

ACKNOWLEDGEMENTS

The Free State Department of Health would like to acknowledge and extend heartfelt gratitude to the following persons who have made this day possible. They worked tirelessly and have been extremely instrumental in bringing everything together through their insight and availability.

1. Dr Embry Howell, Twinning Centre Volunteer attached to the Free State DOH
2. Dr André Rose, UFS
3. Ms Modise, Free State DOH
4. Prof Harry Kotze, UFS
5. Ms Sandra Gouws, UFS
6. Dr Perpetual Chikobvu, Free State DOH
7. Ms Matshidiso Khuse, Free State DOH
8. Ms Elke De Witt, Free State DOH
9. Ms Siziwe Komanisi, Free State DOH
10. Mr Tefo Tabi, Free State DOH
11. Ms Nozipo Sondiyazi, Free State DOH

We are also overwhelmed by the humility and kindness expressed by the Free State Department of Health, University of Free State, Faculty of Medicine and the American International Health alliance (Twinning Centre) through their monetary and in-kind support to make this day a success.

Research Day Overview and Objectives

In recognition of the importance of health research in developing and implementing appropriate, effective and efficient healthcare practice and service delivery system that is supported by evidence based health policy, the Free State Department of Health is holding this research day. After the completion of the day, it is expected that:

1. You will be aware of and informed about all health research that is being conducted and to be carried out in the areas of clinical, epidemiologic, socio-behavioural, health system and health services management and other health related subjects in the province.
2. You will be able to help communicate the relevant findings and recommendations of the research presented to appropriate authorities and organisations in order to influence policy changes.
3. You will be able to promote health research in general.

To this regard, we welcome you to the Research Day with the hope that you will gain abundantly out of your attendance and participation.

THANK YOU

PROGRAM

FREE STATE DEPARTMENT OF HEALTH RESEARCH DAY 7 JUNE 2012

07:30 – 08:30, THURSDAY, 7 JUNE 2012

Support: Ms E De Witt & Team

07:30 – 08:30- Registration: James Moroka building; University of the Free State; Faculty of Medicine

08:30 – 09:30 Opening Plenary

METRO 1

Support: Ms Modise & Dr Chikobvu

PROGRAM DIRECTOR: Dr TD Moji (Free State Department of Health)

08:30 - 08:45: Welcome, introductions and acknowledgements, Dr S Kabane, Head of Department of Health

08:45 - 09:15: Co-ordination of research within Gauteng Health Department: Success and Challenges, Dr B Ikalafeng,

09:15 - 09:20: Introducing the MEC for Health

09:20 - 09:30: Key Note Address by the MEC for HEALTH

09:30 – 10:30 Tea and Poster Session

Support: Dr P Chikobvu & Team

10:30 – 12:30 Parallel Session 1		METRO 1		Support: Ms A Zwegelaar	
Mother and Child Health					
Chairperson: Prof W Kruger (University of The Free State)					
		Time	Abstract title	Speaker	Affiliation
Morning Session 1	Metro 1	10:30-10:50	Patient-related adverse events in the maternity units of Tokollo/Mafube District Hospital	Ms SR Noge	Free State Department of Health
		10:50-11:10	Evaluation of the prevention of mother to child transmission program in the Free State	Prof Steinberg	Department of Family Medicine, Faculty of Health Sciences, UFS
		11:10-11:30	An investigation into the dramatic increase in deaths from gastroenteritis among children at the National District Hospital	Prof H Brits	Department of Family Medicine, UFS
		11:30-11:50	The age of diagnosis of congenital hearing loss at Universitas Hospital	S Basson	Dept Otorhinolaryngology, Faculty of Health Sciences, UFS
		11:50-12:10	Ongoing pediatric bordetella infections since April 2008 in Bloemfontein	UM Hallbauer	Dept Paediatrics and Child Health, UFS
		12:10-12:30	Guidelines for kangaroo care in district hospitals and primary health care maternity sections in the Free State	H Brits	Department of Family Medicine, UFS

10:30 – 12:30 Parallel Session 2		METRO 2		Support: Ms Y Tsibolane & Ms T Morigihlane	
HIV & AIDS and Tuberculosis					
Chairperson: Rev Musapelo (Free State Department of Health)					
Session	Room	Time	Abstract title	Speaker	Affiliation
Morning session 2	Metro 2	10:30-10:50	Predictors of condom use and refusal among the population of the Free State Province	Dr TM Chandran	Provincial Health research Unit
		10:50-11:10	Patient- and delivery-level factors related to acceptance of HCT services among TB patients in South Africa	Prof Christo Heunis	Centre for Health Systems Research & Development, University of the Free State
		11:10-11:30	TB patients' reasons for non-uptake of HIV testing in the Free State	Ms NG Kigozi	Centre for Health Systems Research & Development, University of the Free State
		11:30-11:50	Knowledge and beliefs about TB among people visiting the MUCPP community health centre	Ms R Majola	Department of Physiotherapy, Faculty of Health Sciences, UFS
		11:50-12:10	Factors affecting TB patient adherence to treatment	Ms M Modise	Free State Department of Health
		12:10-12:30	The Occupational Health and Safety Information System (OHASIS): Introducing a state-of-the-art information system designed to promote and protect the health of the healthcare workforce into the Free State Province	L Nophale	Free State Department of Health

12:30-13:30 LUNCH

Support: Ms De Witt and Team

13:30 -13:55 Plenary Session 2

Metro 1

Support: Ms Modise & Dr Chikobvu

Chairperson: Dr TD Moji (*Free State Department of Health*)

Head: Health Antenatal survey: 2010 Results

14:00 - 16:00 Parallel session 3			METRO 1	Support: Ms L Nomtshongwana	
CHRONIC DISEASE					
Chairperson: Prof Kotze (University of Free State)					
Session	Room	Time	Abstract title	Speaker	Affiliation
Afternoon session 3	Metro 1	14:00-14:20	Risk factor profiles for chronic disease: lifestyle and metabolic syndrome in an urban and rural setting	Dr S Van Zyl	Departments of Basic Medical Sciences
		14:20-14:40	The Wheels of Hope heart and lung outreach project	Prof F Smit and Ms L Botes	Department of Cardiothoracic Surgery, Faculty of Health Sciences, UFS
		14:40-15:00	Radical prostatectomy in the treatment of organ-confined prostate cancer at Universities Hospital	Prof S Wentzel	Department of Urology, Faculty of Health Sciences, UFS
		15:00-15:20	HPV types responsible for causing recurrent respiratory papillomatosis in the Free State	Prof R Seedat	Dept Otorhinolaryngology, Faculty of Health Sciences, UFS
		15:20-15:40	The role of van Willebrand factor in bleeding and thrombotic disorder	Prof M Meiring	Department of Haematology and Cell Biology, Faculty of Health Sciences, UFS
		15:40-16:00	Treatment of alcohol and drug dependence in the Free State	Dr P M Van Zyl	Departments of Pharmacology and Internal Medicine, Faculty of Health Sciences, UFS

14:00- 16:00 Parallel session 4 **METRO 2** **Support: Mr B Polelo & Ms S Hugo**

STRENGTHENING THE HEALTH SYSTEM

Chairperson: John Capati (Twinning Center)

		Time	Abstract title	Speaker	
Afternoon session 4	Metro 1	14:00-14:20	An employee assistance programme in the health care sector	Prof W Kruger	Department of Community Medicine, Faculty Health Sciences, UFS
		14:20-14:40	Blood and fluid exposure in the work place	Ms NG Litsitso	Free State Department of Health
		14:40-15:00	Use of blood and blood products in the maternity ward of Boitumelo Regional Hospital	Mr SO Modiko	Fezile Dabi Health District Free State
		15:00-15:20	Oral health care workers: striving towards a safer working environment	Ms J Oosthuyzen	School of Health Technology, Faculty of Health- and Environmental Sciences
		15:20-15:40	Evaluation of the quality and management of maternity services in the National District Hospital	Ms A Sasing	Free State Department of Health
		15:40-16:00	Reasons why patients bypass clinic services in the Metsimoholo District	S Katende	Department of Philosophy, University of the North-West, Mafikeng

16:15 – 16: 30 Research Day Closure and Announcement of Session Prizes

METRO 1

POSTERS SESSION

09:30-10:30: 5 POSTERS		FIRST AND SECOND FLOOR CORRIDORS		Support: Dr Chikobvu & Ms Malahleha	
Poster No	Abstract title	Speaker	Affiliation		
1	Public health Evaluation of training and mentoring interventions to improve TB services	Prof Christo Heunis	Centre for Health Systems Research & Development, University of the Free State		
2	Investigating occupational health and safety at Pelonomi Hospital	Ms L Brandsel	Pelonomi Hospital, Free State Department of Health		
3	An evaluation of a performance management system within ten public health institutions	Semakila Katende	Department of Philosophy, University of the North-West, Mafikeng		
4	Quality assurance with gastroenteritis guidelines at National District Hospital	Prof H Brits	Department of Family Medicine, UFS		
5	ART services in Fezile Dabi and Lejweleputswa Districts	Ms Y Tsibolane	Free State Department of Health		
6	Prescribing and dispensing of ARVs: a challenge for pediatrics	Ms PB Santo	Free State Department of Health		
7	Pre-eclampsia and its complications Manapo Hospital	Prof H Brits	Department of Family Medicine, UFS		
8	An observational retrospective study of the relationship of perinatal HIV infection and onset of menarche in teenagers	I Mokoka-Nkhobo	Bongani Regional Hospital, Free State Province		

9	Knowledge of patients, on angiotensin inhibitors, surrounding angioedema as a side effect	Prof WJ Steinberg	TBC
10	Sustainable partnerships for HIV & AIDS and TB in the Free State Department of Health	Ms SN Hugo	Free State Department of Health
11	Cranial base flexion and skeletal jaw relationships	Nyakale	Dept of Orthodontics, School of Dentistry, University of Limpopo
12	Outbreak of rift valley fever in Free State province, South Africa, February to July 2010 (preliminary results)	DE Landoh	South African Field Epidemiology and Laboratory Training Programme (SAFELTP); School of Health Systems and Public Health (SHSPH), Faculty of Health Sciences, University of Pretoria, South Africa
13	A model for HIV&AIDS care, research and policy interface	M Mofokeng	School of Nursing Science, Faculty of Health Sciences, North West University, Potchefstroom
14	Improving Rational Use of Antibiotics in Four Hospitals in the Free State	H Karsten	Boitumelo Regional Hospital
15	Ensuring Sustainable Supply of Antiretrovirals in Primary Health care Facilities in Thabo Mofutsanyana District	Y Sauer	Mamelolo CHC, Marquard
16	Antenatal care uptake and the delivery services at the Thusanong hospital in the Free State province	Ms AM Morigihlane	Free State Department of Health

**MOTHER AND CHILD HEALTH
SESSION**

PATIENT-RELATED ADVERSE EVENTS IN THE MATERNITY UNITS AT TOKOLLO/MAFUBE DISTRICT HOSPITAL COMPLEX

*Noge SR
Free State Department of Health*

BACKGROUND: Tokollo/Mafube District (TMD) Hospital Complex located in the rural area of Fezile Dabi District within the Free State Province reported a high number of adverse events (AEs) from the maternity units. The information linked to AEs occurring in the hospitals is routinely collected and reported to the hospital management in accordance with the Provincial policy but no study has been done to systematically analyse the available information and to explore the current situation.

AIM: To describe the patient-related AEs in the maternity units of TMD Hospital Complex; the related individual and health system factors; and the functionality of the reporting system used for the AEs during the two year study period.

METHODOLOGY: A descriptive cross-sectional study design was used, based on a retrospective review of routinely collected hospital data from the health records of patients; the AEs committee meeting minutes; and other relevant hospital documents. The study was conducted at the maternity units of TMD Hospital Complex which consists of two hospitals in the district. Data were collected in the following categories: the types of AEs, the profiles of patients who experienced such AEs, the health system factors identified during the AEs committees meetings and reporting of these AEs.

