THE FEDERATION OF INFECTIOUS DISEASES SOCIETIES OF SOUTHERN AFRICA

FIDSSA Quarterly

Volume 1 Issue 3 1st December 2010

Special points of interest:

- News from the FIDSSA secretariat
- A good year for tenofovir
- IPC news
- Boston, the conference hotspot for early 2011

fidssa federation of infectious diseases societies of southern africa

- Infection Control Society of South Africa(ICSSA)
- The South African Society of Travel Medicine (SASTM)
- Infectious Diseases Society of Southern Africa (IDSSA)
- South African Society of Clinical Microbiology (SASCM)
- Sexually Transmitted Diseases Society of Southern Africa (STDSSA)
- Southern African Society of Paediatric Infectious Diseases (SASPID)

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News from the Secretariat - membership numbers

Your New FIDSSA Membership Number

FIDDSA is currently revamping and updating its database to avoid duplication, incorporate SASTM members and ensure that our database is a true reflection of the FIDSSA membership.

The first step is to create and allocate a new FIDSSA number for all members. This will mean that your previous FIDSSA number that you used to login onto restricted sections of the website will change.

Don't Panic: You will be sent your login details by email and/or sms (depending what details we have for you) by 8 December 2010.

Please go online and update your personal details now so that we are able to assign you a new number and inform you of it. Make sure the following details are correct:

Title, Initial, First name and Surname
Contact details – cell number important for SMS announcements
Postal address – to receive your SAJEI copy
HPSCA number – necessary for CPD points
E-mail address – current email address please. (Many are out of date)

if you have not already done so, **renew your annual membership**. All the information you need is on the FIDSSA website (www.fidssa.co.za). Please note that your membership fees are due **annually**. The membership year will run from Jan 1st – 31st Dec. Any member who pays their membership fee before Dec 31st 2010, will automatically be granted membership up to 31st Dec 2011.

Only paid up members will be able to access restricted areas on the website e.g. CPD points for the Case of the Month, antibiotic surveillance data and others. Furthermore, only paid up members will qualify for a discounted registration fee for the biennial conference in Durban 2011.

If you have paid your membership fee and it doesn't reflect on the system please remember to send through your proof of payment so that the system can be updated. If you have any questions about this or any other membership issue, please contact Lea Lourens at info@fidssa.co.za.

World AIDS Day 2010 – Celebrating a good year for tenofovir

By all accounts, its been a good year for tenofovir! First, it replaced stavudine as part of the 1st line national ART regimen. This was swiftly followed by the results of CAPRISA 004, a double blind RCT comparing vaginal insertion of tenofovir gel with placebo, given within 12 hours before sex and a second dose as soon as possible within 12 hours after sex. Women in the tenofovir arm had a 39% lower chance of becoming infected by the virus, with degree of efficacy related to adherence. These results marked a watershed in the history of HIV prevention, the first time a biological intervention against HIV-1 transmission has proven effective, and as such has given a much need boost to the prevention campaign.

Hot on the heels of CAPRISA 004 came results of the iPrEx trial showing a 44% reduction in HIV incidence in men or transgender women who have sex with men, using a once-daily oral dose of tenofovir and emtricitabine (TDF-FTC), compared to placebo.

Both CAPRISA and iPrEx remind us of the need to ensure excellent adherence for such interventions, a monumental challenge, particularly outside of a trial situation.

With respects to the increased use of tenofovir as part of 1st line therapy, we must remain cogniscent of the renal toxicity associated with its use, especially in a country with such high rates of HIV-TB co-infection, which often means that an aminoglycoside is already in use or will be started in someone on ART. It is vital that in these patients, zidovudine is substituted for tenofovir where possible or stavudine if not, during the administration of the aminoglycoside. Furthermore, it is vital that pre-initiation creatinine clearance is interrogated and proper follow up of renal function is maintained to ensure its safe use. Otherwise we will be jumping out of the frying pan of lactic acidosis and into the fire of acute renal failure.

To all our patients and health care workers involved in HIV, we wish you more success in 2011 and the years to come and the hope that the field of HIV prevention will continue to go from strength to strength!

World Pneumonia Day 12th November 2010

Approximately two million children die from pneumonia each year, accounting for almost 1 out of 5 children under-5 deaths worldwide.

