee that comprises representatives from all 6 FIDSSA societies as well as content experts.

We have had expressions of interest from the European Society of Clinical Microbiology and Infectious Diseases (ESCMID) and the International Society for Infectious Diseases (ISID) to co-sponsor sessions during the conference, which will aid in bringing international speakers to our conference and build ties with important international societies.

So save the dates in your diary and we look forward to seeing you in Cape Town for what will be another great FIDSSA conference.

IDSSA welcomes the new WHO MDRTB guidelines – A huge milestone in the treatment of TB

The current 24-month treatment regimen for multi-drug resistant tuberculosis (MDRTB) is suboptimal and not based on sound evidence. It has a very high mortality rate and only 50% of patients are treated successfully. The treatment is cumbersome and has debilitating side effects which include psychosis, depression, hearing loss and renal impairment. It is not surprising that 1 in 5 patients are lost to follow up.

So it is very welcoming that on the 12 May 2016 the WHO has updated its treatment guidelines for MDRTB and is provisionally recommending a standardised shorter regimen (similar to the "Bangladesh regimen"), which has shown to have 80% treatment success rates in observational cohort studies.

The regimen consists of a 4-6 months intensive phase consisting of Kanamycin, Moxifloxacin, Prothionamide (can be replaced with Ethionamide), Clofazamine, Pyrazinamide, high dose Isoniazid and Ethambutol. This is followed by 5 months of Moxifloxacin, Clofazimine, Pyrazinamide and Ethambutol.

This regimen will reduce the duration of treatment to a minimum of 9 months. This has the advantage of improved adherence, improved treatment outcomes and reduced mortality. Despite still containing drugs, which have an unfavourable side effect profile, the regimen seems to be better tolerated, probably because of shorter duration of exposure. Large scale implementation is also expected to reduce cost, which can be better used elsewhere in the MDRTB program and national programs are encouraged to adopt the new guideline. For the individual patient this reduction in treatment by 13 months will have huge implications on quality of life, including employment and psychosocial wellbeing.

The success of the shorter regimen rests on the appropriate selection of patients. It should only be used in patients with uncomplicated disease. Unfortunately patients with extrapulmonary disease, pregnancy, 2nd line resistance or exposure to any of the drugs in the shorter regimen for > 1 month will not be eligible for this regimen.

Excluding second line drug resistance is therefore an essential prerequisite. The WHO also recommends the implementation of a second line molecular line probe assay instead of phenotypic

culture-based drug susceptibility testing. This novel rapid test has a quick turnaround time of 24-48 hours and can be used as an adjunct to the current LPA already in South African laboratories. The test will be a quick triage to decide whether a patient will benefit from the shorter or longer conventional regimen. Of concern in South Africa are the high levels of ethionamide, ethambutol and pyrazinamide resistance, which are not routinely tested for and how this will affect the regimen efficacy remains to be seen.

While this is exciting news for MDRTB patients, the aim would be a completely oral regimen, with a shorter duration and using drugs with better side effect profiles. Hopefully some of these questions will be answered in the STREAM 2 and NExT trials, which have sites in South Africa and will hopefully provide answers that are relevant to our situation within the next few years.

Newly qualified Infectious Diseases Specialist

Congratulations to Jeremy Nel who has successfully completed the Certificate in Infectious Diseases by the Colleges of Medicines for South Africa (Cert.ID SA). He will continue working at Helen Joseph Hospital and aims to do a fellowship with the University of North Carolina concentrating on infectious diseases in the compromised host. We wish him well with his future career.

STDSSA News – Winds of change for South Africa

Can HIV be prevented?

For many years researchers around South Africa have been asking the questions – can HIV be cured and can HIV be prevented? This has also been the desperate cry of many communities and families who have been affected by this deadly disease. In the words of Anthony S Fauci, director of NIAID (part of the NIH), "For the first time in seven years, the scientific community is embarking on a large-scale clinical trial of an HIV vaccine, the product of years of study and experimentation." The HVTN 702 trial will be taking place at 15 sites across South Africa starting in November 2016 subject to regulatory approval. This phase 2b/3 clinical trial utilises two experimental vaccines, both of which are specific to HIV clade C, the main HIV subtype circulating in southern Africa. If the vaccine is deemed safe and effective, it will open up the possibility of eradicating HIV/AIDS and improve the health of future generations of South Africans.