RESULTS: Total of 88 patients, comprising 0.8% of the total number of admissions to the maternity units, experienced AEs. Maternal AEs occurred more commonly than perinatal AEs. The majority of women experiencing AEs were unemployed (93%), between the ages of 19-34 (81%), unmarried (79%) and resided in towns (88.6%). Most of these women belonged to the groups of primigravida and multigravida (85%), attended between one and three antenatal visits (42%), and delivered via normal vaginal deliveries (76%) with a high number of stillborns (77.2%). The majority of maternal AEs occurred during the intrapartum stage. Majority of AEs reported were classified as the most serious being SAC 1, which accounted for 93% of the maternal AEs and 84% of perinatal AEs. The early perinatal AEs accounted for 100% of the reported perinatal AEs.

Although majority of AEs reported at the institution were within the prescribed period, reporting time to the Complex AE Committee (CAEC) and District AE Committee (DAEC) was exceeded in the majority of cases. AEs that required investigation complied with the provincial policy but exceeded the required investigation period.

Clinical governance issues accounted for 43% of both maternal and perinatal AEs, followed by patient transport issues which accounted for a significant percentage (33%).

CONCLUSION: The health system related factors played a significant role in the occurrence of AEs at the maternity units of the Complex and the majority of the reported AEs were very serious. Preventable and contributory factors should be addressed. Patients' profiles should be taken into consideration when adverse incidents are analyzed.

RECOMMENDATIONS: Data identified during records reviews be linked with the AEs reporting system, strengthen training on the implementation of AEs policy. Resources should be channelled to redesigning the system that will change the reporting of AEs. Clinical audits, perinatal, and mortality and morbidity meetings should be made mandatory. The criteria for placement of agency nurses and foreign medical officers at maternity units should be developed. The management of EMS should be decentralized. The Department should adopt the Australian model in reporting of AEs.

EVALUATION OF THE PREVENTION OF MOTHER TO CHILD TRANSMISSION PROGRAM IN THE FREE STATE

M van Lill, WJ Steinberg, P Chikobvu

Department of Family Medicine, Faculty of Health Sciences, UFS

INTRODUCTION AND AIM: Vertical transmission is the primary means by which children become infected with HIV-1. Reported rates of vertical HIV transmission differ significantly between developed and developing countries. The main aim of the study was to evaluate the HIV PMTCT program in the FS Province and to assess the effectiveness, evaluate the success, identify deficiencies and put systems in place in order to improve the service of the PMTCT program rolled out in the FS.

METHODOLOGY: A prospective cohort study of mother infant pairs participating in the PMTCT program in the FS was conducted. A cohort study was the most suitable design for the purpose of evaluating the effectiveness and success of the PMTCT program. The data were collected by conducting an interview and taking blood for laboratory testing. Participants were recruited at the labour ward in National District Hospital during 2007-2010. Information was obtained by completion of questionnaires by recruiting doctors. Blood for HIV PCR tests of the infants were collected at 6 weeks of age.

RESULTS: From the 121 participants, 29 returned for 6 week follow up, 65 HIV results of infants were known (either from follow up or testing at local clinic) and 2 of those were positive. Results showed that patients were counselled well; however 25% believed that PMTCT will cure them from HIV. Ten percent of patients did not understand their HIV results.

CONCLUSION: This study showed a vertical transmission rate of 3.1%. This result correlates with figures demonstrated for the Motheo District, obtained from the NHLS. There is a reduction in the vertical transmission of HIV from mother to child on the new PMTCT regimen. Issues regarding the management of patients in the antenatal health setting in the Motheo district were highlighted in the study.

AN INVESTIGATION INTO THE DRAMATIC INCREASE IN DEATHS FROM GASTROENTERITIS DURING THE SUMMER OF 2007/08 AT NATIONAL DISTRICT HOSPITAL, BLOEMFONTEIN, FREE STATE

Brits H, Joubert G

Department of Family Medicine, UFS

INTRODUCTION AND BACKGROUND: Despite national guidelines and agreed upon admission and referral criteria for children in National District Hospital (NDH), Bloemfontein, the number of children admitted with gastroenteritis (GE) has increased dramatically since December 2007. From the previous year's Child Healthcare Problem Identification Programme (Child PIP) data the increase in GE admissions was evident in NDH. During the preceding year, 123 children were admitted for GE and during the audit period 267. The number of deaths in NDH also increased from an average of 2.25 a month over the past 3 years to 10 a month during January and February 2008.

AIM: The aims of the study were: to determine the causes of death of children in NDH; to determine the relationship between nutritional status, HIV disease, laboratory results, demographic data, time of admission, duration of admission and other diseases or conditions and GE child deaths in NDH.

METHODOLOGY: A cross-sectional study design was used. All child deaths, as well as all children admitted with GE to Ward 3 in NDH from May 2007 to April 2008 were included in the study. The first author collected the information on a cause of death form, a data form and an audit tool.

RESULTS: 1. Cause of death: During this period, 49 children died, 33 (67%) due to GE, 6 (12%) due to tuberculosis (TB), 5 (10%) due to septicaemia, 4 (8%) due to pneumonia and 1 (2%) due to congenital abnormalities. Only 4.1% of the children who died were considered as normal weight for age according to their Road to Health Chart (RTHC). Regarding HIV status, 82.5% of the children who died tested HIV positive. In total, 19.4% of all GE admissions died during this one-year period. 2. GE deaths: Demographic data such as gender and age did not influence the outcome of GE. As expected, severe malnutrition, HIV-positive status and severe dehydration all contributed statistically significantly to high mortality in GE. Severe abnormalities occurred in the laboratory results of most of the children who died and indicated the severity of their disease. No specific organisms were cultured from stool specimens and the quality of drinking water in Bloemfontein was declared safe for human consumption. 3. Other factors that contributed to GE deaths: Medical and nursing care were of a high standard and treatment protocols were followed. Pre-admission factors such as transport, non-availability of 24-hour medical services, non-initiation of

emergency treatment before referral, and caregivers not realising the severity of the disease need urgent attention to prevent further deaths.

CONCLUSION: GE contributed to 67% of deaths in the paediatric ward of NDH. Underlying poor nutritional status and/or HIV disease were present in 96% of the GE deaths. In more than nine out of ten cases the doctors and nurses in the hospital rendered medical care in accordance with standard guidelines. Pre-admission factors need to be addressed in order to prevent more deaths.

THE AGE OF DIAGNOSIS OF CONGENITAL HEARING LOSS IN UNIVERSITAS HOSPITAL

Basson S, Britz E, de Wet, Korsten G, Butler I

Dept Otorhinolaryngology, Faculty of Health Sciences, UFS.

INTRODUCTION: Congenital hearing loss affects approximately 3/1000 live born babies with a profoundly negative impact on the development of communication, cognitive skills and emotional development. International guidelines recommend that congenital hearing loss be diagnosed by 3 months of age. This allows for early intervention which has a proven benefit in ameliorating the effects of the deafness. We believe that children in the Free State are being diagnosed too late for implementation of effective intervention.

AIMS: To determine the age of diagnosis of congenital hearing loss in children presenting to the Ear, Nose & Throat (ENT) Clinic at Universitas Hospital. Secondary aims were to determine if there were delays in diagnosis and to document the interventions undertaken.

METHODS: This was a retrospective descriptive study. The study population was limited to children under the age of six years at diagnosis who attended the ENT clinic at Universitas Hospital between January 2001 and December 2010. A pure tone average of greater than 30dB was used as an inclusion criterion. Children with acquired hearing loss were excluded.

RESULTS: There were 1001 children diagnosed with hearing loss in the study period. 260 children were included in the study. Median age of first visit to the ENT clinic was 3.41 years and the median age at diagnosis of hearing loss was 3.71 years. The mean delay between first visit and diagnosis was 3.6 months. 54% of the children received intervention for the hearing loss at Universitas hospital while 32% received interventions elsewhere.

CONCLUSIONS: The delay in diagnosis can be attributed to a delay in referral to our service. This data will be used to support the drive to establish universal newborn hearing screening in the Free State.

ONGOING PAEDIATRIC BORDETELLA INFECTIONS SINCE APRIL 2008 IN BLOEMFONTEIN, SOUTH AFRICA

Hallbauer U.M¹, Goosen Y¹, Elliott E²

¹Dept Paediatrics and Child Health, ²Dept Medical Microbiology, Faculty of Health Sciences, UFS

BACKGROUND AND AIMS: Pertussis is a highly contagious disease infecting most susceptible individuals. Clinical diagnosis of pertussis may be difficult. Paediatric cases are diagnosed consistently in Bloemfontein since April 2008. The aim of this study is to describe the clinical picture of cases seen in the last 42 months.

METHODS: Cumulative clinical data collected from the records of children confirmed by PCR as Bordetella infection of 42 months will be presented.

RESULTS: To date 80 children have been diagnosed with pertussis. There was a 3:2 female to male ratio. Most were in the “pre-vaccinated” age group. 60% were below 4 months of age, 22% between 4 and 12 months and 18% above 12 months. Clues to the possible diagnosis in the history were: post-tussive vomiting, apnoeic episodes in the young, coughing spells and cyanotic episodes, with whoop being uncommon. Clinical examination was not useful to assist with the diagnosis. Marked leucocytosis ($>20.0 \times 10^9/l$) was present in just under 50% of children. 87% children required admission and 27% intensive care. The average length of hospital stay was 13 days; the average length of stay in intensive care was 14 days per child. There were 2 deaths. There was a clustering of cases in the autumn months of each year, but no confirmed cases for 9 months in 2009.

CONCLUSIONS: The diagnosis of pertussis requires a high index of suspicion and laboratory confirmation. The highest morbidity and mortality occurs in the very young. Consideration should be given to expanding the current immunization schedule in South Africa.

GUIDELINES FOR KANGAROO CARE IN DISTRICT HOSPITALS AND PRIMARY HEALTH CARE MATERNITY SECTIONS IN THE FREE STATE

Brits H, Joubert G, Brussow M. E
Department of Family Medicine, UFS

BACKGROUND: Kangaroo care was started in 1979 in Bogotá, Colombia by Dr Edgar Ray and Dr Hector Martinez due to the shortage in resources and the large number of premature babies that needed special care. Kangaroo care implies direct skin-to-skin contact of the mother and her premature/new born baby. The advantages of Kangaroo care are well known and widely published. In National District hospital we admit stable babies from 1.2 kg and discharge the babies at around 1.8 kg when they can drink adequately. From 1.2 kg mothers practice daytime kangaroo care and the babies sleep in the incubator at night. Between 1.5 kg and 1.6 kg the mothers start with 24 hours kangaroo care. The aim of this study was to determine predictors for good and poor outcome in kangaroo mother care practiced at primary health care. This information was then used to compile guidelines for Kangaroo Care at primary care level hospitals and maternity sections. The aim of these guidelines are to give specific inclusion and exclusion criteria for kangaroo care, to indicate the absolute and relative needs for such a unit and to give guidelines on follow up and what to do if a child is not gaining sufficient weight.

METHOD: In this cohort study patient files of premature babies that received kangaroo care in the National District Hospital were evaluated in order to establish indicators for good and poor outcomes. Patient files were selected consecutively from the last entry in the admission register from May 2005 backwards until June 2003. Data were collected on a standard data collection form. Reasons for not gaining weight and the need for special investigations were investigated and noted. No weight gain or poor weight gain was regarded as weight gain of less than 17 g/kg/day.

