Joint conference of the Public Health Association of South Africa (PHASA) and the Rural Doctors Association of South Africa (RuDASA)

Bridging the health divide: from Policy to Practice

Bloemfontein, South Africa
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L01 - Infant feeding practices of HIV-positive mothers attending post-natal clinic at a district hospital in KwaZulu-Natal province, South Africa

O Abusomwan, M Kawonga

Clinical Manager, Dr CN Phatudi Hospital, Tzaneen, South Africa, Senior Specialist, School of Public Health, University of the Witwatersrand, Johannesburg, South Africa

BACKGROUND
Safe infant feeding by HIV-positive mothers is critical to reducing mother-to-child transmission (MTCT) of HIV. New South African guidelines recommend exclusive breastfeeding as part of the prevention of MTCT (PMTCT) strategy.

OBJECTIVES
This study describes infant feeding practices of HIV-positive mothers attending the postnatal clinic at a district Hospital in South Africa, and evaluates their feeding practices to safe infant feeding guidelines.

METHOD
This was a descriptive cross-sectional study. Structured questionnaires were administered between February and April, 2010 to 395 HIV positive mothers attending the PMTCT clinic six weeks after childbirth. Data were collected on current infant feeding practices and access to resources considered necessary for safe replacement feeding (safe water, fuel, fridge, and regular income). Data were analysed in Epi Info.

RESULTS
The commonest infant feeding method mothers chose and practiced was exclusive breastfeeding (77.7%) followed by replacement feeding (19.7%) and mixed feeding (3.0%). Just under two-third (60%) of mothers practicing replacement feeding had access to safe water, fuel and fridge, however only 21% met all four socio-environmental resource requirements for safe replacement feeding, including maternal income.

CONCLUSION
The study demonstrated that, given a choice of method, the majority of HIV positive women choose exclusive breastfeeding. The high uptake of exclusive breastfeeding suggests that adherence to the new infant feeding guidelines will be high in the early post-natal period, and can make a significant contribution to PMTCT of HIV. Effective mechanisms are however needed to support women to maintain exclusive breast-feeding beyond 6 weeks post-natal.

L02 - Screening Practices of an Incentivized Health Insured Population

L Adonis

BACKGROUND
Preventive care has received renewed interest in the context of a growing burden and cost of chronic diseases of lifestyle. Early detection of risk factors and asymptomatic disease is an integral part of prevention. However, no data exists on screening within South Africa. Vitality a wellness organization linked to Discovery Health uses incentive-based strategies to promote the use of various screening activities.

OBJECTIVES
This research aims to evaluate the screening practices of this health insured population, the role of incentives and the cost and health outcomes of those who belong to Vitality compared to those who don’t.

METHOD
The study design is a longitudinal cohort study. It evaluates screening rates of those before and after joining Vitality compared to those who never joined from January 2008 - December 2011.

RESULTS
Initial results found that only 10.2% of eligible population belonging to Vitality screened for HIV, 23% for cancers (prostate, breast and cervical) and 27.3% for chronic diseases of lifestyle (CDL – cholesterol and glucose tests) during 2011. Overall screening rates increased at a rate of 1.5% on average over the four-year period for HIV, 0.4% for cancers and 1.3% for CDL.

CONCLUSION
Screening rates are low within this health insured population. Screening have the potential to recognize diseases early, initiate early management and avert health care costs of treating far advanced and complicated diseases later. Those who fund health care (government, employers and health insurers) should thus strive to evaluate what population-based practices best increases the uptake of preventive screening.
L03 - Application of a European-based unintentional injuries educational programme: A South African case example

¹N Arendse, ¹S Bulbulia, ²A van Niekerk, ¹M Seedat
¹Institute for Social and Health Sciences, University of South Africa
²Safety and Peace Promotion Research Unit (SAPPRU), Medical Research Council-University of South Africa, Cape Town, South Africa

BACKGROUND
Unintentional injuries have been identified as a major health concern among adolescents. The one factor that can contribute significantly to their increased rates of injury is their risk taking behaviour. Evidence has shown that certain education based strategies in schools can promote safer behaviours, though it is unclear whether any changes are sustained. The current study formed part of a European-based educational programme that was implemented in a low-income African context to help improve adolescents’ attitudes and knowledge about injuries.

OBJECTIVE
To assess changes in grade eleven high school learners’ injury prevention knowledge and attitudes, after exposure to a comprehensive educational programme on the European Code Against Injuries (ECAI).

METHODS
A randomized pre-test and post-test design was used to evaluate the outcome of an injury prevention educational programme shown to grade eleven adolescents living in a low – income community in Cape Town, South Africa. There were 114 respondents who participated at in the control and experimental group. The instrument covered knowledge and attitudes associated with self-reported potentially harmful and protective behaviours with regards to injury. Both descriptive and bi-variate analyses were undertaken.

RESULTS
Adolescents that received the ECAI programme did show some improvements in knowledge when pre-and post-measures were compared, however, it was found not to be statistically significant.

CONCLUSION
These findings suggest that the multimedia approach did not significantly improve adolescents’ knowledge and attitudes about injuries. Future studies should consider a contextually congruent curriculum that examines injury prevention within low – income settings. Reinforcement of these injury prevention messages at regular intervals may contribute to a significant shift in learners’ knowledge and attitude about safety promotion.


¹O Ayo-Yusuf, ¹B Olutola
¹Department of Community Dentistry, University of Pretoria

BACKGROUND
Tobacco control policies in South Africa have shown some success, but little is known of their potential differential impact on various social groupings.

OBJECTIVE
This study therefore sought to examine smoking trends across various social groupings in South Africa during 2003-2011.

METHODS
This secondary data analysis involved three nationally representative samples of South African adults (aged ≥16 years) who participated in the 2003 (n=2,855), 2007 (N=2,907) and 2011 (N=3,003) annual South African Social Attitude Surveys. The datasets from the three surveys were then merged. These household surveys used an interviewer-administered questionnaire to collect data on participants’ socio-demographic characteristics. Main outcome measure: ‘current smokers’ defined as respondents who reported smoking everyday or some days. Data analysis included trend tests and Poisson’s regression.

RESULTS
Of the respondents, 20.5% (n=1965) were current smokers. During 2003 - 2011, the proportion of South Africans ≥ 16 years who were current smokers dropped from 21.4% in 2003 to 19.4% in 2011 (p<0.02 for trend). There was a significant decreasing trend in smoking among the unemployed (p<0.01), those without education (p<0.05) and men (p<0.05). No significant change in smoking prevalence was observed among women, but women who reported using snuff and smoking concurrently significantly increased (p<0.01). Compared to the blacks, those who self-identified as coloureds remained more likely to be current smokers (PR =2.68; 95% CI: 2.30-3.13).

CONCLUSION
This study’s findings suggest that current tobacco control policies have a greater impact on the poor, but less impact on South African women.
L05 - Context, culture and disability: A narrative inquiry into the life experiences of individuals affected by disability in a rural area

J Barratt, C Penn

Department of Speech Pathology and Audiology, School of Human and Community Development, University of the Witwatersrand,
Health Communications Project, University of the Witwatersrand

BACKGROUND
Despite the high prevalence of disability in South Africa, a paucity of knowledge exists regarding the lived experience of individuals affected by disability. Previous research has primarily depended on quantitative measures, or has relied on reports by family members and caregivers acting as proxies, thus perpetuating the notion of voicelessness and marginalisation amongst adults with disabilities.

OBJECTIVE
The project aimed to document the lived experience of 30 disabled adults living in 12 rural villages in Mpumalanga, South Africa.

METHODS
A qualitative design underpinned by the principles of narrative inquiry was employed. Data were analysed using a combination of Clandinin and Connelly’s (2000) Three Dimensional Narrative Inquiry Space and thematic analysis. Interpretation of experiences involved examining the relationship between personal and social perspectives, by scrutinizing the reflexive interplay between content of narratives and the way in which stories were told.

RESULTS
Results revealed that adults with disabilities experience structural, physical, emotional, sexual and financial abuse, affecting the development of strongly constituted identities, and threatening the ability to live up to gender and cultural expectations. Infiltrating the narratives was the ominous presence of death within the community. This combination of factors prevented participants from envisaging any form of individual or collective future.