World Health Organization data shows 14.5 million cases of pneumococcal disease worldwide in 2000, responsible for death in 826,000 children under the age of five. 95% of disease was attributable to pneumonia.

Developing countries, where children have the highest risk for pneumonia, require the most urgent prevention programs. 54% of pneumococcal deaths occurred in Africa, where the lack of vaccines, a high prevalence of HIV infection and lack of access to medical care were contributory.

The 7-valent conjugated pneumococcal vaccine has been part of the Expanded Program for Immunization (EPI) since April 2009. Despite low, estimated vaccine coverage of PCV and a high HIV prevalence, GERMS-SA has already demonstrated a significant decrease in serotype-specific, invasive pneumococcal disease amongst South African infants. These early direct effects are likely to be amplified as vaccine coverage increases.

Throughout the world, healthcare workers wore blue jeans and T-shirts to observe their support and draw attention to correct management and prevention of childhood pneumonia. Immunization is a key component. Influenza vaccine should no be forgotten.
Mark Cotton - President

Antibiotic Resistance Surveillance Workshop

In September this year, linked to the FSASP Pathvine conference, SASCM hosted a workshop on surveillance for antibiotic resistance. The aim of the workshop was to review current surveillance programs and to decide future direction for surveillance activities. The meeting commenced with brief presentations regarding current activities:

SASCM has conducted ongoing laboratory based surveillance of selected pathogens since 2002. Its strengths include coverage of both private and public sector laboratories country wide, while its weaknesses include differences in types of specimen reported between public and private, as well as lack of standardization of antimicrobial susceptibility testing methodology.

GERMS-SA conducts national surveillance of respiratory, meningeal and enteric organisms, utilizing standardized identification and susceptibility testing methods in central laboratories at the NICD. LARS, a more recently established sub-unit of GERMS-SA, aims to establish networks for monitoring resistance specifically in nosocomial pathogens.

Two other organizations, GARP and Best Care Always, whilst not directly involved in surveillance activities, utilize surveillance data to achieve their own objectives. GARP is an organization that aims to develop antibiotic stewardship practices and is currently collecting data to inform policy, while Best Care Always is a campaign to improve patient care, with a focus on preventing nosocomial infections, such as ventilator-associated pneumonia or catheter associated urinary tract infection. Best Care Always also focuses on antimicrobial stewardship.

Following extensive discussion, the workshop focused on drawing up a list of key actions to be taken in the next 6 -12 months to improve surveillance. These are:

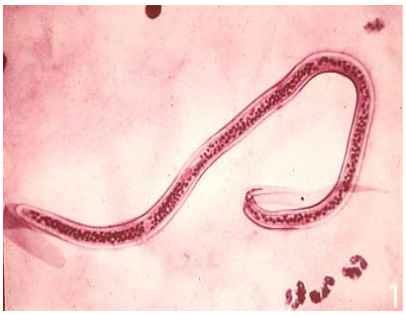
1. Re-inforce the importance of timely and consistent implementation of updated CLSI guidelines to facilitate standardization between laboratories.
2. Standardize data collection procedures between private and public sector.
3. Improve training in use of computer based epidemiology software programs, as well as interpretation of the data generated.
4. Establish contacts with established surveillance programs, such as EARSS, the European centre for antimicrobial surveillance.
5. Disseminate, with the help of an editorial committee, the results of surveillance through brief, targeted and user friendly reports.
6. Investigate the possibility of obtaining surveillance data in terms of detailed information on individual isolates rather than through cumulative susceptibility results.
7. Investigate the possibility of improving laboratory request forms to facilitate collection of clinical data.
8. Establish centres of excellence for detection of emerging resistance

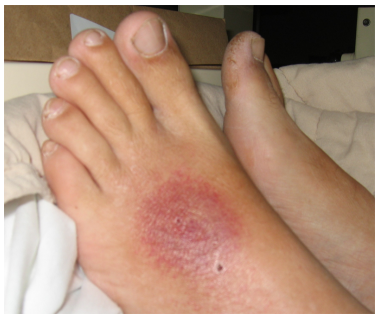
There was debate about the value of surveillance for community acquired pathogens. It was acknowledged that at national and regional level, GERMS-SA is able to provide superior data. However, at local level, individual laboratories may still derive benefit from collation of relevant data from a variety of specimen types.