RESULTS: A total of 200 files were audited. Sixty two percent (95% CI 55.1%; 68.4%) of the babies gained weight satisfactory and 38% unsatisfactory. The mean admission weight of the babies for kangaroo care was 1545 g (range 1100g – 2100g) and the discharge weight was 1800g (range 1700 – 2100g). The chance of weight gain was reduced if one of the following occurred in a premature baby: anaemia, low body temperature, inappropriate amount and route of milk, sepsis, transport, procedures and other medical conditions. The re-insertion of naso-gastric tubes (53%), better temperature control with better kangaroo care technique (79%), the correction of anaemia with blood transfusion (12%) and the correction of the volume of milk (5%) were the major factors identified for not gaining weight

that were addressed. In 29 % of cases extra energy in the form of FM 85 was added to the breast milk.

The type of milk that the babies received namely: breast milk (n=113), premature milk formula (n=40) and a combination of breast milk and formula milk (n=46) did not significantly influence weight gain. Gender, birth weight and gestational age at birth also did not have a significant influence on weight gain. If properly addressed these babies gained weight on average within 4 days.

CONCLUSION: It is possible to render safe kangaroo care on primary health care level to all stable premature babies if adhering to the set guidelines

HIV AND TB SESSION

PREDICTORS OF CONDOM USE AND REFUSAL AMONG THE POPULATION OF FREE STATE PROVINCE

*Chandran TM, Chikobvu P, Boleme MS
Free State Department of Health
Department of Family Medicine, UFS*

BACKGROUND: This study investigated the extent and predictors of condom use and condom refusal in the Free State province in South Africa.

METHODS: Through a household survey conducted in the Free State province of South Africa, 5,837 adults were interviewed. Univariate and multivariate survey logistic regressions and classification trees (CT) were used for analysing two response variables 'ever used condom' and 'ever refused condom'.

RESULTS: Eighty-three per cent of the respondents had ever used condoms, of which 38% always used them; 61% used them during the last sexual intercourse and 9% had ever refused to use them. The univariate logistic regression models and CT analysis indicated that a strong predictor of condom use was its perceived need. In the CT analysis, this variable was followed in importance by 'knowledge of correct use of condom', condom availability, young age, being single and higher education. 'Perceived need' for condoms did not remain significant in the multivariate analysis after controlling for other variables. The strongest predictor of condom refusal, as shown by the CT, was shame associated with condoms followed by the presence of sexual risk behaviour, knowing one's HIV status, older age and lacking knowledge of condoms (i.e., ability to prevent sexually transmitted diseases and pregnancy, availability, correct and consistent use and existence of female condoms). In the multivariate logistic regression, age was not significant for condom refusal while affordability and perceived need were additional significant variables.

CONCLUSION: The use of complementary modelling techniques such as CT in addition to logistic regressions adds to a better understanding of condom use and refusal. Further improvement in correct and consistent use of condoms will require targeted interventions. In addition to existing social marketing campaigns, tailored approaches should focus on establishing the perceived need for condom-use and improving skills for correct use. They should also incorporate interventions to reduce the shame associated with condoms and individual counselling of those likely to refuse condoms.

PATIENT- AND DELIVERY-LEVEL FACTORS RELATED TO ACCEPTANCE OF HCT SERVICES AMONG TUBERCULOSIS PATIENTS IN SOUTH AFRICA: A QUALITATIVE STUDY WITH CHWS AND PROGRAMME MANAGERS

Heunis C

Centre for Health Systems Research & Development, University of the Free State

BACKGROUND: South Africa has a high tuberculosis (TB)-human immunodeficiency virus (HIV) co-infection rate of 73%, yet too few TB patients are tested for HIV. To date, relatively little work has focused on understanding why TB patients may not accept effective services or participate in programmes that are readily available in healthcare delivery systems. The objective of the study was to explore barriers to and facilitators of participation in HIV counselling and testing (HCT) among TB patients in the Free State Province, from the perspective of CHWs and programme managers who offer services to patients on a daily basis. These two provider groups are positioned to alter the delivery of HCT services in order to improve patient participation and, ultimately, health outcomes.

METHODS: Group discussions and semi-structured interviews were conducted with 40 lay counsellors, 57 directly observed therapy (DOT) supporters, and 13 TB and HIV/acquired immune deficiency syndrome (AIDS) programme managers in the Free State Province between September 2007 and March 2008. Sessions were audio-recorded, transcribed, and thematically analysed.

FINDINGS: The themes emerging from the focus group discussions and interviews included four main suggested barrier factors: (1) fears of HIV&AIDS, TB-HIV co-infection, death, and stigma; (2) perceived lack of confidentiality of HIV test results; (3) staff shortages and high workload; and (4) poor infrastructure to encourage, monitor, and deliver HCT. The four main facilitating factors emerging from the group and individual interviews were (1) encouragement and motivation by health workers, (2) alleviation of health worker shortages, (3) improved HCT training of professional and lay health workers, and (4) community outreach activities.

CONCLUSIONS: Our findings provide insight into the relatively low acceptance rate of HCT services among TB patients from the perspective of two healthcare workforce groups that play an integral role in the delivery of effective health services and programmes. CHWs and programme managers emphasised several patient- and delivery-level factors influencing acceptance of HCT services.

TUBERCULOSIS PATIENTS' REASONS FOR, AND SUGGESTIONS TO ADDRESS NON-UPTAKE OF HIV TESTING: A CROSS-SECTIONAL STUDY IN THE FREE STATE PROVINCE, SOUTH AFRICA

Kigozi NG, Heunis JC, Engelbrecht MC
Centre for Health Systems Research & Development, University of the Free State
E-mail: kigozign@ufs.ac.za

BACKGROUND: South Africa endorses the global policy shift from client-initiated voluntary counselling and testing to provider-initiated testing and counselling (PICT), to facilitate uptake of HIV testing amongst at-risk populations in high-prevalence settings.

AIMS: This study explores why non-tested TB patients did not undergo HIV testing and reflects on TB patients' suggestions on how to improve the situation.

METHODS: February-March 2008, a cross-sectional survey was conducted amongst 600 TB patients, in 61 primary health care facilities in four sub-districts of the Free State. Patient selection was done proportionally to the numbers registered at each facility in 2007. Patients were conveniently recruited as they left TB consultation rooms. A structured interview schedule was developed. Participation was voluntary, based on informed consent and guarantee of confidentiality. Data were subjected to bivariate tests and content analysis of open-ended questions.

FINDINGS: Almost one-third (32.5%) of respondents had not undertaken HIV testing for reasons including being 'undecided' (37.0%); experiencing fear (e.g. of testing HIV-positive, 19.0%); and perceiving themselves to be at low risk for HIV infection (13.4%); desire to first deal with TB (12.5%); and because HIV testing was not offered (12.0%). Many patients expressed the need for support and motivation from health workers (33.3%), and from significant others (56.6%). Patients expressed a need for dissemination of TB-HIV information by health care workers (46.1%).

CONCLUSION: Patients did not undergo HIV testing for individual reasons as well as health system limitations. There is a need for dissemination of information on the TB-HIV link, as well as motivation and support to undergo HIV testing.

KNOWLEDGE AND BELIEFS ON TUBERCULOSIS (TB) AMONG PEOPLE VISITING THE MUCPP COMMUNITY HEALTH CENTRE

*Bodenstein K, Majola R, Moloi D, Sethunya T, Sichone Z, Zimu T
Department of Physiotherapy, Faculty of Health Sciences, UFS*

AIM: The aim of this study was to assess the knowledge and beliefs concerning tuberculosis (TB) of the people visiting the Mangaung University Community Partnership Programme (MUCPP) community health centre, as well as determining any misconceptions and stigmas. This information would aid the effectiveness of TB campaigns and physiotherapy educational classes.

METHODOLOGY: This study was approved by the Ethics committee of the Faculty of Health Sciences, UFS. A structured, self-designed questionnaire was used to collect data in this observational, descriptive, quantitative study. The 409 participants in this study were all people that visited the MUCPP community health centre during the timeframe of the study. Descriptive statistics were calculated for continuous data and frequencies and percentages for categorical data.

RESULTS: Participants were between the ages of 18 and 76 years, of which 73.3% were female. The majority of the participants (95%) were of the black race. Most of the participants (88.3%) indicated that they know what TB is and that loss of weight (91.9%), poor balance (79.6%), night sweats (85.5%) and coughing up blood (76.8%) are some of the common symptoms of TB. Nearly one fifth of participants (19%) thought that TB treatment did not exist, whilst 78% of participants knew that it is essential to complete TB treatment. Smoking (59%), germs (37%) and dirty water (4%) were indicated as the causes of TB. Participants mostly believed that anyone, rich or poor, could contract TB (91%).

DISCUSSION AND CONCLUSION: Results reflected that, although 88.3% of participants believed that they know what TB is, there is still a lack of knowledge concerning certain aspects of TB as well as a number of incorrect beliefs, misconceptions and stigmatizations. Future research could include a population of participants inclusive of the different residential areas in and around Bloemfontein.

FACTORS INFLUENCING PATIENT ADHERENCE TO TUBERCULOSIS TREATMENT IN THABA-NCHU, FREE STATE PROVINCE, SOUTH AFRICA

Modise M^{1,2,3}, Louwagie G², Ndugulile F^{2,3}

¹. Provincial Department of Health, Free State, South Africa ². School of Health Systems and Public Health, University of Pretoria, South Africa ³. South African Field Epidemiology and Laboratory Training Programme (SA-FELTP)

BACKGROUND: In South Africa the incidence of tuberculosis (TB), including drug resistant forms has increased significantly in the wake of the HIV&AIDS epidemic. TB remains one of the top ten leading causes of adult mortality in low income countries. One reason that perpetuates this is the interruption and failure of treatment, usually related to non-adherence. The reasons for non-adherence are complex, ranging from basic characteristics of the patient to the social and economic environment. The aim of this study was to provide insight into the determinants of treatment adherence among patients with pulmonary tuberculosis in Thaba-Nchu, Free State, South Africa.

METHOD: This was a case control study comparing non-adherent (cases) and adherent (controls) TB patients for personal, social, structural and health service factors which may influence adherence. The researcher consecutively sampled all TB patients attending the five clinics in Thaba-Nchu on the days of the interviews until a sample size of 150 non-adherent and 150 adherent patients was reached. Face to face interviews, using questionnaires, were conducted with patients aged 18 years and older. We performed univariate and multivariate logistic regression to determine factors associated with non-adherence.

RESULT: Of the total group of 300 study participants, 69 % (207/300) of both groups had pulmonary TB. The mean age of both groups was similar ($p=0.251$). There were more males among cases (61%, $p =0.001$). Slightly more than half of the cases were identified as divorced, separated or widowed (56%). A larger percentage of cases were HIV positive (90%, $p<0.001$). Nearly half (46%) of the cases only completed primary school whereas the majority (64%) of the controls completed secondary as the highest level of education ($p<0.001$). More than one third of the study participants received a disability grant as their main source of income in both groups. A larger number of the control group stayed in a formal dwelling (77%, $p<0.001$). Factors negatively associated with non-adherence in multiple logistic regression included higher “survival support,” (OR: 0.57, 95% CI: 0.39-0.84), “higher significant other support”, (OR: 0.42, 95% CI: 0.29- 0.63), better “knowledge on the causes of TB disease”, (OR: 0.53, 95% CI: 0.39, 0.72) and better “knowledge on TB treatment”, (OR: 0.69, 95% CI: 0.56, 0.85). Results re-TB treatment knowledge and school attendance played a significant role in the state of adherence to TB treatment. Patients who had extra PTB interrupted treatment less often compared to those patients who had pulmonary TB (OR: 0.12, 95% CI: 0.02. 0.71).

CONCLUSION: Patient education can be a very effective response to many of the challenges in getting patients to adhere to and complete their TB treatment course. Increasing patient's knowledge on what to expect from treatment, how medication works, time to onset of effect, expected goals of therapy, how to monitor for effectiveness may alleviate this challenges. Continuous support from the family, community or the health service plays a critical role in influencing patient's adherence to any treatment.

