THE FEDERATION OF INFECTIOUS DISEASES SOCIETIES OF SOUTHERN AFRICA

FIDSSA Quarterly

Volume 4 Issue 3 1st Sept 2013

Special points of interest:

- saNTHNET
- FIDSSA Facebook
- Conference reports
- Paediatric Antimicrobial stewardship

Ten good reasons to attend the 5th FIDSSA Conference - 10-12 October 2013 Champagne Sports Resort, Drakensberg, KwaZulu Natal

1. A stellar line-up of 14 International speakers
2. An equally stellar line up of 56 local experts
3. Something for everyone - ID, microbiology, virology, travel medicine, IPC and STDs
4. Meet the Professor sessions and breakfast symposia for the ultra-keen
5. The 2nd SAASP Workshop presented as a pre-conference meeting
6. 20 CEUs and 2 Ethics points for the conference & 7 CEUs for the SAASP workshop
7. The chance to have your say and direct the future of FIDSSA at the AGM
8. An intimate, relaxed conference in a beautiful setting with friends and colleagues
9. The Berg and all it has to offer
10. Watching the conference chair dancing the Hoola at the celebration braai

It's not too late to register for the conference via the FIDSSA website link.

South African Antibiotic Stewardship Programme Pre-Conference Workshop

Less than 10 places are still available for the SAASP pre-conference workshop on Thursday 10th October. Enquiries can be made via the conference website.

SAASP

MSD Be well

SOUTH AFRICAN ANTIBIOTIC STEWARDSHIP PROGRAMME (SAASP) WORKSHOP

Provisional Programme as at 13 August — 7 CEU Points

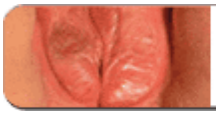
Thursday 10 October		
08h00 – 09h00	**Registration for SAASP Workshop ONLY**	**Venue: Reception Foyer**
SOUTH AFRICAN ANTIBIOTIC STEWARDSHIP PROGRAMME (SAASP) WORKSHOP	**Sponsored by MSD**	**Venue: Summit**
09h00 – 09h15	Welcome and Review of SAASP activities 2012 - 2013 - **Marc Mendelson**	
09h15 – 09h45	Global Antimicrobial Stewardship - just do it! - **Debbie Goff (USA)**	
Session 1	**Multi-Drug Resistant Gram Negative Infections**	**Chair: Marc Mendelson**
09h45 – 10h10	State of the Nation; Clear and Present danger - **Adrian Brink**	
10h10 – 10h50	IPC Strategies – The case for search and destroy For - **Andrew Whitelaw** Against - **Preshnie Moodley** Moderator - **Shaheen Mehtar**	
10h50 – 11h15	Antibiotic dosing – are we getting it right? - **Gary Maartens**	
11h15 – 11h45	**REFRESHMENTS – Monks Cowl**	
Session 2	**Update on South African Antibiotic Stewardship Programmes**	**Chair: Adrian Brink**
11h45 – 12h05	Groote Schuur Hospital ASP 12 month data - **Tom Boyles**	
12h05 – 12h25	The Purple Cow approach to multi-hospital antibiotic stewardship - **Dena van den Bergh**	
12h25 – 12h45	Antimicrobial Stewardship: Baby steps to achieve quantum leaps - **Andriette van Jaarsveld**	
12h45 – 13h15	Panel Discussion	
13h15 – 14h15	**LUNCH SYMPOSIUM– Monks Cowl**	
Session 3	**Abstract Presentations**	**Chair: Andries Gous**
14h15 – 14h30	Countrywide emergence of Carbapenem-resistant Enterobacteriaceae (CRE) in Netcare hospitals - **Karin Swart**	
14h30 – 14h45	Importance of enhanced antimicrobial susceptibility testing and MIC reporting in dose optimization - **Warren Lowman**	
14h45 – 15h00	Teicoplanin Stewardship at Netcare Umhlanga Hospital based on an Utilisation Analysis - **Nerina Banwari**	
15h00 – 15h15	The value of antibiotic claims data in support of antibiotic stewardship & infection control - **Gary Kantor**	
15h15 – 15h30	A multidisciplinary approach to antibiotic stewardship in a private hospital setting in South Africa - **Shanay Singh**	
15h30 – 15h45	Antibiotic point prevalence study in the paediatric department of a tertiary hospital - **Heather Finlayson**	
15h45 – 16h15	**REFRESHMENTS – Sentinel**	
Session 4	**Moving Forward**	**Chair: Gary Kantor**
16h15 – 16h40	GARP-SA and SAASP: A match made in heaven? - **Adriano Duse**	
16h40 – 16h55	What next, after the low-hanging fruit has been picked? - **Debbie Goff (USA)**	
16h55	Close of workshop	