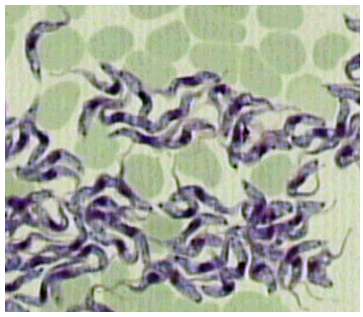
The following members volunteered their services for the editorial committee: Nelesh Govender, Warren Lowman, Yacoob Coovadia, Olga Perovic, Rena Hoffman, Colleen Bamford.

SASCM undertook to hold regular meetings in the future, approximately every 6 months, which would include those actively involved in surveillance work. The next meeting will be on **Saturday 5 March 2011 at the NICD, Sandringham**. Further details will be available shortly.

Infectious Diseases Master Class







The first Infectious Diseases Master Class was held at the National Institute for Communicable Diseases from the 10th -13th November 2010. This course was specifically for residents training in the infectious diseases subspecialty as well as recently-qualified specialists and aimed to cover infectious diseases that may not be routinely encountered during their training, but which they certainly would be called to consult on as ID specialists. The emphasis was on parasitology, tropical and travel-related diseases including the so-called neglected diseases, as well as those of public health importance, surveillance programmes for influenza, measles and polio, outbreak response, notifiable diseases and post-exposure prophylaxis. Nine infectious diseases residents' attendance and flights, accommodation and meals were financed by the Infectious Diseases Society. This is regarded as an important use of funds to support members and grow skills in the subspecialty. Attendees came from University of Pretoria; Tygerberg hospital; Red Cross Children's Hospital; Stellenbosch; Wits and Groote Schuur hospital. The course was initiated, developed and run by Profs Lucille Blumberg and John Frean, from the National Institute for Communicable Diseases in Johannesburg.

Teaching took various formats and included 'under the microscope' laboratory sessions, discussions on the interpretation of laboratory results, slide quizzes, case presentations, and even bedside teaching on a patient with acute East African trypanosomiasis and real-time telephone consultations on a patient with suspected viral haemorrhagic fever and one with probable Katayama fever. A number of patients with interesting infectious diseases generously came to sessions to share their experience with the group. A long-distance tele-presentation from Cape Town gave the group an opportunity to learn about recent cases of West African trypanosomiasis. Topics and diseases covered included approach to the patient with eosinophilia, malaria, trypanosomiasis, filariasis, schistosomiasis, rabies, the patient with fever and bleeding, post-exposure prophylaxis, the principles of outbreak response, response to foodborne outbreaks, and pitfalls in the laboratory diagnoses of cholera. It is planned that the course will be held annually or biannually, depending on need, and demand and could be opened to other interested persons.

Lucille Blumberg and John Frean

Human African Trypanosomiasis - current research in vector control

South African Society of Travel Medicine SASTM

With the upsurge of Human African Trypanosomiasis [HAT] reported in Travellers to Africa on their return to their host countries it is worthwhile looking at new developments in Tseste fly control. No vaccines or prophylactic drugs are available to prevent the disease.

Tsetse flies [Diptera: Glossinidae] infest 10million km sq of sub Saharan Africa where they transmit trypanosomes which cause HAT and African Animal Trypanosomiasis [AAT also known as Nagana]. HAT occurs in two forms "rhodesiense" which is caused by *Trypanosoma brucei rhodesiense* and occurs in eastern and southern Africa; "gambiense" which is caused by *T.b. gambiense* and occurs in western and central Africa. Currently the latter causes 97% of the total number of reported cases of HAT and is transmitted by tsetse of the Palpalis group where most dangerous species are G. palpalis and G.tachinoides.

Field studies were done on fly traps scented with odour from humans, cattle and pigs. The catch of G.tachinioides was 5x enhanced by odour from cattle but not from humans. For G.p. gamiensis both human and cattle odour increased the catch rate by 2%. For G.p. palpilis odours from pigs and humans ncreased the catch by 5x. These results suggest that odour baited traps and insecticide-treated targetscould assist the AU-Pan African Tsetse and Trypanosomiasis Eradication Campaign [PATTEC] Another method been looked is entomological and intends to disrupt the cycle of transmission by reducing the number of flies. Female tsetse flies mate just once with the single insemination sufficient to last her lifespan of 90 to 100 days. After 7-9 days she produces a single egg which develops into a larva within her uterus. Nine days later this larva is released and burrows into the ground where it pupates.