CONCLUSION
Narrative inquiry proved to be a powerful tool for understanding the participants’ lifeworld and highlights how personal and social perspectives are mediated through context. This holds implications for service provision, policy evaluation and implementation and provides a new framework for understanding identity formation amongst persons with disabilities.

L06 - Assessing Glycemic Control at a Primary Health Care Level

C Barth, D Basu

Department of Community health, Charlotte Maxeke Johannesburg Academic Hospital and University of Witwatersrand

BACKGROUND
As many South African’s embrace an urbanized lifestyle, the incidence of diabetes mellitus is on the rise. Achieving good glycaemic control is the cornerstone of good clinical management and important in the prevention and development of complications.

OBJECTIVE
To assess the management of diabetes mellitus at a primary health care level and to identify the clinical and related system challenges associated with managing a chronic disease.

METHODS
The study was done in Sub-district F (Inner city) of the Johannesburg Metro District, looking at 16 primary health care facilities. Data collection included the use of a questionnaire, data from the DHIS, and the NHLS. The study looked at the clinical management of patients, investigations done at the facilities, availability of medication and equipment, data management, staffing (categories of staff and their clinical skills), community involvement and adherence to clinical guidelines. HbA1C results were presented here to describe glycaemic control of patients.

RESULTS
37,114 patients test results were analyzed over a one year period from April 2011 to March 2012. The majority are women (22,225, 60%) and remaining (14,547, 40%) male. The mean age was 54 Years + 14. The mean HbA1c was 8.1 + 2.8. 57% (21,013) had Hba1c above 7%.

CONCLUSION
The findings of the study, show that patients are not adequately achieving glycemic control, we further explore the determinants around this at a primary health care level and aim to introduce interventions based on these findings to improve clinical care and management.
L07 - Age of diagnosis of congenital hearing loss in universitas hospital

S Basson, E Britz, R De Wet, G Korsten, I Butler
University of the Free State

INTRODUCTION AND AIM
Congenital hearing loss is the most common birth defect with various causes, including genetic diseases, drugs during pregnancy, maternal infections and blood type incompatibility. There is a concern that South African children are diagnosed with this disability too late to successfully intervene, and this study aimed to investigate the age of diagnosis of congenital hearing loss in children under the age of 6 years in Universitas Hospital.

METHODS
In this retrospective descriptive study, information regarding the date of birth, date of first visit, date of diagnosis and type of intervention were recorded from patient files at the Ear, Nose and Throat clinic in Universitas Hospital. All of this was done electronically using Microsoft Excel spreadsheets.

RESULTS
The median age of diagnosis found in this population was 3.71 years of age, whereas the median age of first visit was recorded at 3.41 years of age. An average time delay between the first visit and the diagnosis was 3.6 months.

CONCLUSION
Due to the late age of first visit, the age of diagnosis and subsequent intervention is too late to successfully treat these children. A large deaf population puts a lot of strain on a community, and a screening program to detect hearing loss early may hold many advantages for the patient himself, as well as the community at large.

L08 - Tuberculosis, enemy at the workplace

L Bhebhe
University of the Free State

BACKGROUND
Nosocomial Tuberculosis (TB) has become a major occupational hazard for health care workers (HCWs). HCWs are inevitably exposed to TB, due to their constant interaction with patients with undiagnosed and potentially contagious TB. HCWs infection control implementation is critical whenever there is a possibility of exposure.

OBJECTIVE
Following a high incidence of TB among HCWs at Maluti Adventist Hospital in Lesotho, a study was carried out to assess the knowledge, attitudes and practices of HCWs on nosocomial TB infection and infection controls.

METHODS
This was a cross-sectional study done in June 2011 involving HCWs at Maluti Adventist Hospital, involved with patients and/or sputum. Stratified random sampling of 129 HCWs was performed and a self-administered, semi-structured questionnaire was administered.

RESULTS
Most respondents (89.2%) had appropriate knowledge on transmission, diagnosis and prevention of TB, however only 22% of the respondents knew the appropriate method of sputum collection. All the respondents (100%) were motivated and willing to implement infection control measures. A significant proportion of participants (36.4%) had poor infection control practices with the majority of inappropriate practices being the administrative infection controls (<20%). Only 38.8% of the participants reported to be using appropriate respirator N-95.

CONCLUSION
Poor infection control practices to occupational TB exposure were demonstrated, the worst being the first line administrative infection controls. Critical knowledge gaps were identified. However there was encouraging willingness by HCWs to adapt to recommended infection control measures.
L09 - Differential calculus: the impact of occupational, cultural and moral norms on altruism

1D Blaauw, 2M Lagarde
1Centre for Health Policy, University of the Witwatersrand
2Department of Global Health and Development, London School of Hygiene & Tropical Medicine

BACKGROUND
It is often assumed that health workers are more influenced by altruistic motives than other professional groups. Experimental economic methods have been used to investigate altruistic behaviour, but the majority of studies have been conducted with small groups of economic students from industrialised countries.

OBJECTIVE
The objective of this study was to use an experimental economic game to evaluate the altruism of nursing students in three different low- and middle-income countries.

METHODS
In this study, we played the dictator game with more than 1,200 nursing and economics students in Kenya, South Africa and Thailand. Participants played three consecutive games in which they were paired with a different recipient each time: a fellow student, a patient or a poor person. The same experimental procedures were followed in all study sites.

RESULTS
Controlling for important potential individual confounding factors, such as age and gender, we found significant differences in altruistic behaviours between subject pools, with nursing students being more altruistic than economics students, and systematic differences between countries. The generosity of both groups of students increased with the perceived deservingness of the recipient, but, unexpectedly, the sense of moral obligation varied across subject pools, with nursing students being less altruistic than economics students towards patients.

CONCLUSION
Health workers were significantly more altruistic than economic students but there were also important differences between the three countries. These results caution against generalising experimental economics results from standard subject pools and underline the importance of cultural and professional norms in shaping simple economic decisions.

L10 - Establishment of ‘district’ pharmacists in Cape Town

1H Bradley, 1U Lehmann, 2N Butler
1School of Public Health, 2School of Pharmacy, University of the Western Cape, Cape Town

Sub-structure pharmacists were appointed in 2009 when Cape Town was divided into four sub-structures as part of implementing the district health system. Each sub-structure is headed by a director and five deputy-directors, with one having responsibility for pharmaceutical services.

One and two years after they commenced work sub-structure pharmacists and their directors reflected on a list of roles and a competency framework in the light of their actual and envisaged work practices. The list of roles and competency framework had been developed as part of a participatory action research project conducted in Cape Town between 2008 and 2011. Four pharmacists and three directors were interviewed. The interviews were audio-taped, transcribed and analysed using thematic analysis.

Directors and pharmacists agreed that taking up sub-structure pharmacist positions had involved considerable adjustment. One of the most significant was working horizontally as a member of the sub-structure management team, as opposed to working vertically in pharmaceutical services. They agreed that moving into these new roles took time, with directors reporting that pharmacists had grown in capability over the two years and had taken leadership of some sub-structure activities, such as immunisation campaigns. All said the list of roles and competency framework developed was applicable to sub-structure pharmacists.

Factors that may have facilitated their successful transition into these positions included clear understanding of the district health model, good relationships in the sub-structure management teams which provided supportive environments for growth and the pharmacists’ prior experience of pharmaceutical services and familiarity with the health district. As the sub-structures have populations of up to 800,000 they may be considered similar to health districts, and sub-structure pharmacists as district pharmacists.
L11 - Infection control practices among health care workers in a public primary health care clinic in Tshwane

M Cajee, E Badenhorst, A Cassim, NRP Aretikos, MJ Matjila
School of Health Systems and Public Health, Faculty of Health Sciences, University of Pretoria

INTRODUCTION
Infection control can be defined as “policies and procedures used to minimize the risk of spreading infections, especially in hospitals and human health care facilities.” Blood borne pathogens pose an immense risk to health care workers when exposed to blood, particularly by means of sharps injuries.