Don't miss your Society's AGM (1730-1830 Friday 11th October) or the FIDSSA AGM (1830-1930 Friday 11th October) at the Conference

Infectious Diseases Society of Southern Africa

SAPID — southern african society of paediatric infectious diseases

sascm — South African Society for Clinical Microbiology



Sexually Transmitted Diseases Society of Southern Africa

SASTM — South African Society of Travel Medicine

fidssa — federation of infectious diseases societies of southern africa

Infection Control Society of Southern Africa

Travel health advice for travellers to South Africa

South African Society of Travel Medicine

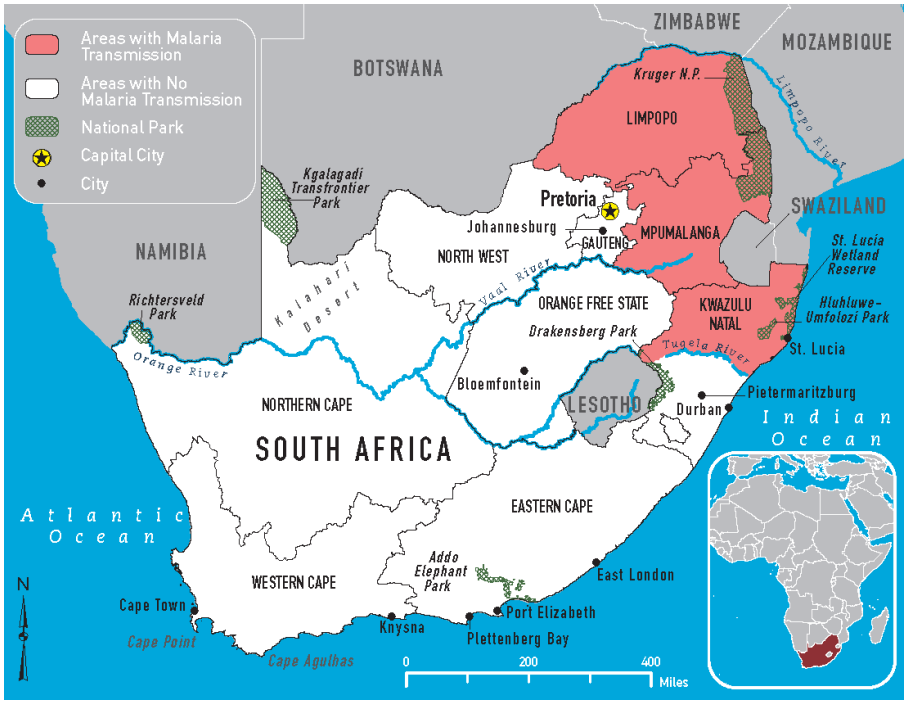
Tourism is a burgeoning industry. In 2012 there were 9 188 368 tourists to South Africa, a growth of 10.2% over the previous year. The average global tourist growth is 4%, so South Africa is outstripping the rest of the world in the tourist industry. The five biggest sources of tourists to South Africa is the United Kingdom, the USA, Germany, China and France.

This is wonderful for South Africa. But where do tourists and the tourism industry obtain information on health advice for these travellers? The main sources would be the Centers for Disease Control and Prevention (CDC), the National Travel and Health Network (NaTHNaC) and the World Health Organisation. For the travel health practitioner additional sources would be Travax (NHS Scotland) and Travax (Shorelands). There is no South African source of information for travellers other than the National Department of Health (limited information and difficult to find), and perhaps a direct enquiry to the South African Society of Travel Medicine (SASTM). The latter is not directed to the traveller as its main function is to serve its members.