This stage lasts 3 weeks and an adult fly emerges. Over a period of 12-14 days it matures and mates! The female continues to produce a single larva at nine day intervals for her entire lifespan. Female tsetse flies produce at most nine larvae. Tsetse flies unquestionably have the lowest reproduction potential of any insect, and this fact makes them a good target for sterile insect techniques. A strategy developed but is very costly is to rear large number of tsetse, separate the males which then are irradiated with gamma rays to make them sterile and then release them in the wild. As the female mates only once in her life time mating with a sterile male will prevent that female from giving birth to any offspring. The technique has been effectively used for eradication of tsetse (G. Austeni) from Unguja island in Zanzibar. Genomics of tsetse symbiotic bacteria are of interest since in the absence of their gut flora; tsetse flies are severely impaired in their longevity and reproduction. Two bacteria have been implicated in modifying vector competence of their host (*Sodalis golssinidius* and *Wigglesworthia glossinidia*). A third symbiont, *Wolbachia* can confer mating sterility. Such transgenic refractory flies could be released into natural populations to replace their susceptible counterparts and hence reduce disease transmission!

Rayaisse JB, Tirados I, Kaba D, Dewhirst SY, Logan JG, et al. Prospects for the development of odour baits to control the tsetse flies *Glossina tachinoides* and *G. palpalis s.l.* PLoS Negl Trop Dis 2010; 4(3): e632

WHO Documents on HAT

Pete Vincent

Infection Control News

Infection Control Society of Southern Africa

2010 has been an exceptionally busy year for Infection Preventionists, who have spent considerable time on the soccer World Cup surveillance and reporting of priority conditions, the country-wide measles outbreak and the roll-out & implementation of the **Best Care.... Always!** Campaign countrywide.

Best Care.... Always! is the South African version of the U.S. Institute for Healthcare Improvement "100 000 lives Campaign". The Campaign has gained remarkable momentum in both the public and private healthcare sectors in just one year, under the enthusiastic leadership of Dr. Dena van den Bergh. You are all invited to join this exciting revolution to change the face of patient safety in South Africa! See www.bestcare.org..za for latest news & information.

The growing importance of infection prevention (IP) as a discipline is reflected in the increasing number of IP courses which augment traditional in-house training:

- Wits and Stellenbosch Universities - post-graduate Diploma courses.
- UKZN - B.Sc (Hons) Medical Microbiology, (www.ukzn.ac.za)
- The Unit for Infection Prevention and Control (UIPC) at Tygerberg Hospital / Stellenbosch University: six-month fundamental course in infection prevention and control, Contact yolandag@sun.ac.za.
- Tsela Training Consultants (Bloemfontein) - community health infection control course.
- Lifehealthcare, MediClinic and Netcare continue to offer in-house IP courses.

If members know of any other courses, please send the details to us.

This being the last newsletter for the year, best wishes for some "bug"-free relaxation over the festive season!

As always, correspondence may be directed to our chairperson, Andrew Whitelaw at Andrew.Whitelaw@uct.ac.za , or Joy Cleghorn at Joy.Cleghorn@lifehealthcare.co.za or myself, Lesley Devenish at Lesley.Devenish@netcare.co.za

Website Watch (www.fidssa.co.za)

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'**A comprehensive Plan for Adult Infectious Diseases in the Western Cape**.' has now been uploaded onto the IDSSA section of the website (see Strategic Planning tab). Although Province-specific, this document is a first attempt to address a strategy for adult infectious diseases services across levels of care, with particular emphasis on secondary and tertiary level and how they will support the majority of patients who are treated at primary level.

Conference Watch

IMED 2011 International Meeting on Emerging Diseases and Surveillance

CROI 2011 BOSTON FEB 27-MAR 2, 2011

The 2011 conference season kicks of with wintery venues for the International meeting on Emerging Diseases and Surveillance in Austria 4-7 February and for one of the flagship HIV conferences, CROI (Conference on Retroviruses and Opportunistic infections) in Boston from 27Feb-2March. If the prospect of the Boston winter is too much for you and you are travel medicine orientated, then why not wait until the Boston Spring and visit the 12th Conference of the International Society of Travel Medicine (CISTM12) 8-12 May. Details of all local and international conferences can be found on our website.