OBJECTIVES
To determine the effectiveness of infection control practices by clinic health workers, to assess the knowledge and attitudes towards the practices of protocols on needle stick injury prevention, to determine the precautions and level of infection control practices put in place for clinic health workers at a primary health care clinic, to determine the incidence of sharps injuries at the clinic, to determine whether there are sufficient resources available for clinic health workers to carry out measures to prevent the spread of infection.

METHODS
The study setting was a district level clinic in the Mamelodi area. The study design was a cross-sectional descriptive observational study – by means of questionnaires and observation ‘checklists’. The study population were staff members & clinicians.

RESULTS
Even though the majority are educated in the practice of proper safety and hygiene, the minority sometimes do not practice these health care practices and could potentially put patients and themselves at risk. We found a 30% incidence of sharps injuries; of which 66% were confirmed needlestick injuries. This is greatly concerning because of the many potentially life threatening blood borne pathogens that can be transmitted.

CONCLUSION
This study shows health care workers the importance and need for improvement in their own as well as patient health. Furthermore, it is evident that infection control practices by healthcare workers should continue to focus on sharps injuries in order to prevent the spread of blood borne viruses.

L12 - Orientating foreign doctors to acclimatize to their new surroundings and offering them ongoing support

B Carpenter
Africa Health Placements

BACKGROUND
Recruiting foreign-qualified doctors without offering them the necessary support would be a futile exercise. Working in a rural healthcare facility could certainly be a stressful experience and foreign-qualified doctors need to be orientated and supported adequately if they are to make a valuable contribution to improving access to healthcare.

OBJECTIVE
Africa Health Placements (AHP) offers an orientation and ongoing support programme to foreign-qualified doctors. The programme aims to orientate foreign doctors and effectively integrate them into their team and community, and to provide ongoing support to doctors during their stay in South Africa.

METHODOLOGY
Figures from AHP’s monitoring and evaluation survey in 2011 proves the programme is assisting doctors in feeling more prepared when they arrive at their healthcare facility.

RESULTS
More than half of foreign doctors (55.6%) indicated that they felt more prepared when they arrived at their facility. Feedback received from doctors between July and December 2011 indicated that candidates found the material distributed as part of the programme very useful. More than 74% indicated that the information provided before arrival was helpful, while 88.9% said the satchel and medical books assisted them in their new post. More than 81% agreed that the AHP orientation officer was approachable and easily contactable.

CONCLUSION
The programme illustrated the importance of offering an orientation programme to ease the anxiety of foreign doctors who are coming to work in South Africa’s rural healthcare facilities. The importance of induction programmes at healthcare facilities has also been identified as a vital intervention.
**L13 - An audit of error associated with the initial management and referral of acute trauma patients in western Kwa-Zulu Natal**

**D Clarke, C Aldous, S Thomson**

Pietermaritzburg Metropolitan Complex Department of General Surgery University of Kwa-Zulu Natal Nelson Mandela School of Medicine

**INTRODUCTION**

In the event of sustaining major trauma patients in rural areas will be treated at a district hospital. This audit examines the incidence of error involved in trauma resuscitation in our rural referral hospitals.

**METHODOLOGY**

We have maintained a database of all trauma referrals from the periphery to our tertiary service in Pietermaritzburg. We have classified all inappropriate and problematic referrals according to four criteria: namely assessment problems, resuscitation problems, logistical problems and operative problems. Assessment problems are errors of planning. Resuscitation problems, operative problems and logistical problems are errors of execution.

**RESULTS**

Over the period July 2009 – June 2010 we received 756 trauma referrals from the periphery. There were 65 (9%) problematic referrals in this period. Of these problematic referrals there were 12 female patients one 9 month old child the rest were adult males. The average age 34 years. Blunt trauma was a problem in 40 patients. There were seven GSW victims, 17 stab victims one burn victim. There were 45 assessment problems, 9 resuscitation problems, 7 logistical problems, 6 operative problems. There were eleven (16%) deaths. Three patients required amputation because of failure to recognize a vascular injury. Renal failure developed in three patients due to inadequate resuscitation. Two patients were transferred with untreated pneumothorax. Both of these developed a tension pneumothorax and one died. Cervical spine injuries were not recognized in two patients. Delay in diagnosing peritonitis was a problem in 14 patients.

**CONCLUSION**

There are significant deficits in trauma care in our referring hospitals. These translate into significant morbidity and mortality. Inadequate assessment and understanding of the pathology being treated is a major problem. Planning errors are more common than execution errors. This has implications for how we teach trauma care in the periphery.

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**L14 - Clinical predictors for the need for relaparotomy in complicated appendicitis**

**D Clarke, B Buljic, V Kong, S Van der Linde, C Aldous**

Department of Surgery, Department of Community Medicine, Postgraduate Research Facilitator

Pietermaritzburg Metropolitan Hospitals Complex Nelson Mandela School of Medicine

University of KwaZulu Natal, South Africa

**INTRODUCTION**

Complicated appendicitis associated with severe intra-abdominal sepsis is common in the developing world. There is currently limited evidence in predicting which patient requires relaparotomy for control of on-going sepsis in the setting of complicated appendicitis. This prospective study aimed to construct a clinical prediction model to aid the decision making process.

**METHODOLOGY**

A prospective database was maintained and all cases of acute appendicitis from Sep 2010 to Mar 2012 were reviewed. ‘Simple’ was defined as any non perforated appendix, while ‘complicated’ denotes perforation, with associated intra-abdominal contamination. Logistic regression analysis was carried out and a clinical predictive model was constructed using clinical parameters available (basic demographics, clinical presentation, laboratory results and operative findings).

**RESULTS**

A total of 300 cases were reviewed, of which 120 required relaparotomy, while the remaining 170 did not. Both samples were statistically comparable for the purpose of analysis. The most significant factors predictive of the need for relaparotomy were: female gender and intra-operative finding of four quadrant sepsis. The overall predictive success was 90.7% (sensitivity: 82.5% and specificity: 96.1%). The ROC curve indicates an AUC of 0.949 (CI 95%: 0.923 – 0.975) with p-value < 0.001.

**CONCLUSIONS**

Patients with complicated appendicitis often require relaparotomy for control of on-going sepsis, but delay in decision making is common due to its uncertain clinical course. Our proposed model may be useful in selecting those at high risk of which a mandatory relaparotomy is absolutely essential as a part of the definite management.
L15 - Going rural: Lessons learnt from the first year of implementation of the rural clinical school, FHS, SU

H Conradie, S van Schalkwyk, J Bezuidenhout, B van Heerden, M de Villiers, T Fish
1 Ukwanda RCS, 2 CHSE, 3 Deputy Dean

BACKGROUND
The Faculty of Medicine and Health Sciences (FMHS) of Stellenbosch University initiated a rural clinical school (RCS) in the Worcester Geographical Service Area in 2011. Selected medical students in the final year spend the whole year in the RCS. Two educational modules were followed. Six students at Worcester regional hospital followed a more traditional model of rotations through specialist disciplines but with added exposure in primary care. Two students followed a more innovative educational model where they spend the whole year at a district hospital under the supervision of a family physician. This allows for a longitudinal integrated clerkship with continuity over one year with patients, the health care team and the community.

OBJECTIVES
This study investigated to what extent the first year of implementation of the RCS had been successful in providing students with a meaningful learning opportunity in a rural context.

METHODS
A qualitative methodology was used. Semi-structured interviews with students and preceptors at the rural sites were recorded and analyzed through thematic content analysis.

RESULTS
The following themes emerged from the data: the learning experience, the curriculum, the clinical experience, assessment, community based learning, professional gain, personal growth, the integrated longitudinal model. These themes will be discussed as they relate to the students and preceptors.