The advice provided by the CDC, NatHNaC and other organisations: how accurate is it, and how frequently is it updated? The CDC states the following on the malaria risk for travellers to South Africa:

Areas with malaria: *Present in northeastern KwaZulu-Natal Province as far south as the Tugela River, Limpopo (Northern) Province, and Mpumalanga Province. Present in Kruger National Park.*
It is stated that the risk for US travellers is low.

The information available on the NaTHNaC site is similar, but different. Travax (Scotland) has the most up-to-date information. The map which accompanies this information is reproduced below:



It is stated that the risk for US travellers is low.

Surely it would be better for the traveller (and professional) to have access to a South African site which carried the correct information, not only for malaria risk to travellers, but other health risks and advice as well?

It was with this in mind the National Department of Health (DoH), the National Institute for Communicable Diseases (NICD) and the South African Society of Travel Medicine collaborated to form the South African National Travel Health Network (SaNTHNet).

The Network will focus primarily on communicable diseases in compliance with the International Health Regulations and will provide an authoritative platform for the following functions and activities:

1. The development of guidelines for the prevention and treatment of travel -related diseases
2. To develop consistent and authoritative national guidance on general health matters for health professionals advising the public travelling locally and abroad, and to disseminate this information widely.
3. The provision of relevant travel information for South African and international travellers with destinations in South Africa and abroad.
4. Act as a resource for travel-related health problems
5. Gather the necessary data as stipulated in the Yellow Fever regulations
6. Provide input and submit expert information to the Department of Health regarding the Yellow Fever regulations
7. Provide the necessary information to professionals dealing with travellers to ensure appropriate investigation and treatment when requested.
8. Provide surveillance for selected travel-related diseases and imported infections e.g. Dengue fever.
9. To define short-term and long-term research priorities in relation to the above
10. Act as a WHO collaborative centre for Mass Gatherings

The website has been launched, and can be accessed at www.santhnet.co.za . Many changes will be required as feedback is received and new items are added to the site. Comments and suggestions are welcome as to how this Network can be improved to best serve the traveller to this Country, providing up-to-date factual information. Please direct your suggestions to Marion Blewett, admin@sastm.org.za – we look forward to receiving them.

Garth Brink, SASTM

Highlights from the STI and AIDS World Congress14-17 July 2013, Vienna, Austria

The setting for this year's congress was in the beautiful city of Vienna in Austria at the Hofburg imperial palace. The architecture, stately rooms and grand décor just gave a sense of the history of this building and of the city itself.

Topics that were mostly covered and of interest were the challenges faced in the MSM population in terms of STIs, in particular syphilis and HIV, and strategies on how to approach this population with the aim of reducing the burden of these diseases. This rising syphilis and HIV rates among MSM has been reported in China, Thailand and New York City and many studies have shown that MSM have a 140-fold higher risk for newly diagnosed HIV and syphilis compared with heterosexual men.

There were many talks that explored the idea of HIV treatment as a prevention strategy. A debate "Social and behavioural interventions are no longer a priority in HIV prevention programmes" was held just to highlight the shift in focus from the scientific to implementational research. The evolution of adult/adolescent antiretroviral therapy guidelines since 1987 to date were reviewed and discussed. From 2008 moving toward earlier ART and treating at CD4 <350 and also considering ART at CD4 >350 depending on patient scenarios. Randomised controlled trials of earlier versus deferred ART in Haiti (CIPRA HT 001 Study) was immediately stopped due to the number of deaths in the deferred group.

HIV prevention strategies/ Towards an HIV cure: a Global scientific strategy:
In addition to proven HIV strategies such as male circumcision, antiretroviral therapy for interruption of transmission from mother to child and antiretroviral therapy for post-exposure prophylaxis, new strategies that are in the "pipeline" were discussed during the meeting. These include preventing/ treating co-infections such as TB, malaria, other STD and parasitic diseases, use of topical microbicides, ARVs for uninfected high-risk individuals (pre-exposure prophylaxis, "PrEP"), universal voluntary testing with immediate ARV therapy ("test and treat" strategy) and vaccines. Studies have shown that ARV infant prophylaxis is effective in reducing HIV-1 transmission and improves HIV-1 free survival in breastfed infants.
The main concerns for these strategies were risk of behavioral disinhibition with increase in HIV infection, risk of viral resistance in seroconverters on PrEP, restriction of individual's treatment options and secondary transmission of resistant virus with resultant compromise of broader first-line treatment guidelines.