2010 FIFA Soccer World Cup, South Africa: Communicable Disease Risks and Surveillance

The FIFA World Cup was a resounding success for South Africa and we are left with many fond memories. The influx of 350 000 foreign visitors to 10 stadiums in 9 host cities across the country posed significant challenges including planning for, surveillance of and potentially treatment of, communicable diseases. Planning took into account an ongoing countrywide measles outbreak, the risk of tourists acquiring disease related to the Rift Valley fever outbreak that was also ongoing, and the imminent start of the seasonal influenza epidemic. Food-related incidents, because of the increased capacity needs and bioterrorism potential, given the high profile of the event, also needed to be planned for. Pre-travel advice included vaccine recommendations for yellow fever (in accordance with IHR regulations), influenza, hepatitis A vaccine (endemic in South Africa), and measles vaccination. Meningococcal vaccine was considered as the event coincided with the expected annual increase in sporadic cases and mass gatherings do pose specific risks, but the overall risk was considered low. Messages about safe sex practices were highlighted in view of the high prevalence of HIV and other STIs in South Africa.

A number of opportunities arose to reduce the risk of communicable diseases including enhanced epidemic intelligence to timeously detect incidents and the provision of standard operating procedures for epidemic response. Routine surveillance systems were strengthened and supplemented with reporting from health facilities at the stadiums, real-time paper-based reporting to central points within the provinces and laboratory support provided by the NHLS including the NICD and private laboratory groups. All laboratories worked together to provide daily reporting of laboratory-confirmed cases with priority conditions.

A special Public Health Cluster, which included representatives from the national Departments for Communicable Diseases, Epidemiology and Surveillance, Port Health, Environmental Health and the NICD and NHLS, met daily to carry out risk assessments to determine the impact on the World Cup event. An emergency reporting system was also established. A risk assessment according to pre-established guidelines was carried out on each communicable diseases incident for possible impact on the World Cup, and any national or international impact.

Priority conditions for surveillance were: Anthrax, Cholera, Food-borne outbreaks, Hepatitis A, Meningococcal disease, Measles, Pandemic influenza A H1N1, Rabies exposures, Rift Valley fever, SARS, Smallpox, Typhoid, Viral haemorrhagic fevers and Yellow fever

Thirty incidents were reported during the period of the World Cup and most of these were unrelated to the event itself.

- Five food-borne outbreaks were related to the World Cup, the majority affecting volunteers.
- One confirmed case of cholera affecting a returning South African traveller from India.
- Very little pandemic H1N1 activity, influenza A H3N2 and B predominated during the influenza season which was later and milder than usual, possibly because of school closure and the large number of attendees who were likely immune to influenza A H1N1 (2009) through previous exposure or vaccination.

- A number of measles cases involving World Cup attendees from other countries were confirmed, and some were further characterised and identified as genotype B3, the genotype currently circulating in South Africa.

Challenges included interpretation of data for decision-making given the lack of base-line data and a 'changing' population. Achievements included the establishment of the Public Health Cluster, the overall improvement in notifications, especially from the private health sector and improved responses to managing potential food-borne outbreaks. Sustaining many of these should be a legacy beyond the 2010 World Cup.

Lucille Blumberg, NICD

And finally.....

I would like to thank all the contributors to FIDSSA Quarterly over the past year. Their dedication and scholarly input has been invaluable in kick-starting this important communication between FIDSSA and its members. Thanks particularly to Mark Cotton of SASPID, Garth Brink and Pete Vincent of SASTM, Frans Radebe of STDSSA, Lucille Blumberg of IDSSA, Mark Nicol and Colleen Bamford of SASCM and Andrew Whitelaw & Lesley Devenish of ICSSA, who have led in providing and sourcing contributions from their societies.

Thanks go also to Lea Lourens, FIDSSA's administrator for taking on the task and achieving so much in a short space of time!

To all FIDSSA members and readers of the FIDSSA Quarterly, I would like to wish you a very merry festive season and hope that 2011 will be a wonderful year for you and your families!

Best wishes,

Marc Mendelson
President of FIDSSA