CONCLUSION
Lessons learnt and recommendations for future implementation will be discussed

L16 - Students experience of a rural clinical school at the Faculty of Medicine and Health Sciences, Stellenbosch University

H Conradie and Students
Ukwanda Rural Clinical School

The Faculty of Medicine and Health Sciences (FMHS) of Stellenbosch University initiated a rural clinical school (RCS) in the Worcester Geographical Service Area in the Western Cape in 2011. Medical students in the final year spend the whole year in the RCS. Two educational modules are being followed. Students at Worcester regional hospital follow a more traditional model of rotations through specialist disciplines but with added exposure in primary care. Students allocated to district hospitals follow a more innovative educational model where they spend the whole year at a district hospital under the supervision of a family physician. This allows for a longitudinal integrated clerkship with continuity over one year with patients, the health care team and the community.

The students from Worcester Regional Hospital as well as students form Robertson and Swellendam District Hospitals will describe their experience in the RCS with particular emphasis on teaching and learning, practical clinical exposure, community based learning and assessment both formative and summative. Students in the two different models will compare and reflect on their respective learning experiences.
L17 - Association between gender and HIV risk perception among young STD patients in Site B youth clinic, Khayelitsha, in Cape Town

S Dekeda
University of Stellenbosch

We investigated association between gender and HIV risk perception among young STD patients in Site B youth clinic, Khayelitsha. We used data collected from a randomized controlled trial conducted in this clinic. The final sample comprised of 1729 participants (819 males and 910 females). In the univariate analysis, males were almost three times more likely than females to perceive themselves at HIV risk (OR=2.66, 95% CI: 2.17 to 3.25, p=0.001). In the multivariate analysis, only gender and age were significantly associated with HIV risk perception (p=0.001, and p=0.010, respectively), assuming that all other factors were kept constant (OR=2.32, 95% CI: 1.84 to 2.90, and OR=1.07, CI: 1.02 to 1.13, respectively). We expected females to have high HIV risk perceptions compared to males as they have a considerably higher HIV prevalence. Further research is needed, but this result needs to be born in mind when planning interventions for young women.

L18 - The integration of mental health care services into primary health care system at King Sabata Dalindyebo municipality

N Dlatu, B Longo-Mbenza, I Malema
Walter Sisulu University, Department of Community Medicine, Mthatha, South Africa

BACKGROUND
Primary Health care refers to care which is based on the needs of population. There is no research in King Sabata Dalindyebo, carried out on issues around integration of mental health with primary health care.

OBJECTIVE
The aim of the study was to investigate the level of knowledge, implementation and barriers of integrating mental health care services into primary health care system.

METHODS
This descriptive cross-sectional study was conducted at King Sabata Dalindyebo Clinics, between January 2010 and December 2011. A 10% random sample of all health professionals was interviewed concerning their demographic characteristics, education/qualifications, general and further training in psychiatry, awareness about Mental Health Care Act 17 of 2002 and mental health care services characteristics.

RESULTS
A total of 52 health professionals (40.4% males, 59.6 females, 59.6 married, 3 doctors, 49 nurses, mean age 36.9± 8 years range 23 years-52 years), were surveyed. The participants were characterized by low level of qualification in specialization, further training in psychiatry, and by very low awareness about Mental Health Care Act 17 of 2002. Furthermore, there was no implication of experts. Working in remote and disadvantaged area, health workers with lower education qualification, absence of co-ordinator for mental health care services and absence of workshop on Mental Health Care Act 17 of 2002 were determinants of lower awareness about Mental Health Care Act.

CONCLUSION
There is a lack of improving human capacity for mental health in terms of continuous training in mental health issues, policies, organization and development.
L19 - Effect of the ‘Good Start’ home based HIV counselling and testing intervention in rural South Africa: A cluster randomised trial

¹ T Doherty, ¹ H Tabana, ² R Naik, ³ W Zembe, ⁴ D Jackson, ⁵ C Lombard, ⁶ S Swanevelder

¹ Health Systems Research Unit, Medical Research Council, ² School of Public Health, University of the Western Cape, ³ Biostatistics Unit, Medical Research Council, ⁴ Division of Global Health (HCAR), Karolinska Institutet, ⁵ School of Public Health, Boston University

BACKGROUND
HIV counselling and testing (HCT) is critical for addressing HIV prevention and treatment targets. Since HIV testing rates are low, there is growing interest in expanding testing coverage through models such as home-based HIV counselling and testing (HBHCT).

OBJECTIVE
We assessed the effect of home based offer of HIV testing on HIV testing rates in a rural sub district in KwaZulu-Natal.

METHODS
In this cluster randomised trial, 16 communities in the uMzimkhulu sub district were randomised to either HBHCT or standard of care. In the intervention arm lay counsellors conducted home visits and offered HBHCT to all consenting adults and children 14-17 years with parental/guardian consent. A baseline household survey was undertaken between September and November 2008. The survey was repeated 2 years after implementation where data on study outcomes were collected.

RESULTS
The proportion of individuals who had tested for HIV increased by almost three fold (OR 2.71, 95% CI 1.95 – 3.77) post intervention with a larger effect amongst women (OR 3.24, 95% CI 2.27 – 4.61). Increases were also noted in couple counselling and testing (OR 3.89, 95% CI 1.83 – 8.32). The intervention had broader effects with a 55% reduction in multiple sexual partners (OR 0.45, 95% CI 0.24 – 0.87) and a 48% reduction in casual partners (OR 0.52, 95% CI 0.26 – 1.02).

CONCLUSION
HBHCT can increase uptake of HIV testing in rural high HIV prevalence settings with benefits including increased couple counselling and reduced sexual risk behaviour. This strategy should be considered in order to reach HIV treatment and prevention targets.

L20 - Rapid Assessment Response (RAR) Study: drug use and health risk: Emthonjeni Correctional Centre, Pretoria, South Africa. Towards policy advocacy and advancement within the prison sector

M dos Santos
Foundation for Professional Development

BACKGROUND
According to UNAIDS, prison populations are one of the populations most at risk of contracting HIV infection for many reasons such as unprotected sex, violence, rape, and tattooing with contaminated equipment. At the International AIDS Conference in Vienna in July 2010, UNAIDS stressed that overcrowded prisons are breeding grounds for AIDS. Specific data on drug users in prison is not available for the majority of countries, including South Africa. This study aimed to identify the attitudes and knowledge of key informant (KI) inmates and prison staff regarding drug use, and the mapping of drug use and HIV-related problems, so as to facilitate the long-term planning of activities in the field of drug-use prevention in prisons, including suggestions for the development of comprehensive health promotion programmes.

METHOD
A Rapid Assessment Response (RAR) methodology was adopted for the study, which included observation, mapping of service providers (SP), key informant (KI) interviews (staff and inmates) and focus groups (FGs). The assessment tool is based on the Rapid Assessment and Response Guide on Injecting Drug Use (IDU-RAR). The study was implemented in Emthonjeni Correctional Centre, Baviaanspoort Prison, Pretoria, South Africa. Fifteen KI staff participants were interviewed and 45 KI inmates.

RESULTS
Substance use is fairly prevalent in the prison, with tobacco most commonly smoked, as well as followed by cannabis and heroin. The banning of tobacco has also led to black-market features such as transactional sex, violence, gangsterism and smuggling in order to obtain mainly tobacco products, as well as other illicit substances.

CONCLUSION
HIV-related health-risk reduction within the prison sector needs to focus on measures such as improvement of staff capacity and security measures, deregulation of tobacco products, and the development and implementation of comprehensive health promotion programmes.

L du Toit, I Couper, A Gibbs, A Dreyer, P Mnqapu

The Wits Faculty of Health Sciences commenced offering the new degree, Bachelor of Clinical Medical Practice (BCMP), in January 2009 with an annual intake of students. This is a three year programme leading to a qualification as a Clinical Associate. The first cohort of graduating WITS Clinical Associates started working in District health care teams in 2012. The Clinical Associate is registered with the Medical and Dental Professions Board of the Health Professions Council of South Africa. The BCMP programme is offered in collaboration with the National, North West and Gauteng Departments of Health. The Clinical Associate works under supervision of the doctor, not replacing the doctor but working in the team of clinicians in district hospitals. As this is a new category of health care worker in the District team, various issues relating to their actual work in individual contexts and their experiences of the health system are still unclear. It is furthermore important to be conscious of expectations from other professionals of this new cadre. There is scope to further define how the Clinical Associate can and should function as part of the Primary Health Care team. A short survey was conducted among the 25 practising WITS Clinical Associates, currently working in Gauteng and North West to gather information on the evolving definition of the role in practice. Challenges associated with working in the District health system were also highlighted.