Ending the HIV/AIDS pandemic: From scientific advances to public health implementation:
The current status of the global HIV/AIDS pandemic indicate that in 2011 new HIV infections were 2.5 million with a decrease of 22% since 2001. Ending the HIV/AIDS pandemic will require implementation research in partnership with interventions of treatment and prevention which will also require extensive basic and clinical research. There are currently 9.7 million people receiving antiretrovirals in low- and middle-income countries. The ART scale-up has averted 4.2 million deaths between 2002-2012. There is a need to improve the implementation of existing interventions while discovering new treatment and prevention interventions. The challenges are many. In 2012, 37% of HIV-infected adults eligible for ART, and 60% of eligible children, did not have access in countries with highest HIV burden. Levels of access to testing, entry and retention in care, initiation and adherence to ART are inadequate

in many settings. This prompted the WHO to update antiretroviral guidelines. As of June 2013 ART is recommended for:

- HIV + adults and adolescents with CD4 T cell counts <500mm^3
- HIV+ children < 5 years
- HIV+ pregnant and breastfeeding women
- People with HIV/TB coinfection
- People with HIV/HBV coinfection who have chronic severe liver disease

HIV serodiscordant couples

Biomedical intervention/behavioral research such as adult male circumcision significantly reduces men's risk of acquiring HIV in South Africa, Kenya and Uganda as high as 73%. The challenges are despite 2 million circumcisions for HIV prevention in eastern and Southern Africa, only 10% of the goal of 20 million circumcisions by 2016 has been achieved. UNAIDS report in June 25 2013 that since 2009, MTCT of HIV has been reduced by 50% or more in 7 sub-Saharan African countries. Despite extraordinary accomplishments in the prevention of mother –to-child transmission of HIV, 300 000 infants acquired HIV infection in 2012.

The growing threat of multi-drug resistant Gonorrhoea:

The emergence of the first cases of multi drug-resistant (XDR) *Neisseria gonorrhoeae* have impelled researchers to find new gonococcal treatment options as it is feared that gonorrhoea may become untreatable in the near future. The Gonococcal Antimicrobial Surveillance Programme (GRASP) has been documenting the emergence and spread of antimicrobial resistance (AMR) in gonorrhoea since 1992 and has informed treatment guidelines. Cephalosporins are currently the last remaining option for first-line empiric monotherapy of gonorrhoea but a number of countries have recently reported increasing minimum inhibitory concentrations (MICs) to cephalosporins. In South Africa, the first cases of extended-spectrum cephalosporin resistant *N. gonorrhoeae* have been identified in three men-who-have-sex-with-men (MSM), two residing in Johannesburg and one in Cape Town. All three isolates were epidemiologically linked and resistant to cefixime, ciprofloxacin, penicillin and tetracycline, with intermediate resistance to azithromycin but susceptible to ceftriaxone and gentamycin. Two of these isolates belonged to a successful international MSM-linked XDR gonococcal clone associated with several cefixime treatment failures in Europe and North America. The main reason for decreased susceptibility has been mosaic *penA* alleles encoding penicillin-binding protein 2 (PBP2), with up to 70 mutations relative to wild-type. Non-mosaic *penA* alleles containing A501V and A501T mutations also confer decreased susceptibility. Molecular techniques that detect these AMR determinants have the potential to enhance AMR surveillance and are being developed and used more frequently in routine settings. In the absence of new antimicrobial agents, actions and responses such as the timely development of novel effective drugs, implementation of global and regional action/response plans, increased surveillance of gonococcal AMR, treatment failure investigations and improving prevention and early diagnosis are essential in detaining the global spread of AMR in *N. gonorrhoeae*.

One of the highlights of the conference was the pre congress workshop which was on the new WHO STI guidelines. The sessions focused on the WHO STI Laboratory manual which is an up to date and comprehensive manual covering all aspects of STI laboratory diagnosis. This manual includes also quality management and recipes for media preparation. The manual is available for downloading from the WHO website. www.who.int/reproductivehealth

There were various presentations and a symposium on the new paradigm of PMTCT using HIV and Syphilis combined diagnosis. The new rapid point of care test DPP Syphilis screen and Confirm was shown to be a useful tool in a study done in Lisbon, Portugal. SD Bioline have also introduced a rapid HIV- Syphilis duo kit which showed good performance in a laboratory evaluation in Nairobi, Kenya.