The Occupational Health and Safety Information System (OHASIS): Introducing a state-of-the-art information system designed to promote and protect the health of the healthcare workforce into the Free State Province

Nophale L¹, Yassi A², Bopheke Z³, O'Hara L², Barker S², Engelbrecht M⁴, Spiegel J²

¹Free State Department of Health, Bloemfontein, South Africa ²University of British Columbia, Vancouver, Canada ³Pelonomi Regional Hospital, Bloemfontein, South Africa ⁴University of the Free State, Bloemfontein, South Africa

Background: Healthcare workers globally face difficult working conditions. The HIV&AIDS epidemic, combined with re-emergence of tuberculosis, causes loss of staff due to illness, absenteeism, and low staff morale, and health workers are at higher risk for infectious disease. A state-of-the-art information system, the *Occupational Health and Safety Information System (OHASIS)*, developed originally in Canada, was re-designed with extensive input from South African collaborators, address the challenges for health workers in South Africa.

Objectives: OHASIS has the following modules: Incident Reporting and Investigation, Workplace Assessment, Workforce Health, and a separate module Health and Safety Committees. OHASIS was designed to assist decision makers, front line workers, occupational health and infection control practitioners and health and safety committees in their day-to-day functions. The system also provides measurable, comparable, and consistent data useful for research. This presentation will describe OHASIS and the experience to date.

Lessons Learned and Next Steps: OHASIS was piloted at Pelonomi Hospital in the Free State, from 2007-2011. Based on feedback received, the system was made more user-friendly and modules on HIV and tuberculosis (which were not included in the original version) were finalized and implemented. It was decided to roll out the new system not only at Pelonomi but also at Universitas Hospital and Bongani Hospital, with the idea that effective implementation as measured by pre-versus post implementation surveys, as well as qualitative assessments, would lead to implementation across Free State, and beyond. The study, specifically evaluating whether the system is a “tool, weapon or white elephant” is currently underway and will inform future roll-out. Meanwhile OHASIS is also currently being implemented across the National Health Laboratory Service in South Africa.

Conclusions and Applications: Information systems could be valuable in improving protection of healthcare workers and promoting a safe work environment to protect patients and workers alike, but many protocol and procedure issues as well as technical challenges must be addressed.

CHRONIC DISEASE SESSION

RISK-FACTOR PROFILES FOR CHRONIC DISEASES OF LIFESTYLE AND METABOLIC SYNDROME IN AN URBAN AND RURAL SETTING IN SOUTH AFRICA

Van Zyl S, Van der Merwe LJ, Walsh CM, Groenewald AJ, Van Rooyen FC

Departments of Basic Medical Sciences, Nutrition and Dietetics, Chemical Pathology and Biostatistics, Faculty of Health Sciences, UFS.

INTRODUCTION: Chronic diseases of lifestyle share similar modifiable risk factors, including hypertension, tobacco smoking, diabetes, obesity, hyperlipidaemia and physical inactivity. Metabolic syndrome refers to the cluster of risk factors that increases the risk for developing type 2 diabetes mellitus and cardiovascular disease.

OBJECTIVES: The aim of the study was to assess health status and identify distinct risk-factor profiles for both chronic diseases of lifestyle and metabolic syndrome in rural and urban communities in central South Africa.

METHODS: The investigation formed part of the Assuring Health for All in the Free State (AHA-FS) study. During interviews by trained researchers, household socio-demographic and health information, diet, risk factors (history of hypertension and/or diabetes) and habits (tobacco smoking and physical activity levels) were determined. All adult participants underwent anthropometric evaluation, medical examination and blood sampling.

RESULTS: The risk-factor profile for chronic diseases of lifestyle revealed that self-reported hypertension and physical inactivity were ranked the highest risk factor for the rural and urban groups respectively. The cumulative risk-factor profile showed that 40.1% of the rural and 34.4% of the urban study population had three or more risk factors for chronic diseases of lifestyle. Furthermore, 52.2% of rural and 39.7% of urban participants had three or more risk factors for metabolic syndrome. The study also observed poor control of life-style related risk factors such as hypertension and diabetes in both study populations but the rural study population was more at risk.

CONCLUSION: This study confirmed that the worldwide increase in the prevalence of chronic diseases of lifestyle, can be attributed to a more sedentary lifestyle, illustrated in the urban study population, and increasing obesity. The rural study population had a higher prevalence of risk factors for metabolic syndrome. Optimal primary health care for patients with hypertension and diabetes at public sector community health centres is advised. Serious consideration should be given to this escalating burden of chronic diseases of lifestyle and metabolic syndrome in these South African populations. The development and implementation of comprehensive health promotion strategies will improve the general health and reduce the risk for chronic diseases of lifestyle and metabolic syndrome in these communities.

WHEELS OF HOPE – AN OUTREACH PROJECT

Smit FE, Botes L, Brown S, Mitrovich M, Volschenk OM
Department of Cardiothoracic Surgery, Faculty of Health Sciences, UFS

INTRODUCTION: The Wheels of Hope Project was initiated by the Department of Cardiothoracic Surgery, UFS and focuses on diagnostic and treatment aspects of heart and lung conditions as well as training and education programs. Rheumatic fever (RF) is a delayed sequel of a throat infection caused by a group A streptococcus. More than one third of affected children develop carditis, followed by progressive and permanent valvular lesions, known as rheumatic heart disease (RHD). In Sub Saharan Africa more than a million people live with rheumatic valvular disease. There is no information available on prevalence rates, feasibility of mass programs for its detection, or on the adequacy or effectiveness of present methods of secondary prophylaxis for this region. We suspect that several patients that were diagnosed with RF or RHD do not continue under medical care and is not receiving regular prophylactic treatment.

AIM: The aim of the project is to implement a surveillance program in order to acquire information on the overall prevalence of RHD and to assess its load on health care services in central South Africa. We aim to determine the prevalence of RHD in Grade 10-12 learners in schools in Bloemfontein, Welkom, Bethlehem and Kimberley.

METHOD: The study design is a cross-sectional epidemiological study. Grade 10-12 learners in schools in Bloemfontein, Welkom, Bethlehem and Kimberley are screened for RHD. During each visit the following data are recorded; anthropometric measurements, echocardiography, throat swabs to screen for the presence of Group A Streptococcus (GAS), blood pressure, glucose and O₂ saturation.

RESULTS: To date 605 learners have been screened (2011-current) and 42 (6.9%) suspicious echocardiograms were referred to Paediatric Cardiology, UFS. Ten of the 42 (24%) was tested for RHD (two positive; 20%), pulmonary incompetence/tricuspid incompetence (five positive; 50%), pericardial effusion (one positive; 10%), left ventricular hypertrophy/hypertension (one positive; 10%) and dysrhythmia (one positive; 10%).

CONCLUSION: The Wheels of Hope outreach screening initiative enabled children and young people, with limited access to healthcare, to get simple and inexpensive antibiotic prophylaxis for RHD. Positive identification can halt the progression of RHD and can have a positive impact on health care economics in central South Africa.

RETROPUBIC RADICAL PROSTATECTOMY: 100 CONSECUTIVE CASES DONE AT UNIVERSITAS HOSPITAL

Vermeulen LP, Wentzel SW

Department of Urology, Faculty of Health Sciences, UFS

INTRODUCTION: Cancer of the prostate (PCa) is now recognized as one of the most important medical problems facing the male population. There exist no proper epidemiological data for PCa in South Africa. The surgical treatment of prostate cancer (PCa) consists of radical prostatectomy (RP), which is the removal of the entire prostate gland between the urethra and the bladder, with resection of both seminal vesicles. Radical prostatectomy was first applied at the beginning of the 20th century by Young using a perineal approach, while Memmelhaar and Millin were the first to perform retropubic RP. In 1982, Walsh and Donker described the anatomy of the dorsal venous complex and the neurovascular bundles. This resulted in a significant reduction of blood loss and improved continence and potency rates. Currently, radical prostatectomy is the only treatment for localised PCa that has shown a cancer-specific survival benefit when compared with conservative management in a prospective, randomised trial. There exists no radical prostatectomy database in South Africa (to our knowledge) that can be used to council our African patients.

AIM: The aim of this paper is to present the data of the first 100 cases captured in the radical prostatectomy database.

METHODOLOGY: A retrospective descriptive study. Population: Includes 100 patients who have been treated for prostate cancer by radical prostatectomy at Universitas hospital from 2010 to 2011. Sample: The data of 100 patients will be retrieved from the radical prostatectomy database on the Meditech system and analyzed. Procedure: Variables that will be analyzed in the database include age of patient, tumor characteristics and operation details. Analysis: The data collected will be transferred to the data (Excel) spread sheet. Results will be summarized by frequencies and percentages. (categorical variables) and means, standard deviations or percentiles (numerical variable). Ethical aspects: Ethical approval has been obtained from the Ethics committee, UFS.

HPV TYPES RESPONSIBLE FOR CAUSING RECURRENT RESPIRATORY PAPILOMATOSIS IN THE FREE STATE

Seedat, R

Dept Otorhinolaryngology, Faculty of Health Sciences, UFS

INTRODUCTION: Recurrent respiratory papillomatosis (RRP) is a disease characterised by recurrent papillomas affecting the respiratory tract, usually the larynx caused by human papillomavirus (HPV). Although the initial symptom is hoarseness, the condition often presents with life-threatening airway obstruction. Over 120 HPV types have been identified but most cases are caused by HPV-6 or HPV-11, although some authors have identified other types. HPV-6 and HPV-11 are also the types associated with genital warts. The condition can be classified into two types: juvenile onset RRP (JORRP), with infection occurring during the birthing process from an infected mother's genital tract, and adult onset RRP (AORRP). Most studies have found HPV-11 disease to be more aggressive than HPV 6 disease but the only previous study in South Africa suggested that HPV-6 disease was more aggressive.

AIM: The aim of our study was to attempt to determine the HPV types responsible for causing RRP in our patients and to determine if the HPV type or other variants could be used as factors predictive of disease aggressiveness.

METHODS: Clinical records of the patients with RRP were reviewed. HPV type was determined by sequencing a section of the L1 gene of the HPV isolated from papilloma specimens. Other segments of the HPV genome were also sequenced. Genetic variants were determined by comparing the sequence data with HPV sequence data on Genbank.

RESULTS: HPV typing was performed on 57 patients with JORRP and 10 patients with AORRP. Only HPV-6 and HPV-11 were identified. JORRP patients with disease due to HPV-11 had significantly more aggressive disease than those with HPV-6 disease but in the AORRP group there was no significant difference in aggressiveness between the two types. Although two novel variants were identified, most isolates were similar to those identified in other parts of the world.

CONCLUSIONS: RRP in patients managed in our department is exclusively due to HPV-6 or HPV-11, with HPV-11 disease being more aggressive. A quadrivalent vaccine against the HPV types associated with cervical cancer and genital warts is available. Vaccination to reduce these infections in mothers could possibly reduce the incidence of RRLP in children.

THE ROLE OF VON WILLEBRAND FACTOR IN BLEEDING AND THROMBOTIC DISORDERS

Meiring SM, Louw V, Webb M, Setai P, Coetzee M

Department of Haematology and Cell Biology, Faculty of Health Sciences, UFS

BACKGROUND: Haemostatic illnesses feature extremes of haemorrhage or thrombosis. The multimeric protein, Von Willebrand Factor (VWF) contributes to both kinds of haemostatic emergencies. Inherited abnormalities of VWF result in Von Willebrand Disease (VWD), the most common bleeding disorder in humans. Despite this high prevalence in the population, the diagnosis and classification often remains a challenge. Von Willebrand Factor multimers are subjected to competing processes of clearance and of proteolysis by its cleavage protein in plasma, ADAMTS13. Increased clearance of VWF influences the levels of this protein and can cause VWD. On the other hand, defective proteolysis of VWF by ADAMTS13 can cause a thrombotic disorder, thrombotic thrombocytopenic purpura (TTP). TTP used to be a rare disorder but its incidence has increased dramatically with HIV&AIDS. The underlying cause may be due to low ADAMTS13 levels. In this study we measured VWF and VWF-propeptide levels in VWD patients and ADAMTS13 levels and VWF levels in patients infected with HIV and patients with TTP.