L22 - The role of family physicians in districts: What is best practice?

L du Toit, A Gibbs, I Couper, J Hugo, S Smith
Centre for Rural Health, University of the Witwatersrand

The classification of Family Medicine as a medical specialty in South Africa in 2007 required that postgraduate training in this discipline change from part-time, distance training into full-time registrar training, leading to the completion of a full-time, accredited postgraduate training programme in MMed (Fam Med). An important outcome of training in this specialist field is the ability of medical generalists to function independently at the district healthcare level.

In the discussion around district and primary healthcare in Africa, South Africa is taking the lead in the development of principles to guide the work of family medicine specialists at district level. The focus on primary healthcare remains of critical importance, as international research has suggested that health systems focusing on primary care provided by highly trained generalist specialists practicing within communities are more effective clinically and in terms of cost than systems that do not focus on primary care.

This study gathered qualitative data on the variations in the experiences of district-based family physicians. In many instances, there is no clear definition of what the role(s) of the family physician are, or should be. The various examples of practice (with differences in functions) between provinces and districts indicate that there is no standard role for this health care practitioner. This provides an opportunity to better understand the different roles family physicians in South Africa’s district health system fill, and could potentially fill, with an eye toward assisting in the development of initial guidelines in this regard.
L23 - Treatment uptake among newly diagnosed multi-drug resistant tuberculosis cases in city of Johannesburg, Gauteng province, 2011

South African Field Epidemiology and Laboratory Training Programme, Centre for Tuberculosis, NICD, NHLS, School of Health Systems and Public Health, University of Pretoria

BACKGROUND
South Africa has the largest burden of multi-drug resistant tuberculosis (MDR-TB) in Africa. Early laboratory diagnosis, prompt treatment initiation and good adherence to treatment are important for successful treatment outcomes of TB and prevention of MDR-TB.

OBJECTIVE
The study aims to determine treatment uptake among newly diagnosed MDR-TB cases and risk markers for those who did not initiate treatment.

METHODS
A cross-sectional study at Sizwe hospital and City of Johannesburg district in Gauteng province, South Africa was conducted. A line list of newly diagnosed MDR-TB patients, in 2011, was obtained from NHLS corporate data warehouse. Their socio-demographic and clinical characteristics were collected and used for analysis.

RESULTS
Preliminary results show that of the 419 newly diagnosed MDR-TB cases, 50.8% were males, median age of 34 years but majority were in the 25-44 years age category and residing in townships. A total of 262 (62.5%) initiated treatment at a median of 11 days after date of MDR-TB diagnosis, 83.6% had history of previous TB treatment and 75.1% (196/261) were HIV positive. Twenty six (9.9%) of the MDR-TB cases who initiated treatment did not maintain treatment up to the fourth month of treatment as 80.8% (21/26) died at a median of 31 days after treatment initiation. Among those who did not initiate treatment (157/419), 52.9% died at a median time interval from MDR diagnosis of 22 days.

CONCLUSION
Treatment uptake of 63% among the MDR-TB cases is not optimal. Patients dying before treatment initiation accounted mostly for non-initiation of treatment.

L24 - Protecting the health of health care workers at one tertiary and two regional hospitals in the Free State Province

Centre for Health Systems Research & Development, University of the Free State, Global Health Research Programme, School of Population and Public Health, University of British Columbia, Provincial Occupational Health Unit, Free State Department of Health

BACKGROUND
In recognition of the pivotal role of healthcare workers in preventing illness and caring for the ill, international efforts are underway to improve access of healthcare workers to HIV prevention, treatment and care. Moreover, HIV-infected healthcare workers are at higher risk of morbidity due to occupational exposure to TB and other pathogens. Furthermore, the crisis in health human resources merits prioritising healthcare workers.

OBJECTIVES
The study sought to identify the practices that health care workers follow to protect themselves from occupational exposure to infections.

METHODS
A cross-sectional survey was undertaken among a 20% sample of workers at one tertiary and two regional hospitals in the Free State: 437 nurses/doctors (45.2%), 278 support staff (28.7%), 179 administrative staff (18.5%), and 73 allied health professionals (7.5%). Self-administered questionnaires (in English and SeSotho), were completed by the majority of respondents, with interviews conducted with less literate support staff. Univariate and bivariate analysis was performed using SPSS.

RESULTS
Almost 40% of nurses/doctor stated that they always recapped needles (a hazardous procedure) and almost 20% reported not always washing their hands between patients. Most (64.4%) staff had never been screened for TB at work including 67.2% of the doctors/nurses; 53.5% of all staff and 32.7% of doctors/nurses reported not receiving training in TB infection control; and most doctors/nurses (73.5 %) did not wear N95 respirators to protect themselves. Most staff wanted more training in health and safety issues.

CONCLUSION
Professional health care workers are not adequately protecting themselves against occupationally acquired infections.
L25 - Airborne microbial burden and risk of respiratory infections among children under-five in Ibadan, Nigeria

1,2 G Ana, 2 G Fakunle

1Coordinator, Climate and Society Programme (CSP), CESDEV, University of Ibadan, Ibadan, Nigeria, 2Department of Environmental Health Sciences, Faculty of Public Health, University of Ibadan, Ibadan, Nigeria

BACKGROUND
Acute Respiratory Infections (ARIs) is the fourth major cause of morbidity and mortality among under-five children (U-5C) globally. However, possible microbial burden that could contribute to these infections particularly in the indoor environments have not been extensively studied in Nigeria.

OBJECTIVE
This study was therefore designed to determine the burden of airborne microorganisms in the indoor environment that predisposes under-five children in Ibadan to ARIs.

METHOD
A prospective hospital-based case-control design was employed for this study. Children with ARI (cases) and without ARI (controls) were recruited consecutively from Oni-Memorial Children Hospital and University College Hospital, Ibadan. Residential indoor airborne bacterial and fungi samples were collected using a non-volumetric method and the total number of counts per cubic metre was determined and compared with the American Industrial Hygiene Association (AIHA) guideline. Data were analyzed using descriptive statistics, t-test and spearman's rank correlation at p=0.05.

RESULT
Mean indoor total bacterial count for cases (9.6x10² cfu/m³) was significantly higher than the limit proposed by the AIHA (≤500 cfu/m³) as compared to controls (≤3.5x10² cfu/m³). Mean indoor temperature and RH was significantly higher among cases (33.7 ± 1.6ºC and 66.3 ± 5.6%) than controls (31.6 ± 1.8ºC and 61.9 ± 6.3%). There was a positive correlation between the indoor RH and indoor (TBC) (p<0.05).

CONCLUSION
Higher proportion of houses among cases than controls had elevated indoor airborne bacteria burden. Educating mothers of under-five children on improve ventilation and good housing practices in order to reduce indoor microbial load is therefore advocated.

L26 - From policy to implementation: The importance of leadership in implementing institutional reforms in rural medical education

T Fish, K Moodley

Stellenbosch University Faculty of Medicine and Health Sciences

BACKGROUND
There is global consensus that health sciences faculties have a social responsibility to address the health inequities in society. This requires, decentralising health sciences education systems to facilitate the re-distribution of the health workforce to rural areas. To achieve such reforms the leadership at Stellenbosch University, committed to actualising their vision of creating and sustaining an environment within which knowledge can be applied to the benefit of the community.

OBJECTIVES
To identify factors necessary for implementing successful rural health sciences education programmes that nurture and sustain interest in rural practice, provide early and frequent exposure to rural practice settings increase admission of students from rural backgrounds and capacitate rural clinicians as perceptors.

METHODS
The successful implementation of the rural clinical school involved a series of fundamental steps. A strategic decision in 2002 was taken by faculty leaders to establish a Rural Health Centre, within the management structures at SU supported by the Department of Health. This commitment to rural health served to elevate its position and further its development and growth. Strategic decisions were made to direct considerable resources into the programme including the Clinical Training Grant and strategic university funds for the development of a Rural Clinical School (RCS).