For more information go to:

http://www.niaid.nih.gov/news/newsreleases/2016/Pages/HVTN702.aspx

https://www.niaid.nih.gov/news/QA/Pages/HVTN702-QA.aspx

Is syndromic management of STIs enough?

In SA STIs are usually managed syndromically without performing laboratory diagnostic tests to first determine the aetiology of the infection. It is thought that treatment on the first visit to the health care provider will help to limit the spread of STIs, however the prevalence of many STIs remains high and has not declined with the implementation of syndromic management. This raises the question "Is syndromic management for the treatment of STIs enough?" and if not "what can be done to reduce the

burden of STIs in SA?" These questions are hotly debated by the STI community at the moment with prominent groups within South Africa proposing new interventions such as the testing and possible implementation of promising point-of-care STI diagnostic tests and expedited partner therapy to reduce the risk of reinfection of the primary patient from an infected partner who may even be asymptomatic.

For further information go to:

http://www.kznhealth.gov.za/family/STI-guidelines-2015.pdf

http://sti.bmj.com/content/early/2016/04/15/sextrans-2016-052581.extract

New leadership

It is with mixed feelings that I bid South Africa farewell in July 2016. Having been on the Scientific Planning Committee for FIDSSA 2015 and the newly elected chair of STDSSA since November 2015, I have learned just how passionate the FIDSSA team is when it comes to advancing reach and health care in South Africa. I am sad to leave such a vibrant and enthusiastic team, but at the same time looking forward to new adventures and new opportunities in the UK.

Unfortunately I will not be able to complete my term as chair of STDSSA because I will no longer be living in SA although I am still proud of my South African roots! I wish STDSSA and FIDSSA a prosperous future which sees new medical breakthroughs being made and improved health care for all South Africans.

Bronwyn Joubert, outgoing Chair of STDSSA

I C S S A
INFECTION CONTROL SOCIETY OF SOUTHERN AFRICA

World Hand Hygiene Day



On the 5th May, hospitals celebrated World hand Hygiene Day. An Infection Prevention and Control Specialist (Jenny Grimsley) led Life The Glynnwood Hospital making a video of staff dancing to the tune of 'Gangnam Style' while performing hand hygiene. Nurses, doctors, administrators and visitors had great fun creating awareness of a very important practice. The Clinical Programme Coordinator (Yolanda van Zyl) led the Paarl Hospital where hand hygiene was done and pamphlets in the 3 languages regarding the benefits of clean hands were handed out. Everyone from the cleaners to the CEO was involved. A submission from Briette du Toit (Infection Prevention and Control Manager) for Mediclinic who's theme was: 'My Habit Inspires Change'.

Chapter News

Hannelie van Lill has recently taken over from *Lizette de Beer* as chairperson of the Pretoria Infection Control Forum.

Marietjie du Toit has recently taken over from *Lesley Devenish* as chairperson of the Gauteng Infection Control Society.

Thank you to both Lizette and Lesley for years of commitment and hard work and we look forward to great things from Hannelie and Marietjie going forward!

The Importance of Paying Attention to Detail - TB

The difference between something good and something great is attention to detail. Charles R. Swindoll (clergyman)

Again and again I notice, when responding to telephone calls or colleagues requesting advice or in cases of patients in my care, that attention to detail provided the clue to the correct assessment and subsequent management.

Backdrop: Tuberculosis – unfortunately still an everyday experience in many of our work settings

Scene 1: April 2016:
Call from colleague paediatrician 200km away. 4 month old baby admitted with pneumonia. Father has been diagnosed in January 2016 with DR-TB, resistant to INH, rifampicin and ethionamide. Child was exposed for a month, then father was admitted (when?). Infant has been coughing for 2 weeks, is well nourished and HIV-uninfected. Sputum GeneXpert negative, chest x-ray shows left upper lobe consolidation. Responded well to antibiotic treatment.