METHODS: ELISA methods were used to measure von Willebrand factor levels and VWF propeptide levels in 40 VWD patients and the ratio of the VWF: propeptide / VWF: antigen was calculated. An increased ratio indicates a reduced VWF survival. We also measured ADAMTS13 levels and VWF levels in 100 HIV positive patients and 40 patients with HIV associated.

RESULTS: We found increased ratios of VWF: propeptide / VWF: antigen in plasmas of all VWD patients with a mean ratio of 1.9 ± 0.3 (SD). These ratios also inversely correlate with the VWF: antigen levels in these patients. Therefore, the lower the VWF: antigen levels, the higher the VWF: propeptide / VWF: antigen ratio. In normal subjects, the mean VWF: propeptide / VWF: antigen ratio was 1.1 ± 0.2 (SD). ADAMTS13 levels were only decreased in TTP patients (144 ± 109 ng/ml) and not in HIV positive patients (934 ± 245 ng/ml) with normal values range between 520 and 1060 ng/ml. VWF levels were however more than 3 times increased in most HIV-positive patients ($767 \pm 578\%$) and in patients with TTP ($494 \pm 430\%$) where normal VWF levels range between 50 and 150%.

CONCLUSION: This systematic assays of both plasma VWF and the VWF propeptide in type 1 VWD patients may be used to identify patients with a reduced VWF survival phenotype. These patients might require alternative treatment strategies than VWD patients with normal VWF survival. von Willebrand Factor levels were increased in both TTP and HIV infection due to the opportunistic infections in these people and might be used as a marker

for infections and thrombotic potential in these patients. The ADAMTS13 levels can be used as an indicator for TTP in HIV positive persons. As soon as ADAMTS13 levels starts to drop, a TTP event is suspected and might be prevented by treatment.

TREATMENT OF ALCOHOL AND DRUG DEPENDENCE IN THE FREE STATE

van Zyl PM, Gagiano C, Mollentze W, Snyman, J

Departments of Pharmacology and Internal Medicine, Faculty of Health Sciences, UFS

BACKGROUND: Historically characterized by a high prevalence of alcohol dependence, South Africa has in recent years experienced a massive increase in illicit drug use, linked to organized criminal activities. While internationally the role of pharmacotherapy in the multi-disciplinary treatment of substance dependence becomes more important based on an increasing body of evidence revealing the biological nature of the condition, major transformation in the Health and Social delivery systems are taking place locally.

AIMS: This study aimed to provide a critical analysis of current treatment practices regarding pharmacotherapy for drug and alcohol dependence in the Free State. It investigated the extent to which pharmacotherapy is utilized in the treatment of alcohol and drug dependency in the Free State.

MATERIALS AND METHODS: A questionnaire and structured interview was conducted with a total population of 121 health care professionals that could reasonably be expected to be confronted by patients with substance dependence. The population included a random stratified sample of general practitioners in the Free State; as well as representatives of state hospitals, treatment centres, private psychiatrists and therapists in the corresponding towns where general practitioners participated.

FINDINGS: Fragmentation of the treatment environment occur at paradigmatic, legal/political, health service funding and delivery, training and multidisciplinary levels. Inconsistencies in pharmacotherapy present as a lack of interest from first contact level medical personnel, lack of consideration of clinical factors in therapy selection and some controversial practices. The role of medical practitioners in various treatment settings is intimately interwoven with the role of pharmacotherapy. Their interaction with their respective patient populations and utilization of treatment resources within the local constraints eventually determine the role of pharmacotherapy.

CONCLUSION: The role of pharmacotherapy as an element of the multi-disciplinary approach to substance dependence need to be reconsidered in the light of a growing understanding about the biological nature of dependence. This biological evidence needs to be integrated into treatment interventions, supported by service delivery policies that acknowledge optimal utilization of pharmacotherapy as an essential component of dependence treatment within a primary health care approach.

**STRENGTHENING THE HEALTH
SYSTEM SESSION**

EMPLOYEE ASSISTANCE PROGRAMME IN THE HEALTH CARE SECTOR: ELEMENTS FOR A BEST PRACTICE

Kruger WH, van Zyl G, Venter A

Department of Community Medicine, Faculty of Health Sciences, UFS

INTRODUCTION: Employee assistance programmes (EAP) are well-established in several countries but the traditional workplace is faced with challenges and opportunities due to constant changes. Seven core technologies were identified by researchers to clarify the functions of the EAP.

AIM: The aim of the study was to determine the elements for the EAP best practices in an ever-changing health care environment.

MATERIALS AND METHODS: A mix model research approach was followed using a modified Delphi survey. An expert panel of twelve executive managers in health care management and EAP providers were established using a purpose sampling strategy with maximum variation. A questionnaire with 205 questions was sent electronically using a three point Likert scale to achieve consensus or stability. An option to provide comments on questions was also available.

FINDINGS: A low rate of consensus was achieved on the questions during the first round (42%) but the participants achieved consensus on 83% of the questions after the third round. It took the participants six rounds to achieve consensus (95%) and stability (11%) on all the questions. Several general and specific comments were received for participants and it was used to finalise the elements. The elements for best practices were categorised in four sections namely the strategic approach, structure and requirements, processes and the evaluation of the EAP. Participants provided comments in each round on aspects such as current labour relation practices and disciplinary measures.

CONCLUSION: A single generic EAP for the health care sector is not available and there is a lack of standardisation with regard to the specific elements to be included in an EAP. This study identified crucial elements for inclusion in a best practice EAP for health care workers. It is recommended that health care institutions should have a written programme in which the identified elements can be adapted into an institution-unique EAP.

BLOOD AND BODY FLUID EXPOSURE IN THE WORKPLACE

Litsitso NG

Free State Department of Health

INTRODUCTION: Blood and body fluids are the commonest route by which blood-borne viruses and other infections such as HIV and hepatitis are transmitted to healthcare workers (HCWs). Such infections pose high risks to HCWs, especially where basic rules of occupational health and safety are not applied.

AIMS: This study was conducted to determine knowledge, attitudes and practices of HCWs regarding exposure to blood and body fluids (BBF) at Thebe District Hospital in Thabo Mofutsanyana in the Eastern Free State.

METHODS: A questionnaire investigating BBF exposures, reporting of exposures, and HCWs' knowledge of infection control and occupational health resources was distributed to all HCWs in 11 high-risk departments in the hospital; 74 (88%) of 101 questionnaires were returned. Data were captured into SPSS and descriptive statistics were generated.

RESULTS: 82.4% of respondents knew how to contact occupational health services and 74% knew how to contact the Infection Control Service. 84.9% reported no BBF exposure in the past 6 months; 9 out of 11 respondents, who said they did, reported such exposures. 83.3% of respondents reported being vaccinated for Hepatitis B; 59.5% completed all doses. Reasons for not being vaccinated or not completing all doses included forgetting and not knowing about immunisation services. Only 54.3% of respondents knew needles should never be recapped; 44.9% knew gloves should be used all the time; and 63.4% knew cleaners should use latex gloves when cleaning.

CONCLUSIONS: Too many respondents did not know enough about dealing with BBF exposures. Despite this, HCWs take immunization for Hepatitis B seriously, most take precautions to avoid BBF exposures, and most report exposures.

RECOMMENDATIONS: Awareness of OHS at Thebe District Hospital needs improvement. Immediate induction for new employees would help improve awareness of OH services. OHS representatives need to be more proactive within their units. More training is needed on sharps disposal and the importance of using personal protective equipment.

USE OF BLOOD PRODUCT IN THE MATERNITY WARD OF BOITUMELO HOSPITAL

Modiko SO

Fezile Dabi Health District Free State

BACKGROUND: Recently, the South African health system has been experiencing shortage of blood and blood products due to increase in demand for conditions (such as road accident injuries, assaults, surgery and complications of labour) and decrease in supply due to conditions such as Human Immunodeficiency Virus and Hepatitis B. This resulted in difficulty in managing conditions such as obstetric haemorrhages which is one of the commonest causes of maternal mortality and morbidity in South Africa. It was therefore important to monitor the use of these products in South African hospitals to avoid inappropriate use as well as to contain expenditure. However, no formal study has been done in the recent past to systematically study the use of blood and blood products in the maternity units in these hospitals.

AIM: To determine the extent of the use of blood and blood products in the maternity ward of the Boitumelo Regional Hospital and the factors that influenced their uses.

METHODOLOGY: The study design was a cross-sectional study based on retrospective review of routinely collected hospital data from hospital records of patients for the period of 1 April 2009 to 31 March 2010. The setting of the study was the maternity ward of Boitumelo Regional Hospital. Data were collected on the following variables: types of blood and blood products transfused, profile of patients transfused with blood and blood products, turn-around time and cost of these products. Descriptive statistics were used to report the findings.

RESULTS: This is probably the first study done at a regional hospital setting in South Africa which looked at broad issues pertaining to the use of blood and blood products in the maternity ward of the Boitumelo Regional Hospital, and the factors associated with these specified blood and blood products during one study period. The study found 99 (4.2%) of the 2304 patients that delivered during this one year period received blood and blood products transfusion (13 units of whole blood, 250 units of red blood cells, 33 units of fresh frozen plasma and 1 unit of platelet). Primiparity (32, 32.6%), pre-term labour (49, 49.5%), booking status (unbooked 20, 20.4%) were found to be common among these patients. A significant number of them (36, 36.4%) were anaemic based on their booking haemoglobin but only a few of them were diagnosed and treated for anaemia. Among the other antenatal diseases, pregnancy induced hypertension was commonest (27.3%) followed by human immunodeficiency virus (15.2%). The majority of the subjects who received transfusion had normal vaginal delivery signifying the need for active management of third stage. Only 5%

(36/776) of Caesarean section patients received transfusion, which is much lower than other studies. The median blood loss during delivery was 400 ml. Seventeen (17.5%) patients were transfused before delivery and one (1%) was transfused during delivery and 81 patients (81.5%) were transfused after delivery. Eighteen of them (18.4%) were transfused for antepartum haemorrhage and 81 (81.6%) of them were transfused for postpartum haemorrhage. The median time interval between prescription and administration was 160 min which is quite long and could be improved by reducing the interval between prescription and ordering blood and interval between receipt and administration. The total cost of transfusion during one year study period was R 329,579.27 (Whole blood: R7, 433.37, Red Blood Cell: R282, 192.50, Fresh Frozen Plasma: R33, 411.37 and Platelet: R6, 542.03) and the average cost of transfusion per patient was R3329.01.

CONCLUSION: The findings of this study will be reported to the hospital management for improving management of obstetrics patients. The researcher also proposed further study among all the patients who received transfusion at all the regional hospitals in the Free State Province to compare the use of blood and blood products in these institutions.

ORAL HEALTH CARE WORKERS: STRIVING TOWARDS A SAFER WORKING ENVIRONMENT

Oosthuysen J

School of Health Technology, Faculty of Health- and Environmental Sciences

Private Bag X20539, Central University of Technology, Free State, Bloemfontein 9300, South Africa

E-mail address: jeanneo@cut.ac.za

INTRODUCTION: It has long been recognised that oral health care workers work in extreme hazardous environments. These workers are exposed to dangerous chemicals, traumatised tissue, saliva and blood. They face the threat of being exposed to infections pathogenic micro-organisms and infectious agents, including, HIV, hepatitis B virus and prions. The lack of infection control guidelines for oral health care facilities in South Africa has led to an investigation into the extent of infection control in oral health care facilities in South Africa.