Further Reading:
Abstracts book on : *Sex Transm Infect* July 2013 **vol 89 (Suppl 1**): A1-A428

Contribution: Etienne, Frans, Lindy, Vanessa- CHIV & STIs (NICD/NHLS)

ICSSA Update

By the time you read this, it will be about a month (or less) to the congress. The programme is virtually complete (its amazing how long it takes to finalise!). ICSSA is sponsoring Ms Constance Cutler, who is a director at Main Line Health System in Philadelphia, a member of APIC, and a fellow of the Society for Healthcare Epidemiology of America. Connie will be offering a workshop to look at behavioural change, and a plenary session entitled "Clinical bundles & people bundles – a marriage made in heaven?" I think the other highlight for infection control will be the workshop on training IPC professionals, and how to get training recognized by SANC. Hopefully this will (at last) put us on the right path. We currently have nearly 400 delegates registered already, and a record number of abstracts submitted, so it promises to be a fantastic meeting – if you haven't registered yet there is still time!

The congress will also, of course, be the venue for the bi-annual society AGM. As I have indicated in previous newsletters, I must stand down as president at this time, and if you want a say in who will take over the reins or at least the next 4 years, this is your chance! I would encourage as many people as possible to attend the AGM – if you are at the congress there is no excuse.

We are all now well aware of the rising threat of carbapenem-resistant Enterobacteriaceae (CRE), as highlighted in past cases of the month, as well as numerous articles and workshops. The society has developed an inter-hospital infection control alert form, to be used when transferring patients colonized with CRE (or other resistant organisms) between health care facilities. The document is available on the FIDSSA website – in the ICSSA page, under "Resources". Please use it if you feel it is appropriate. The W Cape provincial DoH has issued an adapted version for use in facilities in the province.

Other issues that have been raised in ICSSA around CREs recently include:

- Is it acceptable to "flag" patients as being CRE carriers? The feeling is that this is acceptable, as long the information is not used to discriminate against patients, but to inform appropriate infection control practices. Whether the flag should include information about the specific organism, or just a message to contact infection control is still receiving some debate. Educating / informing patients and their families is an important part of this process.
- Education of long term care facilities around the appropriate precautions for patients with resistant organisms is being taken up by a number of the committee members. This also involves protocols that allow patients to socialize and take part in rehabilitation programmes – clearly an important aspect of care, but one that may present some infection control challenges.

- Many institutions screen patients based on risk profiles – be aware that this is an imperfect practice, and may result in some patients with CRE being missed. A few sessions at the congress will be devoted to CRE (including the pre-congress stewardship workshop), including screening.

That's all for now – if you have anything to share, or any comments, as usual please contact either myself (awhitelaw@sun.ac.za - note new address), Lesley Devenish (Lesley.Devenish@netcare.co.za) or Joy Cleghorn (Joy.Cleghorn@lifehealthcare.co.za).

News from the FIDSSA Website

fidssa federation of infectious diseases societies of southern africa

You can now follow FIDSSA's progress on Facebook. Just like the page from our website and stay up to date with all the latest news. We are also setting up a live stream on the home page.
Many thanks to IT guru Carl Bouwer at E2 Solutions for setting up the website!

FIDSSA is the proud collaborating organization for the 16th International congress on Infectious Diseases which will take place from 2-5 April 2014. The FIDSSA homepage now has a link to the conference website, detailing registration and scientific programme information.

Through the porthole: cases from neonatal antimicrobial stewardship rounds

Weekly antimicrobial (AM) stewardship ward rounds have recently been introduced on neonatal and paediatric wards in Tygerberg Children's Hospital (TCH). These teaching ward rounds form part of the hospital's re-designed Antimicrobial Stewardship Programme (ASP), and will include using the FIDSSA AM prescription charts, discipline-specific AM guidelines (posters and electronic) and AM usage point prevalence surveys. The cases below are selected examples from a neonatal AM stewardship ward round.