QUESTION: Baby has been on prophylactic INH 10mg/kg/d since January, which TB prophylaxis should the baby be given now?

THE MISSING DETAIL: The personal details of father were necessary to be able to check results on NHLS Trakcare: Sputum: January 2016 micro +++, culture pos after 5 days. This was not all: The resistance pattern was reported fully only in February: INH (inhA and katG mutation), kanamycin, capreomycin and ofloxacin resistant. Sputum in February micro +++ culture pos, March culture negative.
This is essentially XDR-TB.

Factors that may increase the risk of the child's infection with TB organisms:

- The father had a high bacterial load. How close was the contact of father and child?
- How long was the father symptomatic before admission for treatment?

The child:
Detail of chest x-ray? Tuberculin skin test result?
Was a gastric aspirate specimen (one or two?) sent in for TB culture?

Advice:
Unfortunately there is no TB prophylaxis that can be given in this case. Follow up child monthly (preferably the same doctor for continuity), check symptoms, repeat CXR, repeat specimens for TB investigations if symptomatic and follow-up results diligently. If positive get expert advice immediately.

Scene 2: December 2015, Sunday morning
Intern: "Dr H, please quickly look at this child, I just want to check I am doing the right thing. He is 2 ½ years old, the boyfriend of the daycare lady has TB. So, I have seen the child: He is well nourished and HIV-uninfected. The Mantoux is 15 mm and the chest x-ray looks abnormal, there are big hilar nodes. I want to notify primary PTB and start on INH, rifampicin and PZA."
So far: well done.
Dr H: "What is the name of the man?" "Oh, I don't know." "Try find out." – "The mother says it is Koos Solomon (fictitious name)."
So, we find the GeneXpert from August 2015: "MTB detected, rifampicin resistant". No other results or specimens are found on Trakcare. After some detective work of a colleague we find more results under Solomon Koos (diligence when completing lab request forms is so important):
PCR (LPA) *Mycobacterium tuberculosis*: INH resistant (inhA and katG), MGIT culture based 2nd line testing: sensitive to capreomycin, kanamycin; resistant to PZA, ofloxacin.
This is pre-XDR-TB. The situation is explained to the mother, the child is admitted and treated as having drug-resistant PTB. He has done well so far.

Vaccination at All Ages

The last week of April was World Immunization Week 2016: "Closing the Immunization Gap"

Vaccination opportunities to consider beyond childhood:

- Earlier this year again a student living in the hostel tragically succumbed to meningococcal infection. Subsequently the university arranged for students to receive the quadrivalent meningococcal vaccine. I am aware of one other university that has offered hostel students an opportunity to be vaccinated (with payment): meningococcal and influenza vaccine. This should be offered at many more institutions.
- New medical doctor interns: All should be asked about their previous vaccinations. Advice should be given to consider the following vaccinations: pertussis-tetanus-polio-diphtheria vaccine, hepatitis A (many have not received it), varicella and papillomavirus.
- Pertussis-tetanus-polio-diphtheria vaccine in the 3rd trimester of pregnancy.
- Pneumococcal vaccine (the 23-valent vaccine) should be offered to children diagnosed with some primary immune deficiency conditions or post-splenectomy.
- Hepatitis A vaccination, at any age if never vaccinated or not immune.
- Measles vaccination of adults if never vaccinated.
- Some of these vaccinations have to be paid for as they are not available in the public health sector.
- Encourage adults to keep the vaccination record next to their passport.
- Health-care workers who are fully immunised are more likely to have patients that are fully immunised.