RESULTS
The institutional commitment, vision and investment in the RCS has supported a decentralised education track. This resulted in rural service-learning opportunities, constructive community partnerships and interaction, including excellent interaction with the DOH.

CONCLUSION
Transformational and supportive leadership generates successful rural medical education models that can be scaled up over time.
L27 - Strengthening leadership and governance for primary health care through collaborative research: the approach of the DIAHLS project

S Elloker, P Ockers, L Gilson, U Lehmann

City of Cape Town, Provincial Government of the Western Cape and the Schools of Public Health, Universities of Cape Town, Western Cape

Planning and management are commonly investigated in organisational and policy research outside the health sector. Yet despite being critical elements of health leadership and governance, these topics are not widely considered in South African public health research. In seeking to strengthen sub-district planning and management to support PHC improvement, the DIAHLS project has adopted an action learning approach. Working through cycles of collaborative action and reflection in Mitchell’s Plain sub-district of Cape Town, specific areas of activity are negotiated and agreed with local health managers. All are then implemented either by health managers, with support from the research team, or by researchers, through engagement with managers. Full documentation of activities, their evolution and rationale is part of this process, together with collaborative reflection on lessons learnt.

This paper will provide an overview of the first phase of our work. It will identify critical contextual and governance features of Mitchell’s Plain, outline the rationale for the overall research approach and identify, explain the project’s activities. These activities include: an initial appraisal of planning and management processes and structures; several interventions to strengthen planning and management (supporting reflective practice by local health managers, and a community health profiling initiative led by local area teams); and reflective inquiry with PHC facility managers into their roles, challenges and options for supporting their management. The paper will, finally, conclude with initial reflections on what is being learnt about strengthening planning and management and about this approach to health systems research.

L28 - The Broader Impact of Policy Change: Antiretroviral Treatment Expansion in eThekwini

T Govender

Maternal Adolescent and Child Health Unit

BACKGROUND

Decentralising care to primary health care (PHC) clinics and capacitating nurses through NIMART to provide antiretroviral treatment (ART) has resulted in more patients accessing care. This was further facilitated by the synergistic policy change in the eligibility criteria from a CD4 count of 200 to 350. Whilst absolute numbers may increase; the impact of the public sector ART program on survival and health seeking behaviour must be evaluated. MATCH, a PEPFAR funded NGO, has incrementally supported the government ART program in eThekwini district since 2004 through a comprehensive support package of resources to 8 hospitals, 3 community health centres (CHCs) and 34 PHC clinics.

METHODS

The number of adult patients (> 15 years) initiated on ART at supported sites (2004 to 2011) was entered into the UNAIDS Estimates and Projection Package (EPP) program and the results entered into the SPECTRUM package to assess the cumulative effect of patients on treatment expressed as the number of life years gained. The data was further analysed by gender and designated level of care determined by the health care facility.

RESULTS

The number of adult patients ‘ever on treatment’ including the annual increment was plotted with the timeline of policy changes. From 2004 to 2011, 71,951 patients were initiated on ART 85% of which remain in the program, 8% were lost to follow-up, 2% died, 4% transferred out and 1% stopped treatment. Decentralising care to PHC resulted in a marked increase in patients entering the ART programme. Fewer men than women accessed the ART program (1:3). The SPECTRUM package estimated 19,500 life years were gained of which 13,184 were accrued by women and 6,316 by men. Fewer adult males accessed ART at hospitals (1:3) than at CHCs (1:2).

CONCLUSION

PEPFAR partner support (additional resources, task shifting etc.) of SA public sector HIV related programmes resulted in improved treatment access and minimal lag time for implementation of ART policy and revisions thereto in eThekwini district. In addition, decentralisation to resulted in a change in health seeking behaviour with proportionally more men accessing care at clinics in comparison to hospitals. An economic evaluation of the program has the potential to further demonstrate the qualitative benefits to family life and social cohesion by computing QALYs, given the evolving gender profile and the accrued benefits over time.
L29 - Comparison of the Analytic Performance of the Hemocue Hemoglobinometer and Laboratory Analyzer for Venous Blood in Children under Field Work Conditions

T Gwetu, M Chhagan
University of KwaZulu-Natal, Durban

BACKGROUND
The HemoCue is routinely used to manage patients, but few studies have evaluated its accuracy in the South African paediatric population. This study compared the performance of the HemoCue with the laboratory haemoglobin analyzer under field work conditions with indigenous schoolchildren.

OBJECTIVE
To assess the validity of the HemoCue in relation to the laboratory gold standard test.

MATERIALS AND METHODS
A cross-sectional study of indigenous children aged 6–9 years from a rural community located in an isolated mountainous rural area in KwaZulu-Natal. Venous bloods for the reference laboratory standard and HemoCue tests were collected at the same time. The HemoCue test results were interpreted without knowledge of the results of the reference standard or clinical examination.

RESULTS
The study was carried out over a period of four months in 2012 and enrolled 184 participants. Mean Hb using the Hemocue was 11.70 g/dl and 12.19 g/dl for the laboratory reference method. The mean difference between HemoCue and hemoglobin (bias) was -0.49 g/dl and standard deviation (precision) 0.75 g/dl (95% CI -0.60 to -0.38). Discrepancies between HemoCue and laboratory hemoglobin were greater than 1 g/dl in 15.2% of cases. Bias was increased in non-anaemic participants with increasing haemoglobin values. The accuracy of the HemoCue was not affected by the presence of anaemia.

CONCLUSIONS
We demonstrated a low bias between HemoCue and laboratory haemoglobin determination. Large HemoCue vs. laboratory hemoglobin differences may however still occur. We therefore recommend that therapeutic decisions based upon HemoCue alone should be very cautious.

L30 - Sign (SASL) language interpreting services working to advance the right of access to health care

M Heap, H Haricharan, A Cassidy, L London

Up to 80% of consultations occur across language barriers, with sometimes severe consequences for health. Yet South Africa still has no professional interpreter posts in health care. It is estimated that there are between 500-1.5 million Deaf persons in South Africa, yet only a limited number of South African Sign Language (SASL) interpreters accredited in SA and none working in health care. Between 2008 and 2011, a project piloted the first ever professional SASL interpreter service in health, Cape Town to assess how these services address language barriers and advance the right of access to health care, as contained in South Africa’s Constitution? The project, using qualitative and quantitative methods, documented uptake of the service; interviewed patients and health care providers on their experiences with and without the services of a professional interpreter; accompanied patients on health care visits and followed up case studies.

Provisional analysis of 357 requests made in a 3-year period captured use of interpreter services in 73% of cases, using only part-time professionals. Analysis describes the type of services sought and facility visited, gender of respondent and geographical location. It also identifies limitations of the pilot service. We describe strategies to address the limitations of the pilot service, including piloting a two-year SASL medical interpreter training.

General Comment 14, the authoritative UN interpretation of the right to health, provides the framework to assess ‘accessibility’. As such these interpreter services can be said to advance access for (1) a vulnerable group, (2) informational access and (3) acceptability to staff and patients.
L31 - Knowing the Law: Using the law!

M Heywood
Section27

South Africa has one of the best legal frameworks for the realisation of the right to health of any country in the world. Section 27 of the Constitution combined with the National Health Act, and a range of other laws and legally binding policies, mean that the rights of both patients and health providers should be protected.

South Africa should be moving progressively forward in terms of the accessibility, availability and quality of health services. However, many feel that the opposite is in fact the case. The problem is that more often than not health providers do not know the law or are reluctant to invoke it against their employers in the Health Department. The same is true of patients and communities. The result is that there is little accountability or organised pressure from below.

This session aims to remedy this. It sets out:
• key pillars of the law governing health services
• important principles that have been established through jurisprudence (cases)
• steps and strategies that rural health practitioners could (and should) take to address health needs in rural communities

L32 - We could not reach you in 1995, do we reach you now?

1 S Homer, 2 P de Witt
1 Freelance: contracted to Department of Occupational Therapy, University of the Witwatersrand, and to Wits Reproductive Health & HIV Institute (WRHI),
2 Head, Department of Occupational Therapy, University of the Witwatersrand

BACKGROUND
In 1995 we promised the National Health Act, changes in university curricula, and employment of mid-level rehabilitation workers would create an equitable, accessible rehabilitation service.