Methods: An infection control audit was conducted in 50 dental practices, sourcing information on control measures addressing the variables, administration, personnel protection, surfaces, equipment, hygiene practices, sterilisation, handling of sharps and waste.

FINDINGS: The audit revealed a lack of compliance across all variables in a large number of practices. Notably, infection control training of staff and maintenance of air and waterlines scored the lowest values; 28% and 37% respectively, while sharps handling and hand hygiene performed the best, 77% and 76%.

DISCUSSION: These data support the notion that formal infection control guidelines should be developed for the oral health care profession, which should cover administration, staff protection, personal hygiene, surface contamination, safe sharps handling, equipment and waste.

EVALUATION OF THE QUALITY AND MANAGEMENT OF MATERNITY SERVICES IN THE NATIONAL DISTRICT HOSPITAL IN THE FREE STATE PROVINCE

Sesing A

Free State Department of Health

INTRODUCTION: Maternity services are a priority for all health care services but in most cases there have been serious challenges experienced through service performance. The National District Hospital's (NDH) key performance indicator is bed occupancy rate which showed an underutilization of this facility. Various studies have been conducted to identify management challenges in maternity units of district hospitals, but no formal study has been done to systematically document this problem at the NDH, although there has been anecdotal evidence of problems in the performance of the unit. It was therefore important to investigate the functioning of the maternity unit of the NDH and identify problems that hinder it from functioning effectively.

METHODOLOGY: A cross sectional study design was used comprising of a retrospective record review. The setting of this study was the maternity unit at NDH. Data were collected on various variables that are relevant to the performance of maternity services.

RESULTS: The data collected were analyzed and revealed that the factors contributing to the poor performance of the maternity services were: Poor record keeping, such as incomplete recording of partograms. Non adherence to guidelines and protocols, such as poor management related to HIV and AIDS care and poor management of patients in the advanced labour phase. Failure to make informed decisions due to information mismanagement. Poor supervision in the unit. No adherence to objectives of peer review meetings.

CONCLUSION: From the study it was evident that the quality and the management of maternity services rendered at NDH was of a sub standard level.

RECOMMENDATION: Establish patient centred maternity services. Train and retrain health care providers in the maternity unit. Review existing strategies to improve quality of care in the maternity unit. Strengthen the implementation of the maternity guidelines. Improve functioning of the maternal morbidity review meetings. Strengthen monitoring and evaluation strategies.

REASONS WHY PATIENTS BYPASS CLINIC SERVICES IN THE METSIMAHOLO DISTRICT

Katende S

Department of Philosophy, University of the North-West, Mafikeng

AIM: The purpose of study was to investigate the reasons why Metsimaholo's patients bypass their nearest local clinic for Metsimaholo District Hospital and to determine how patient and hospital characteristics may influence the bypassing phenomenon.

METHODS: Patients between the ages of 18 and 80 years who attended the casualty department of Metsimaholo District Hospital without any referral letter on weekdays between 07:30 and 16:00 were included in the study. The patients were randomly selected till the required number was obtained. The questionnaire was in the patient's preferred language and took into consideration most hospital and patient characteristics that could influence patient's decision to bypass their nearest clinic as well as a section for own reasons.

RESULTS: 97 patients were included of whom 73.2% bypassed their local clinic. Demographics of the by passers revealed that: 62% were young, 58% were in lower income range, 43% passed grade 12. Gender and unemployment did not show a significant effect on the bypassing phenomena. The patients' reasons given to bypass their local clinic were influenced by the followings factors: the distance, the number of hours open, availability of drugs, availability of doctors, satisfaction with the health facility service, limited service, long waiting time, unfriendliness of personnel, medical condition, and lack of care.

CONCLUSION: This study on the phenomena of bypassing the local clinic for hospital care in Metsimaholo found that the patient decisions were significantly influenced by patients' characteristics and hospital characteristics. The bypass rate of 73% is considerably higher than 20%-50% bypass documented in the literature. The solution to this problem depends on those responsible for the different health facilities and the community, and it consists of the improvement of quality service by the health facility being bypassed.

POSTERS PRESENTATIONS

PUBLIC HEALTH EVALUATION OF TRAINING AND MENTORING INTERVENTIONS TO IMPROVE TB PATIENTS' UPTAKE OF HCT IN THE FREE STATE: WHERE ARE WE NOW?

Heunis JC

Centre for Health Systems Research & Development, University of the Free State

BACKGROUND: During 2011 the CHSR&D and its partners – the Tuberculosis Management Directorate and the HIV&AIDS/STI & CDC Directorate of Free State Department of Health, University Research South Africa (URSA), National Institute of Communicable Diseases (NICD) – received a CDC grant to conduct a Public Health Evaluation (PHE) of professional and community health worker training and mentoring interventions to improve TB patients' uptake of HCT in the Free State. The quasi-experiment to implement and evaluate the interventions using a pre-post intervention comparative design commenced in 2012. It took place in Thabo Mofutsanyana District – randomly assigned to intervention – and in Lejweleputswa District – randomly assigned to control.

AIM: The main aim of the project was to increase the uptake of HCT by TB patients in the Free State Province by implementing, evaluating and comparing the (cost-) effectiveness of professional nurse and community health worker training and mentoring interventions appropriate for local circumstances. For purposes of possible future implementation of the training and mentoring interventions, the Free State Department of Health will be informed as to which of the three interventions has the most positive impact on uptake of HCT by TB patients taking in to account the cost-effectiveness of each intervention.

RESEARCH STRATEGY: The impact of the training and mentoring interventions will be measured by pre- and post-intervention comparison of changes in 1) the rate of uptake of HIV testing by TB patients, 2) TB patients' satisfaction with HCT services, and 3) professional nurses and community health workers' HCT-related knowledge, ability, skills and attitudes. The pre- and post-intervention surveys comprised the following data-gathering methods: 1) interviews with TB patients; 2) collection of patient-specific routine TB and HCT information; 3) interviews with professional nurses; 4) interviews with CHWs; 5) gathering of facility TB-HIV routine programme statistics at facilities; and 5) gathering of costing information to measure the provider input costs of the interventions; and 5) outcome measures to conduct a cost-effective analysis from available secondary data and records kept by the research team during the implementation of the intervention.

PROGRESS: Baseline data collection has just been completed in the three intervention sub-districts (Maluti-a-Phofung = nurse focus; Dihlabeng = CHW focus; and Setsoto = both nurse and CHW focus) and the control sub-district (Matjhabeng).

INVESTIGATING OCCUPATIONAL HEALTH AND SAFETY (OHS) AT PELONOMI HOSPITAL IN THE FREE STATE: STAFF PERCEPTIONS OF OHS SERVICES, USE OF SERVICES FOR HIV AND TB, AND STIGMA IN THE WORKPLACE

*Brandse L, Myeko N, Ntlole M, Tshapuletsa F
Pelonomi Hospital, Free State Department of Health*

BACKGROUND: A 2011 audit at Pelonomi Hospital found that between January and May, 568 health care workers attended the OHS unit. Only 42 attended for tuberculosis (TB) and 121 for HIV counselling and testing: these numbers are low given the province's high HIV and TB prevalence. Following the audit, a study investigated perceptions among staff of Pelonomi's OHS unit, utilisation of the unit for TB and HIV, and stigma and discrimination in the workplace.

METHODS: A questionnaire was designed, piloted and distributed to staff across a wide range of departments; 343 questionnaires were returned. Data were captured into SPSS and descriptive statistics generated.

RESULTS: Only 30% of respondents reported visiting the OHS unit on employment. While 42.4% did not know if the unit provides HIV treatment, only 62.4% knew it provides TB treatment. Too many (37.1%) respondents thought stigma occurs routinely in the workplace. Only 24.6% thought co-workers would disclose their HIV-positive status to anyone at work, despite 84% agreeing that bosses would respond supportively. Generally comments on the training and attitude of OHS staff were positive, but there was a strong call for the OHS unit to be more proactive and improve confidentiality. The latter is important given that only 51.8% think confidentiality is always maintained at the unit.

CONCLUSION: Lack of knowledge of the OHS unit and services, and stigma, perceived or real hampers efforts to fight HIV&AIDS-TB among staff at Pelonomi. Staff members are reluctant to disclose their status and/or seek HIV/TB treatment at the unit.

RECOMMENDATIONS: Perceived lack of confidentiality at the OHS unit must be addressed. The unit needs higher visibility, early induction of new employees, and provision of regular HIV-TB training for all staff. Taking advantage of attendance at the OHS unit for other purposes (e.g. vaccines, medical surveillance, injuries) to offer HIV-TB services could increase testing, education, treatment initiation, and follow-up of infected staff.

AN EVALUATION OF PERFORMANCE MANAGEMENT SYSTEM WITHIN TEN PUBLIC HEALTH INSTITUTIONS

Katende, S

Department of Philosophy, University of the North-West, Mafikeng

INTRODUCTION: This study focused on the appraisal system for the Free State Provincial Government health department, popularly called the Employee Performance Management and Development System (EPMDS), with the purpose of identifying factors needed for its success. Problem statement: “the failure of the EPMDS to deliver its intended purpose.”

OBJECTIVE: To establish gaps in the literature surrounding the successful application of appraisals, to identify factors required for their effectiveness, which entailed developing a modified structural performance appraisal model (MSPAM) that will make the current failing EPMDS work effectively to enhance organisational effectiveness within the South African public health sector. Relevant literature established gaps, through hypotheses to the problem statement.

METHODS: Triangulation of quantitative and qualitative methods to collect data, using questionnaires and interviews, focused on employees of 10 Eastern Free State Province public hospitals. Simple random sampling and purposive-judgemental methods were employed for selecting 300 participants from 2400 employees. Empirical methodology used to test hypotheses.

FINDINGS: Evidence emerged that 14 factors influence EPMDS’ success. A strong link was established between them and EPMDS’ effectiveness. Leadership/management should focus mainly on strategic goals –productivity and employee empowerment instead of reward, to enhance performance and staff retention.

CONCLUSIONS: Leadership and management need acquiring skills to manage appraisals effectively. Effective leadership, management and communication/MIS critical for appraisals’ success must be aggressively addressed. Organisational and employee goals need alignment and integration into common purpose.

RECOMMENDATIONS: MSPAM is proposed for public hospitals, which capitalises on shortcomings of its predecessors to enhance appraisals effectiveness. Developers and vendors of appraisals should incorporate key factors into the framework to improve objectivity and effectiveness, which requires promotional programmes to potential users. Future research and testing of MSPAM is required on its replication and viability.

QUALITY ASSURANCE ON GASTRO-ENTERITIS GUIDELINES AT NATIONAL DISTRICT HOSPITAL

Brits H, Joubert G

Department of Family Medicine, UFS

BACKGROUND: Despite national guidelines and agreed upon admission and referral criteria for children in National District Hospital (NDH), Bloemfontein, the number of children admitted with gastroenteritis (GE) has increased dramatically since December 2007. From the previous year's Child Healthcare Problem Identification Programme (Child PIP) data the increase in GE admissions was evident in NDH. During the preceding year, 123 children were admitted for GE and during the audit period 267. The number of deaths in NDH also increased from an average of 2.25 a month over the past 3 years to 10 a month during January and February 2008. To determine whether doctors adhered to prescribed GE treatment protocols; to determine whether nursing personnel carried out doctors' orders as prescribed; and to identify other factors that contributed to GE deaths.

AIM: As part of the quality-improvement project, 10 items were assessed to determine whether doctors adhered to treatment protocols.

METHOD: All child deaths in Ward 3 in NDH from May 2007 to April 2008 were included in the study. The first author collected the information on a cause of death form, a data form and an audit tool. And 10 items were assessed to determine whether nurses adhered to nursing orders and basic nursing care. Any other factors that contributed to poor care were also noted.