Workshop in Durban : The HIV exposed uninfected child

SASPID has endorsed the 2nd HEU Infant & Child Workshop that will be held on the 17th of July 2016 at the Nelson R. Mandela School of Medicine, University of KwaZulu Natal. At the 1st HEU workshop in Vancouver in July 2015, a committed group of researchers wanting to improve the health and wellbeing of HEU infants and children was identified. However, the current level of evidence in this field is inadequate. The aim of this 2nd HEU workshop is to consider research methodology related

to infectious and other morbidity in HEU infants & children to facilitate the generation of high quality evidence translatable into action for HEU infants and children.

Interested persons can contact Natasha Samuels (+27 21 9384298/ samuels@sun.ac.za) or the SASPID executive committee for further information.

Ute Hallbauer, Paediatrics & Child Health, University Free State

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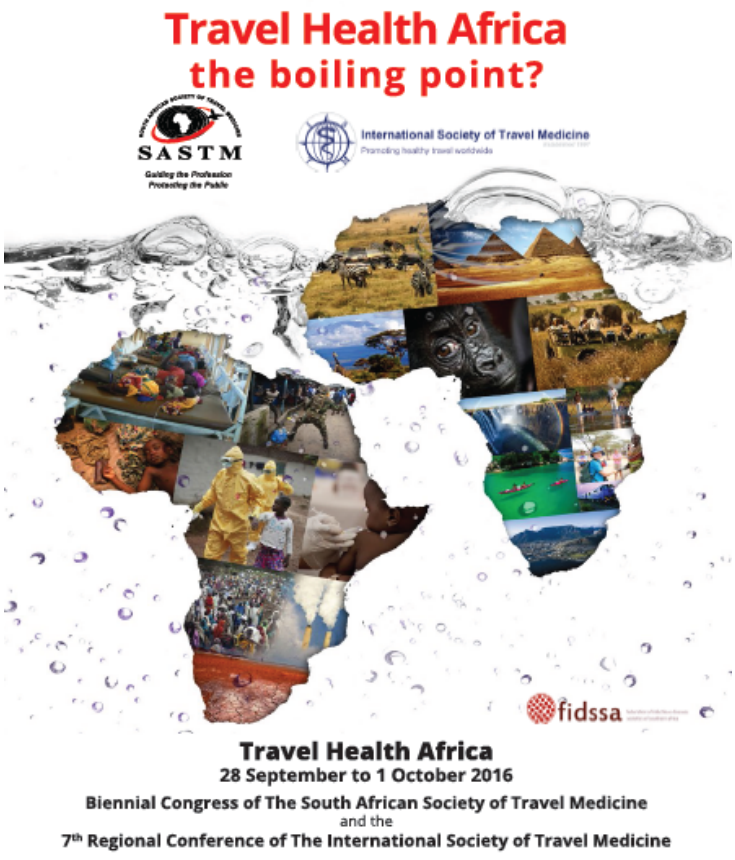
South African Society of Travel Medicine



Is Africa at the Boiling Point?

Travel Health Africa: September 28 – October 1 2016

There is the misconception that travel medicine is only about vaccine preventable diseases. Perhaps this is valid, given the recent outbreak of yellow fever in Angola. This is vaccine preventable – there has not been documented evidence of vaccine failure – and now Africa stands on the verge of another outbreak – indeed Africa is at the Boiling Point.

Travel medicine is more than just vaccinations – it encompasses One Health, emerging infectious diseases, the psychological impact of working in a foreign country with a different culture, to minimising the travel related health risks for travellers – from the adventure traveller to the traveller who becomes involved in displaced communities.

At Travel Health Africa these topics will be explored by national and international experts. There will be an update on Zika virus and the link to microcephaly, polio in Africa, the risk of meningitis, diarrhoeal disease, Dengue (the next emerging infectious disease in Africa?), respiratory tract infections and the role of the traveller in importing disease and microbial resistant organisms (and much more) – a veritable cauldron of interesting and thought provoking topics linking all the disciplines involved in travel medicine.

Registration for FIDSSA members is at the special membership rate, so avail yourself of this opportunity to attend the 7th Regional Congress of the International Society of Travel Medicine and the biennial Congress of SASTM.