OBJECTIVE
To assess access to rural and urban rehabilitation services.
To determine gaps in policy to be addressed to ensure PWD are included in the drive for “A long and Healthy Lifestyle”

METHODS

RESULTS
Data for 1994/1995, and 2010/2011 will be compared:
No. of therapists for the general population, and for the population of PWD (National and Provincial breakdown).
Therapists in private practice versus the Department of Health.
Therapists remaining in rural sites after community service.
Undergraduate time spent in rural versus urban areas, and community versus hospital sites.

DISCUSSION WILL COVER
Gains made in service provision.
Whether services are equitable and accessible for people in rural areas.
Policy gaps.
Current opportunities to influence policy and improve services.

CONCLUSION
Whilst there have been great strides forwards, rural rehabilitation services remain inequitable and depend on a few therapists passionate about good service.
L33 - A randomised controlled trial on effectiveness of an integrated, community-based package for maternal, newborn, child and PMTCT care in Kwa-Zulu Natal

O Jackson, M Tomlinson, T Doherty, J Lawn, D Robbins, Y Singh, D Sanders, A Goga, C Lombard, P Persson, T Ndaba, G Stenro, M Cokin, M Chopra

1Department of Psychology, Stellenbosch University, South Africa, 2Health Systems Research Unit, Medical Research Council, South Africa 3School of Public Health, University of the Western Cape, Bellville, 4Saving Newborn Lives, Save the Children, Cape Town 5Department of Paediatrics and Child Health, Kalafong Hospital, South Africa, 6Biostatistics Unit, Medical Research Council, South Africa 7International Maternal and Child Health (IMCH), Department of Women’s and Children’s Health Akademiska Sjukhuset, Uppsala, Sweden 8Saving Newborn Lives, Save the Children, Washington, 9Maromi Health Research, Durban, South Africa, 10Chief of Health, UNICEF, New York

BACKGROUND
Progress towards MDG4 in South Africa will depend on scaling-up effective prevention against mother-to-child transmission (PMTCT) of HIV and addressing neonatal mortality.

OBJECTIVE
Develop and evaluate an integrated home-visit package delivered by trained community health workers (CHWs) targeting pregnant and postnatal women and their newborns to provide essential maternal/newborn care and promote PMTCT services.

METHODS
A cluster randomised controlled trial conducted in Umlazi, Durban, KwaZulu Natal. A baseline survey established homogeneity of potential clusters and stratification so stratification was not required for randomization. Sample size was based on increasing HIV-free survival from 74% to 84%, and calculated to be 30 clusters (15 per randomized arm) with 120 pregnant women recruited per cluster. CHWs delivered two home-based antenatal visits, a postnatal visit within 48 hours of birth, and a further four visits during the first two months of the infant’s life. Interviews and infant HIV DNA PCR testing were conducted by data collectors blind to treatment status at 12 weeks post-delivery. Primary outcomes include: HIV-free survival, levels of exclusive and appropriate infant feeding, anthropometry, coverage of care and behavioural indicators.

RESULTS
A significant effect was seen on exclusive breastfeeding (RR 1.92, 95% CI 1.59 – 2.33), weight-for-age (+0.9 z-score, p=0.04), and length-for-age (+0.11 z-score, p=0.006). Improvements in coverage of care indicators, such as delivery preparations (RR 1.14, 95% CI 1.07 – 1.21), were also seen, but no difference in HIV-free survival was observed.

CONCLUSION
The study suggests this package of services was effective for some indicators and could be implemented at scale.


J Jakavula
University of Pretoria

INTRODUCTION
A ban in public smoking was introduced in 2001. However, only limited information is available on the effectiveness of this policy.

OBJECTIVE
This study therefore sought to determine the trends and correlates of exposure to second-hand smoke among South African non-smoking adolescents.

METHODS
This secondary data analysis used three nationally representative samples of grades 8-11 learners who participated in the 1999, 2002 and 2008 Global Youth Tobacco Surveys. The three datasets were merged to explore trends. Data collected included participants’ demographic characteristics and tobacco use behaviour and attitudes. Main outcome measure: ‘Regular exposure to second-hand smoke (SHS)’, defined as reporting exposure to SHS at home and/or other places everyday over a seven day period. Data analysis restricted to non-smokers (n=14,690), included trend tests and Poisson’s regression.

RESULTS
Of the non-smoking adolescents, 16.1% (n=2,525) reported regular exposure to SHS either at home alone (5.3%) and/or in public places (10.8%). On aggregate, there was a significant reduction in exposure of children to SHS between 1999 and 2008, particularly female adolescents (p<0.05). Those who have more close friends smoking (Prevalence Ratio [PR] = 1.61; 95%CI: 1.43-1.81) and those whose parents smoke (PR=2.83; 95%CI: 2.51-3.20) were more likely to report regular exposure to SHS. The decline in children’s exposure to SHS was completely mediated by an associated decline in proportion of children reporting smoking parents and friends.

CONCLUSION
This study’s findings suggest that the current ban in public smoking has had a positive effect on protecting South African children from exposure to SHS.
L35 - Self Reported ART adherence rating as a tool to estimate and improve adherence to ART

S Johnson
Foundation Professional Development

BACKGROUND
Currently there is no non-clinical “gold standard” to estimate adherence in low resource settings. Rapid ART program scale-up in South Africa requires valid and reliable tools with which to estimate patient adherence. The aim of the study was to find a better way to estimate and improve adherence to ART.

METHODS
The study (2010/2011) was a randomized intervention study following treatment-naïve HIV-infected individuals for the first six months on ART. Lay counsellors implemented the intervention — repeated measurements of self-reported ART adherence ratings (SRAAR) based on four-day recall — through on-going counselling sessions. SRAAR and standard of care (SOC) pill counts were tested for association with virological outcomes.

RESULTS
259 study participants (response rate of 97%) participated in the study at two in Tshwane, Gauteng. At six months, 86% were still active on ART, 92% had a suppressed viral load and 70% had a CD4 count greater than 200. Less than 1% reported a missed dose based on four-day recall, although 47% reported “reasons” for missed doses on the same measurement form. SOC pill count identified 18% as non-adherent. Neither SRAAR, nor SOC pill count was significantly associated with virological treatment outcomes and no significant differences between randomization groups were observed (p=0.6544).

DISCUSSION
In this study setting, neither SRAAR, nor SOC pill count appears to provide a valid or reliable estimate of adherence as measured by viral load.

L36 - HIV Self Efficacy scores as a tool to estimate and improve adherence to ART

S Johnson
Foundation Professional Development

BACKGROUND
Although there is no non-clinical “gold standard”, HIV self-efficacy (HSE) — a measure of confidence in ability to adhere to ART — is cited as a significant predictor of adherence. The aim of the study was to find a better way to estimate and improve adherence to ART in low resource settings

METHODS
The study (2010/2011) was an intervention study following treatment-naive HIV-infected individuals for first the six months on ART. Counsellors implemented the 21-item HSE scale at baseline and 6-months; HSE scores were calculated using log odds ratios and were tested for association with virological outcomes.

RESULTS
Of 259 study participants, 100% and 45% completed HSE at baseline and six-months. After six-months, 86% were active, 92% had suppressed VL and 70% had CD4 count >200. Median HSE increased from 81.6% to 90.8% (p<0.0001). Lowest HSE item scores related to disclosure, CD4 decreases, and barriers of access to clinic appointments. Baseline HSE had no association with outcomes (p=0.6529, p=0.9827), however 6-month HSE was associated with both CD4 and VL (p=0.0552 and p=0.0389).