RESULTS: Medical and nursing care were of a high standard and treatment protocols were followed. Pre-admission factors such as transport, non-availability of 24-hour medical services, non-initiation of emergency treatment before referral, and caregivers not realizing the severity of the disease need urgent attention to prevent further deaths

CONCLUSION: In more than nine out of ten cases the doctors and nurses in the hospital rendered medical care in accordance with standard guidelines. Pre-admission factors need to be addressed in order to prevent more deaths.

ART SERVICES IN FEZILE DABI AND LEJWELEPUTSWA DISTRICTS OF THE FREE STATE, JANUARY – AUGUST, 2011

*Chikobvu P¹, Ncube H¹, Tsibolane Y¹, Mathibe M¹, Nkomo F¹, Makhoba T¹, Gumede F², Malgas B³, Howell E⁴
Free State Department of Health¹, Fezile Dabi District², Lejweleputswa District³, Urban Institute/AIHA⁴*

BACKGROUND: During 2011 the Free State expanded Anti-Retroviral Treatment (ART) services throughout the province by combining an outreach campaign, HIV Counselling and Testing, and expanded ART services in clinics that had not previously provided ART. The goal was to expand services to more sites and consequently to more patients with HIV. It is important to consider whether and to what degree this goal was accomplished.

METHODS: A province-wide ART reporting system uses reports from clinic to district to province. Data for two districts are used to analyze the following four cross-district indicators, by age and gender, for the first 8 months of 2011: (1) number of patients initiating ART; (2) number of patients on ART; (3) number of prescriptions for ART; and (4) number of visits for ART (usually called “headcounts” in the clinics). Additional data for calculating rates of services include total population and number of HIV-infected persons in each district (Source: Annual Performance Plan for the Free State Department of Health, 2012/13).

RESULTS: The rates of service use and trends are similar across districts, with some exceptions (e.g. a higher rate of prescriptions and a higher growth rate for those on ART in Lejweleputswa, but a higher rate of patients with HIV on treatment in Fezile Dabi). The number of patients initiated monthly is flat with one exception: 6/2011/Lejweleputswa. Adult women have higher use rates than men, with pregnant women the highest. Only 29% (Fezile Dabi) and 18% (Lejweleputswa) of persons with HIV are estimated to be receiving ART services (8/2011).

CONCLUSIONS: The number of people of ART is increasing steadily in both districts, but certain populations are hard to reach with traditional outreach campaigns (e.g. adult males); targeted outreach is needed. The ART data system provides useful data to monitor and evaluate ART services; data use should be expanded.

PRESCRIBING AND DISPENSING OF ARVS, A CHALLENGE FOR PAEDIATRICS

Santo, PB

Free State Department of Health

INTRODUCTION: The down referral of ARVs to clinic resulted in increase patient load, high prescribing and dispensing errors in clinics where there are no pharmacist assistants.

CHALLENGES IDENTIFIED

1. DOSAGE FORMS: The available dosage forms, e.g. tablets, syrups, etc, sometimes pose a challenge when dispensing medication to paed. Some of the ARVs are not available in liquid form and as a result tablets are being prescribed to paed. Crushing the tablet and missing with water at times alters the composition of the product so much that it is rendered inactive. Most often the crushed tablets are not palatable. Result: missed doses or defaulting.

2. WHAT ITEM SHOULD BE PRESCRIBED? Children are sometimes seen as small adults. Adult medications are sometimes prescribed in small doses. Even though the ART guidelines are widely available, some of them are still prescribed Tenofovir, which is an item which should be restricted to adults. Result: toxicity.

3. DOSE: Calculation of paediatric doses is a challenge for most prescribers. They are either issued too much or too little because of calculation errors. Result: toxicity or/and resistance.

4. REPEAT OF PRESCRIPTIONS: When patients received a repeatable prescription, it is generally understood that that patient will get the medication as stipulated, in the specified doses for a term/period which is specified. For growing children this should not be the case.

For example, if a child weighing 10kg is prescribed Lamivudine, Abacavir and Kaletra® in January, and the prescription is repeatable 3 for three months. After the first month, the weight of the child changes. By the 3rd month the child may weigh up to 15kg, yet that child will be issued medication based on the 10kg weight. Result: under dosing, resistance, insufficient viral suppression.

CONCLUSION: Children are not small adults, and cannot be handled as such. They need special care. In order for the health care workers to be able to give the special care, tools should be given to enable this.

PRE-ECLAMPSIA AND ITS COMPLICATIONS IN MANAPO HOSPITAL

*Akweyo N, Brits H, Joubert G
Department of Family Medicine, UFS*

INTRODUCTION AND AIM: PET is a syndrome that affects 5% of all pregnancies, producing substantial maternal and peri-natal morbidity and mortality. The aim was to determine the prevalence of hypertensive disorders in pregnancy (pre-eclampsia (PET) and eclampsia), and its complications in Mafumahadi Manapo Regional Hospital, medication used in the management of PET, as well as the outcome of the neonates.

MATERIAL AND METHODS: The researcher collected data from patient files for a period of 6 months. All patients admitted in the Manapo Hospital that met the criteria for PET, with adequate information in the file were included in the study

RESULTS: A total of 1 112 patients delivered during the period of whom 82 had PET and 75 patients were included in the study. Demographic data confirmed that 63% were primigravidae, which correlates with literature. Complications occurred in 80% of the patients, with the majority of them presenting with more than 1 complication. 48% developed HELLP syndrome, 39% eclampsia and 2 patients died. Methyldopa was used in 97% of patients, Magnesium sulphate in 85%, hydralazine in 43% and nifedipine 60%. Neonatal outcomes were: 41% alive term babies, 29% alive preterm babies, 22% stillbirths and 8% neonatal deaths.

CONCLUSION: The incidence of PET in Manapo Hospital was 7%, with a complication rate of 80% and 30% of pregnancies ended in stillbirths or neonatal deaths. These figures are comparable with that of developing countries.

RECOMMENDATION: To implement management protocols for PET in order to improve maternal care in Manapo Regional Hospital and to evaluate it after implementation.

AN OBSERVATIONAL RETROSPECTIVE STUDY OF THE RELATIONSHIP OF PERINATAL HIV INFECTION AND ONSET OF MENARCHE IN TEENAGERS

*Mokoka-Nkhobo I, Nhiwatiwa I, Ndayi W
Bongani Regional Hospital, Free State Province*

AIM: The purpose of this study is to establish whether perinatal HIV infection influences the onset of menarche in teenagers. The study will focus on adolescent girls aged between 13 to 18 years attending the youth HIV clinic in Bongani teaching hospital.

METHOD: The target group of the study is girls aged 13 to 18. The sample of the study will be obtained from HCT clinic and Youth centre. Informed consent will be obtained from the participants, parents or guardians the first stage of the study involves identifying the participants through Bongani HCT clinic and records from Youth centre at the hospital.

This will be followed by screening interview to identify HIV infected teenagers all participants will be examined and anthropometric measurement of height and weight recorded. The study will be conducted under the research committee of the University of Free State. The project will run for approximately 12 months.

VALUE OF THE STUDY: With advancement of HAART and PMTCT programmes more of perinatally infected children reach puberty and teenage stage. Statistically with PMTCT the incidence of perinatally children has fallen to less than five % this is the first study to focus on this topic, the findings of the study will assist clinicians in making informed decision on initiation of contraceptives in HIV infected teenagers. This is important considering possible drug interactions between contraceptives and HAART (especially efavirenz and nevirapine).

KNOWLEDGE OF PATIENTS, ON ANGIOTENSIN INHIBITORS, SURROUNDING ANGIOEDEMA AS A SIDE EFFECT

Hancke YJ, Prinsloo EAM, Steinberg WJ

INTRODUCTION AND OBJECTIVES: Angioneurotic oedema (angioedema) is a vascular reaction characterized by a well defined area of non-pitting and non-pruritic oedema, engaging mainly the skin and mucous membranes of the tongue, lips, soft palate, larynx and face and in rare cases the mucous membranes of the gastrointestinal tract. Angiotensin converting enzyme (ACE) inhibitors have long been recognized as a cause of angioedema, with a reported incidence of 0.1 to 1%. The risk of acute upper airway obstruction makes this an emergency situation. Patients should be informed about these side effects. This study attempts to answer the following questions:

1. Are patients that are placed on ACE inhibitors informed about the side effect of angioedema?
2. Did the patients already on ACE inhibitors, show any symptoms of angioedema previously?
3. If there were symptoms, what was the action taken?

METHOD: As a descriptive study, information was collected through a questionnaire completed by patients. Forty nine of the pharmacies (private and public) in Bloemfontein were randomly included. Patients receiving ACE inhibitors have been approached to complete the study questionnaire.

RESULTS: 640 usable questionnaires were received. A third of the respondents were male. On average respondents were on ACE inhibitors for 36 months. The knowledge of angioedema was good in 5%; limited to 3% and 92% of respondents had no knowledge of angioedema. 43% of the respondents have experienced possible symptoms and most had no suitable explanation.

CONCLUSION: Patients on ACE inhibitors were not informed sufficiently about the side effect of angioedema. A fifth of the patients on ACE inhibitors do have symptoms, of which the majority showed no action yet.

SUSTAINABLE PARTNERSHIPS FOR HIV & AIDS AND TB IN THE FREE STATE DEPARTMENT OF HEALTH

Hugo SN

Free State Department of Health

INTRODUCTION AND BACKGROUND: The Free State Department of Health established a Directorate for Partnerships in 2007 for management of partnerships with NPOs. Major work was done with the PEPFAR funded NPOs and NPOs funded by DOH through the EU Donor Fund. The work was done between 2008 and 2011.

METHOD: A partnership plan was developed to guide the support of the partners. The work plans of the partners were aligned to the FSDOH plans and priorities in line with NSP. Partners were allocated specific districts to support. Monitoring of the work done by the partners was through the quarterly partnerships meetings. Skills transfer was also emphasized. Meetings were also held per programme.

RESULTS: This resulted in great success and achievement of FSDOH goals. Secondment of staff to close service gaps in unfunded posts was done. Pharmacies were renovated for ARV services. Parkhomes were donated to address space issues. Health care workers and CBOs were trained on HIV and AIDS and TB. TB focal points were established in the hospitals. Mobile clinics were donated by partners for strengthening of outreach services. Pharmacy Assistants were trained and placed in the new sites as part of expansion of sites for ART services.

CONCLUSION AND RECOMMENDATIONS: It can be concluded that when DOH leads the partners, success is possible. DOH presents plans and priorities to the partners to align their plans. Monitoring of support is measured on progress towards achievement of goals per district. It is also recommended that for sustainability, plans should be made at the beginning for the exit of the partners. This is more important to address issues like absorption of seconded staff.

CRANIAL BASE FLEXION AND SKELETAL JAW RELATIONSHIPS IN A SAMPLE OF BLACK SOUTH AFRICANS

Nyakale, Kahn, Sethusa

*Dept of Orthodontics, School of Dentistry, University of Limpopo
Free State Department of Health*

INTRODUCTION: Flexion of the cranial base plays a very crucial role in the study of the craniofacial complex, particularly with the development of skeletal jaw relationships. An understanding of growth of the cranial base has come to assume great importance in orthodontics, and successful treatment of skeletal jaw malrelationships depends largely on the growth and flexion of the patients' cranial base.

AIM: To determine the relationship between cranial base flexion and skeletal jaw relationships in a sample of black South Africans.

MATERIALS AND METHODS: The sample comprised of 300 pre-treatment lateral cephalograms of black South Africans which was equally divided into class I, class II and class III skeletal jaw relationships according to the cephalometric tracing and analysis, and each class of skeletal jaw relationship had an equal number of male and female subjects. A digital cephalometric analysis software program (Orthview®, Netherlands) was used to trace and analyse the selected lateral cephalograms. The sample was first analysed to determine if gender differences existed for the mean cranial base flexion value in all three classes of skeletal jaw relationships. Comparisons among Class I, II, and III mean cranial base flexion values of the black South Africans in this study were compared with the average cranial base flexion value of black and Caucasian South Africans from the previous studies for significance using an independent t-test.