Visit www.sastm.org.za to view the programme and REGISTER NOW

Recently published papers from SA describing emerging antimicrobial-resistant pathogens/ resistance mechanisms

- The emergence of resistant bacteria and fungi in South Africa and further afield is an enormous problem with serious public health and treatment implications.
- Treatment of infections caused by multi-drug resistant organisms is challenging due to the sub-optimal clinical efficacy, limited availability and higher toxicity and cost of alternative antimicrobial agents.
- Surveillance for antimicrobial resistance (AMR) is an essential pillar of South Africa's National Strategy on AMR.

The following selected articles, which describe the epidemiology of AMR in SA, were published in the last year:

1. Coetzee J, Corcoran C, Prentice E, Moodley M, Mendelson M, Poirel L, Nordmann P, Brink AJ. Emergence of plasmid-mediated colistin resistance (MCR-1) among *Escherichia coli* isolated from South African patients. S Afr Med J. 2016 Apr 19;106(5):449-450. doi: 10.7196/SAMJ.2016.v106i5.10710.

   Summary: In SA, colistin resistance was previously caused by genetic changes that were not transferrable between bacterial species. Plasmid-mediated colistin-resistant *E.coli* has been described in other countries and in this paper, described as causing infection among 9 SA patients with no prior colistin exposure. The main concern is that the plasmid conferring resistance can be transmitted to other extensively-resistant Gram-negative bacteria for which colistin may have been a final treatment option.

2. Govender NP, Patel J, Magobo RE, Naicker S, Wadula J, Whitelaw A, Coovadia Y, Kularatne R, Govind C, Lockhart SR, Zietsman IL; TRAC-South Africa group. Emergence of azole-resistant *Candida parapsilosis* causing bloodstream infection: results from laboratory-based sentinel surveillance in South Africa. J Antimicrob Chemother. 2016 Apr 28. pii: dkw091. [Epub ahead of print]

   Summary: In this paper, *Candida parapsilosis*is reported to be the dominant species causing fungaemia among neonates, adults in the private sector, and patients in Gauteng province. More than half of these isolates were resistant to fluconazole, limiting treatment options to amphotericin B and echinocandins.

3. Naicker SD, Magobo RE, Zulu TG, Maphanga TG, Luthuli N, Lowman W, Govender NP. Two echinocandin-resistant *Candida glabrata* FKS mutants from South Africa. Med Mycol Case Rep. 2016 Mar 21;11:24-6. doi: 10.1016/j.mmcr.2016.03.004. eCollection 2016 Mar.

   Summary: *Candida glabrata* isolates are relatively resistant to the azoles and when possible, echinocandins are the antifungals of choice for invasive infections (except those originating from the urinary tract). The first 2 cases of *C. glabrata* infection with echinocandin resistance are described in this paper. This finding reinforces the need for continued surveillance to monitor trends.

4. Perovic O, Iyaloo S, Kularatne R, Lowman W, Bosman N, Wadula J, Seetharam S, Duse A, Mbelle N, Bamford C, Dawood H, Mahabeer Y, Bhola P, Abrahams S, Singh-Moodley A. Prevalence and Trends of *Staphylococcus aureus* Bacteraemia in Hospitalized Patients in South Africa, 2010 to 2012: Laboratory-Based Surveillance Mapping of Antimicrobial Resistance and Molecular Epidemiology. PLoS One. 2015 Dec 31;10(12):e0145429. doi: 10.1371/journal.pone.0145429. eCollection 2015.

   Summary: Almost half of *S. aureus* isolates causing bacteraemia in this multicentre SA study were reported to be methicillin resistant, with MRSA infections occurring more commonly among children <5 years old and in Gauteng province. The majority of MRSA isolates were SCC*mec* type III and type IV, which are associated with hospital- and community-acquired infections respectively. This paper also provides a baseline snapshot of the geographical distribution of MRSA "clones" in SA, with a dominance of spa types 037 and 1257 and sequence types ST612 and ST5.