Challenges to ASP implementation encountered to date include:

- ensuring doctors understand how to optimally use the FIDSSA prescription chart;
- maintaining focus on antimicrobial use during clinical ward rounds;
- ensuring buy-in from all stakeholders (doctors, administration, nursing, pharmacy);
- determining the best methods of measuring ASP impact and providing feedback to clinicians.

The following case scenarios were selected from a typical neonatal ASP ward round:

Location: Ward X, Neonatal Unit, Tygerberg Children's Hospital			**Date: 23 August 2013**
Attended by: Ward X medical team, Paediatric ID, TBH superintendent, Microbiology and IPC teams			
Bed occupancy	**AM prescription prevalence**	**AM for treatment of HAI***	**Empiric AM prescription**
28/32 (88%)	10/28 (36%)	4/10 (40%)	7/10 (80%)
Examples:	**Case 1**	**Case 2**	**Case 3**
Indication for AM	Day 10 premature neonate, suspected sepsis	Day 6 premature neonate, suspected maternal amniotic fluid infection	Day 8 term infant with blistering skin lesions and suspected sepsis
AM prescribed	Meropenem + Vancomycin	Penicillin + Gentamicin	Penicilin, Gentamicin, Cloxacilin + Acyclovir
Duration of therapy	Day 3	Day 8	Day 3
Empiric or Targeted	Empiric	Empiric	Empiric
Dosage/s	Correct	Correct	Correct
Dosing interval/s	Correct	Correct	Correct
Route	Intravenous	Intravenous	Intravenous
Monitoring (TDM)	Indicated for Vanco but not performed	Done for gentamicin	Not done, but indicated for gentamicin
Laboratory results	BC pending, CRP = 20	BC negative, CRP = 10	LP normal, Herpes PCR awaited, BC result provided to team during ward round *Staphyloccus aureus* - MSSA
ASP team recommendation	Advised to **stop** Vancomycin since no good indication; should perform routine TDM for Vancomycin in neonates on day 2 to optimise dosing; if BC negative after 72 hours stop Meropenem	Advised to **discontinue all AM** and **remove** IV line **immediately** (to prevent bacterial thrombophlebitis	**Discontinue all AM** apart from Cloxacillin (targeted therapy); repeat BC; **consider oral switch** as soon as infant stable

TBH = Tygerberg hospital; IPC = Infection prevention and Control; AM = antimicrobial; HAI = healthcare-associated infection; TDM = therapeutic drug monitoring; BC = blood culture; CRP = C-reactive protein; LP = lumbar puncture; PCR = polymerase chain reaction

World Health Organization raises the bar

On June 30th this year, the World Health Organization (WHO) launched the 2013 WHO Consolidated ARV guidelines. In addition to increasing emphasis on community-based testing, consolidation of services and continuity of care, and the use of viral load testing rather than CD4 count for monitoring of therapy, the bar is now raised for starting ART from CD4 counts of <350 cells/mm^3 to <500 cells/mm^3.

Although the priority remains to initiate individuals with CD4 counts <350, stage 3 or 4 disease, the earlier start for all individuals with CD4 counts <500 and HIV-infected individuals in sero-discordant relationships (treatment as prevention), heralds the next step in the management of HIV infection.

Any change in policy must be weighed up in terms of pros and cons. The benefit of starting earlier will be to hopefully impact further on the incidence of tuberculosis, particularly if coupled with isoniazid preventative therapy, to reduce HIV-driven pathology such as HIV-associated nephropathy (HIV-AN) or HIV-associated Neurocognitive Disorder (HAND), and potentially, to impact on the incidence of HIV-associated cancers i.e. lymphoma, cervical cancer and Kaposi's sarcoma. Other potential benefits could be reduction in non-AIDS defining cancers, and non-infectious comorbidities such as cardiovascular disease.

These are all important goals, yet the potential for harm also exists when starting patients on ART earlier. Adherence and the potential emergence of drug resistance, the spectre of adverse drug events and the cost to a middle-income country such as South Africa are all important considerations.

World Health Organization 2013. Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection: recommendations for a public health approach. Accessed on 20th August 2013 at http://www.who.int/hiv/topics/strategic_use_arv/en/