RESULTS: Age distribution showed no statistically significance in all the three classes of skeletal jaw relationship ($p > 0.05$). There were no statistically significant differences between the mean cranial base flexion values of the male and female subjects in all the three classes of skeletal jaw relationships ($p > 0.05$). The results demonstrated a significantly larger mean cranial base flexion value in the Class II skeletal jaw relationship sample when it was compared with the mean cranial base flexion values of Class I and Class II skeletal jaw relationship samples respectively ($p < 0.05$).

OUTBREAK OF RIFT VALLEY FEVER IN FREE STATE PROVINCE, SOUTH AFRICA, FEBRUARY TO JULY 2010 (PRELIMINARY RESULTS)

Landoh D.E.^{1,2}, Modise M.P.^{1,2,3}, Archer B.N.⁴, Matsaneng M.P.^{1,2}, Blumberg, L.⁴, Thomas J.⁴, Harris B.N.^{1,2}, Weyer J.⁵, Cengimbo A.⁴, Khajoane A.^{1,2,3}, Paweska J.⁵, Baleni D.³, Nyokong B.³

*1. South African Field Epidemiology and Laboratory Training Programme (SAFELTP); 2. School of Health Systems and Public Health (SHSPH), Faculty of Health Sciences, University of Pretoria, South Africa; 3. Department of Health, Free State Province, South Africa; 4. Outbreak Response Unit, National Institute for Communicable Diseases (NICD), National Health Laboratory Service (NHLS), Johannesburg, South Africa; 5. Special Pathogens Unit, NICD, NHLS, Johannesburg, South Africa
E-mail: mlandoh@yahoo.fr / modestel@nicd.ac.za*

BACKGROUND: A large outbreak of Rift valley fever (RVF) was detected in Free State Province (FSP) during February 2010. We conducted an investigation to describe the extent of the outbreak in humans and identify high-risk population groups to inform targeted control interventions.

METHODS: We requested clinicians to submit blood specimens from suspected cases presenting with influenza-like illness or known complications of RVF infection, and recent close contact with livestock within RVF affected areas. Laboratory confirmation of acute-RVF infection was performed by nucleic acid detected, virus isolation, and serology at the National Institute for Communicable Diseases (NICD). We interviewed confirmed patients and attending clinicians from FSP using standardized questionnaires.

RESULTS: From February through July 2010, NICD reported a total of 229 confirmed RVF cases throughout South Africa, of which the largest proportion (123, 54%) were from FSP. Of the FSP patients, 84 (68%) were confirmed by virus isolation and the remainder by serology. The majority of patients 109 (89%) were male, 57 (51%) were from Lejweleputswa District, and the median age was 44 years (range 2-87 years). Patients commonly presented with symptoms of fever $\geq 38^{\circ}\text{C}$ (99 cases, 80%), headache (74%) and myalgia (78 cases, 63%); four (3%) confirmed-patients were asymptomatic. Eleven (9%) cases were fatal. The majority of patients 111 (91%) reported direct contact with sick animal prior to onset of illness, and 90 (73%) were working within occupations (e.g. farming, veterinary) where contact with animals frequently occurs.

CONCLUSION: We documented an extensive outbreak of RVF in FSP, and recommend health promotion interventions toward individuals where direct exposure to RVF-infected livestock may frequently occur. Our recommendations were successfully implemented and influenced ongoing awareness and health promotion campaigns in the province.

A MODEL FOR HIV&AIDS, RESEARCH AND POLICY INTERFACE

Mofokeng, M.A.

School of Nursing Science, Faculty of Health Sciences, North West University, Potchefstroom

BACKGROUND: Nursing plays a pivotal role in the care of people living with HIV&AIDS and has an obvious contribution in influencing HIV&AIDS policy. Studies suggest that despite their knowledge and experience nurses do not systematically inform policy and yet they are knowledgeable in this regard. Against the background of above research problem, the following research question was posed. How can a model for HIV&AIDS care, research and policy interface be developed? This included utilizing the identified concepts during data analysis.

OBJECTIVES: The purpose of this study is to develop and describe a model for HIV&AIDS care, research and policy interface. The study objectives were developed in two phases relevant to developing a model.

Phase 1 objectives –The identification of concepts in relation to HIV&AIDS care, research and policy interface. To examine how HIV&AIDS stigma influence nurses provision of prevention, care and treatment to patients and families. To explore and describe how HIV&AIDS affects the workforce. To examine the HIV&AIDS policies and interventions

METHODS: Three different instruments were used to collect data. The HRM rapid analysis tool, the clinical survey and the interview guide. Content and construct validity were used to determine rigor of the quantitative instruments and trustworthiness of the qualitative data was established according to Lincoln & Guba (1985) and Krefting's (1991) considerations of trustworthiness.

RESULTS: The analysed data resulted into conclusion statements, reduced into the following concepts: HIV&AIDS care, research, HIV&AIDS stigma and policy. These were used to develop a model for HIV&AIDS care, research and policy interface.

RECOMMENDATIONS: Recommendations for practice, research, education and policy: Stakeholder inclusion in HIV policy, increase the research component of clinical nurses and roll out the use of HIV&AIDS care, research and policy interface.

IMPROVING RATIONAL USE OF ANTIBIOTICS IN FOUR HOSPITALS IN THE FREE STATE

Karsten H¹, Mohapi R¹, Coetzee J², Tsiu L³, Kgare D⁴

¹Boitumelo Regional Hospital, ²Parys Hospital, ³Nala District Hospital, ⁴Mohau District Hospital

BACKGROUND: Rational use of antibiotics in hospitals has proven to pose a problem worldwide. Optimal use, rational prescribing and administration of antibiotics in hospitals remain critical in the treatment of infections and reduction of antimicrobial resistance in general. This can only be achieved through multidisciplinary efforts. A study on antibiotic use was done at four hospitals in the Free State, namely, Boitumelo Regional Hospital, Mohau District Hospital, Nala District Hospital and Parys District Hospital.

METHOD: An antibiotic use assessment tool was developed to check whether antibiotics were prescribed according to Standard Treatment Guidelines (STGs) and correctly administered. A single antibiotic from each prescription was analysed.

Following an initial assessment of 50 prescriptions in November 2011, a Standard Operating Procedure (SOP) was developed for the prescribing and administration of antibiotics according to Standard Treatment Guidelines (STGs). In-service training on the new SOP was provided to doctors / nurses / pharmacists. A further 50 prescriptions were assessed in January 2012 and again in February 2012. Results from later assessments were compared to baseline findings to show change.

RESULTS: The average percentage of antibiotics prescribed according to STGs increased from 36.3% at baseline to 46.6% (final assessment). All four facilities registered an increase in STG use with the exception of Boitumelo hospital that where a 22% decrease was observed. It was also observed in that two of the four hospitals had an increase in the percentage of antibiotics that were correctly administered. The average increase was 17.4%. Nala and Parys hospitals however had an overall decrease from baseline to the final assessment.

DISCUSSION: The decrease in adherence to STGs in Boitumelo hospital and non adherence to the SOP may have been attributed to new personnel appointed in the beginning 2012 who were not yet trained on the STGs and SOP on antibiotic administration. There needs to be continuous training regarding the importance of correct administration of antibiotics in the wards to ensure reinforcement and sustainability. The participation of pharmacists in multidisciplinary teams in providing patient care should be encouraged.

ENSURING SUSTAINABLE SUPPLY OF ANTIRETROVIRALS IN PRIMARY HEALTH CARE FACILITIES IN THABO MOFUTSANYANA DISTRICT

Sauer Y¹, Moleli K², Theron A³

¹Mamelo CHC, Marquard, ²Elizabeth Ross Hospital, Qwa-Qwa, ³Phekolong Hospital, Bethlehem

BACKGROUND: In 2011, the South African Government embarked on the roll-out of antiretroviral (ARV) services to primary healthcare facilities (PHC) with nurses initiating therapy. Uninterrupted availability of ARVs at PHCs was identified as a problem in Thabo Mofutsanyana (TM), one of the biggest of five districts in the Free State province. Pharmacists from the Free State province embarked on a project to optimise ordering and delivery schedules of ARVs in three sub-districts namely Maluti-a-Phofung (MAP), Dihlabeng, and Setsoto. These sub-districts have a total population of 381 058 which accounts for 52% of TM's population. The aim of the project was to ensure 100% availability of ARV's required, in 16 identified clinics in TM by February 2012.

METHOD: Standard Operating Procedures (SOPs) for managing ARV stock were reviewed in each of the sub-districts Maluti-a-Phofung (8 PHCs), Dihlabeng (4) and Setsoto (4 PHCs). New SOPs as well as Delivery and Ordering schedules were developed and implemented in these facilities. ARV Medicine Supply Management training was provided to 22 Pharmacist Assistants (PAs) and 39 Professional nurses in November 2011 as part of the implementation process. Data was collected retrospectively, three months prior to the training and SOP implementation, on the percentage of facilities with 100% ARV availability; the number of facilities submitting bi-weekly orders and average lead time. The same data was collected three months post intervention in order to determine progress.

RESULTS: The results have shown that DSM-training improved the availability of ARV's and the submission of bi-weekly orders in all three sub-districts just after the training. However, an increase in lead time during the December period resulted in clinics not submitting bi-weekly orders and this had a negative impact on the availability of ARV's.

DISCUSSION: In Dihlabeng and MAP storage space in clinics had a negative influence on medicine availability. In Setsoto, clinics had enough storage space in clinics and there was a designated pharmacist for each clinic and this helped to drive the DSM-process successfully. This was not the case in Dihlabeng and MAP.

ANTENATAL CARE UPTAKE AND THE DELIVERY SERVICES AT THE THUSANONG HOSPITAL IN THE FREE STATE PROVINCE

Morigihlane AM

Free State Department of Health

BACKGROUND: Antenatal care has been proven to be effective in preventing adverse outcomes in pregnancy. Effective antenatal care is coupled by scheduled visits related to the development of the foetus. World Health Organization (WHO) recommends four antenatal visits for women with normal pregnancies (WHO, 1994; Kinzie and Gomez, 2004) in developing countries. Routine visits are at 20, 26, 32 and 38 weeks for low risk pregnant women (Department of Health, 2007). The visits for high risk pregnancy are determined by the degree of the risk.

METHODS: This study was conducted at Thusanong district hospital. The hospital serves a population of 128007, with nine referral clinics from Allanridge, Odendaalsrus and Wesselsbron towns. The clinics are situated within five kilometres radius from the residence of the people who use the services. Cross-sectional survey where information was collected through patient records review. The records of all the women who delivered at Thusanong District Hospital over a period of six (6) months with reference to the study period were reviewed.

RESULTS: There were 1205 records that were retrieved from the archive and were reviewed for the study. Of these 985 did not have relevant information and 220 had relevant information and were included in the study. Convenient sampling method was used. Ninety two (46%) of them were un booked in terms of WHO definition, five of them never attended antenatal clinic and only presented to the hospital for delivery. The median age of the booked and un booked patients were similar.

Among the patients who visited the hospital, 22% (n=92), of them were un booked according to WHO definition. However, 91% (n=108) of the booked subjects had antenatal visits equal to four (4) or more. The study shows that 5.4% (n=92) of the un booked subjects never attended antenatal services. There is no significant association between booked and un booked mothers in terms of baby outcome. However the study shows that there was a significant association between booking status and preterm babies 2.2% (n=92).

CONCLUSION: There is need to improve on the antenatal services that are provided public hospitals in an effort to strengthen the implementation of maternity guidelines.