DISCUSSION
Initial lower levels of HSE may have triggered self-reflection and/or prompted focussed counselling intervention and thereby influenced treatment plans and adherence behaviours. This is supported by the overall improvement in HSE, as well as the good treatment outcomes. In this study setting, significant associations between 6-month, but not baseline, HSE scores and virological treatment outcomes recommend further investigation of the role of HSE assessments as a tool for adherence in the public sector ART clinic setting.
L37 - Psychosocial distress during medical internship in a South African rural hospital

M Kanda
Polokwane-Mankweng Hospital Complex

Stress and burnout both in medical practice and during medical internship are major issues of concern among health professionals. This paper with an anthropological perspective aims to propose that the sociocultural factors and context which influence the experience of medical internship are also etiological factors contributing to the psychosocial distress experienced by the interns in a South African rural hospital.

In this ethnographic study, the main data-collection methods were participant observation, in-depth-interviewing and informal and unstructured interviews. Fifteen medical interns present in a rural hospital during the period of the research were observed and interviewed. Ten of these fifteen medical interns participated in the in-depth-interviews at different times of their internship. From the observation and the medical interns’ accounts the internship process occurs in a context of HIV/AIDS, death and poverty. This context and the sociocultural factors such as language, beliefs and socio-economic status presented challenges to the interns. The psychosocial distress among the interns was not only related to the high work load and the occupational risk of HIV infection, but also to existential challenges of dealing with responsibilities and finding the right attitude in the face of suffering, death and ethical dilemmas.

The results of the research suggest that there is a need for appropriate and holistic psychosocial intervention to assist interns in managing the psychosocial distress occurring during internship.

L38 - Becoming a medical doctor in a rural hospital: Anthropological insights into the experiences of medical internship

M Kanda
Polokwane-Mankweng Hospital Complex

This study acknowledges that the experience of medical internship by medical interns is influenced by various factors. This study is aimed to produce a comprehensive description of medical internship in a South African rural hospital as a lived experience from an anthropological perspective with reference to various socio-cultural factors.

The research methods applied during this study included participant observation, in-depth interviewing and informal and unstructured interviews. All fifteen medical interns present in a South African rural hospital during the research period were observed and interviewed as research participant. Ten of the fifteen interns participated in in-depth interviews at different times of their internship. It emerged from the research that medical internship occurs in a context of HIV/AIDS, death and poverty which impacts both on the interns and their interaction with the patients and their families. In this context, sociocultural factors such as socio-economic status, language and traditional beliefs influenced not only the internship process but also the interns themselves. If the health-care delivery system has to move from the biomedical model, which overlooks the psycho-sociocultural and spiritual dimensions of both the patients and the medical interns, to the biopsychosocial model as proposed at the different medical schools in South Africa, there is a need for psycho-sociocultural and spiritual issues to be given enough prominence during medical training and medical practice.
L39 - Two-month sputum smear non-conversion among TB patients in the Free State: Implications for programme management?

N Kigozi, J Heunis, S van der Merwe, P Chikobvu, A Janse van Rensburg, A Rau, E Janse van Rensburg-Bonthuyzen

University of the Free State

BACKGROUND
Despite the availability of effective treatment, TB remains a serious public health challenge in South Africa. Treatment success remains sub-optimal, with the Free State achieving a 71.4% cure rate in 2009.

OBJECTIVE
The Province seeks to address, in particular, high two-month smear non-conversion among new-smear positive cases. Operational research set out to explore possible quantitative and qualitative factors at play.

METHODS
Quantitatively, a retrospective record review was conducted for all such cases between 2003 and 2009 recorded in the ETR.Net. Qualitatively, in-depth interviews were conducted with TB nurses and facility managers from 15 purposefully selected PHC facilities. Quantitative data was subjected to multivariate logistic regression analysis while qualitative data were analysed for meaning and organised into themes.

RESULTS
For the 38 987 patient records included in the quantitative arm, the mean age was 37.2 and 33.3 years for males and females. Among males and females two-month sputum smear non-conversion respectively declined from 15.9% and 10.8% in 2003 to 12.1% and 6.6% in 2009. The more positive performance of the programme in respect of females was statistically significant (p < 0.001). Together, quantitative and qualitative analyses found that, age, sputum grading, time to treatment onset, and disease classification hold programmatic implications.

CONCLUSION
Two-month sputum smear conversion is variously influenced by socio-demographic, clinical and health system factors that should be taken into consideration when managing TB patients. The study provides policy makers and programme managers with evidence to develop more tailored care so that scarce programme resources can be directed appropriately.

L40 - Going rural: Measuring success

N Kok, S Van Schalkwyk, M De Villiers, B Van Heerden, H Conradie, T Fish, J Bezuidenhout

Faculty of Medicine and Health Science, Stellenbosch University

BACKGROUND
In 2011 the first group of Stellenbosch University medical students completed a year-long, comprehensive rural placement at the Rural Clinical School (RCS). In addition to the clinical training at a regional or district hospital, these students were exposed to primary health care. They participated in the same final summative assessment as their peers at Tygerberg Hospital.

OBJECTIVES
This benchmarking study supported by SURMEPI, was conducted to determine the success of the first year of implementation at the RCS. An analysis of the students’ marks was undertaken to review the academic performance of the RCS students and to compare these results with those who completed the year at Tygerberg Hospital.

METHODS
The results of 174 final-year students were obtained from the exam schedule, anonymised and analysed using STATISTICA. Anova and Variance Estimation tests were performed to explore the rotation, examination and final marks of the seven disciplines that students at the RCS rotate through.

RESULTS
All the RCS students completed their studies successfully, obtaining higher final marks in Family Medicine (69% vs. 67%) and Psychiatry (64% vs. 62%). The analysis also highlighted interesting trends across the early, middle and late rotations for the two groups. However, given the small number of students at the RCS in 2011 (8) these results should be seen as preliminary.

CONCLUSION
The rural exposure did not disadvantage the students. These findings rather indicate some trends that suggest that the exposure might have benefitted the RCS students in assessments and the need for further investigation as successive cohorts go to the RCS.
L41 - Problems in retaining community service doctors in the public healthcare system and possible strategies to improve hospital management structures to increase short/long term retention

S Kornik
Africa Health Placements

BACKGROUND
Since the inception of community service (CS) in South Africa, it has been debated whether CS is engendering a long term sense of obligation in junior doctors or whether a negative experience accelerates their migration to the private sector and overseas.

OBJECTIVES
The junior doctors are a critical element in this model and our presentation will further allude to the role they play as facilitators or obstacles to effective healthcare in South Africa.

METHODS
The data collection tool was a two-page survey with multiple-choice questions. The survey was conducted consecutively with all contactable CS officers in 2009, 2010 and 2011. The responses from junior doctors allocated to rural and urban facilities were critically analysed to highlight the differences that exist.

RESULTS
The statistical analysis compared supervision, hospital management and retention variables and produced consistent evidence to show that the CS doctors who experience lower levels of management support in rural facilities will inexorably leave that facility and are unlikely to consider working in a public hospital in future.

One proven strategy to curb this trend involves recruiting a contingent of foreign doctors in rural facilities. With a team of experienced doctors on board, junior doctors and trainees can be easily attracted because they have the opportunity to be properly supervised and mentored.

CONCLUSION
By adopting this model, our research has shown that hospital management can focus on using the facility’s improved capacity effectively and can then become self-sustaining.

L42 - Factors influencing the utilization of community based rehabilitation services by people with disability in Soshanguve and Winterveldt, Gauteng Province

F Kotsokoane
University of Limpopo

The aim of the study was to determine factors that influence the utilization of services in the community based rehabilitation centers in Soshanguve and Winterveldt.

The objectives were to determine the socio-demographic characteristics of people with disabilities, to determine whether they are aware of the rehabilitation services and to identify environmental barriers affecting access to rehabilitation.

METHODOLOGY
A retrospective quantitative descriptive design was used to gather information in the study from 89 participants from rehabilitation departments. A questionnaire was used to collect data from participants.

RESULTS
Out of the 89 participants from Soshanguve and Winterveldt, 56% were males and 44% were females. 45/89(51.6%) were less than 10 years of age. 67% of participants used taxis and 33% used hired transport to visit the hospital. The results show that 78% were not aware of the rehabilitation services whilst 22% were aware and only of those who were aware only 20% have used the community services before. Only 54% of the clinics were accessible to patients with disability.

CONCLUSION
Lack of awareness about the rehabilitation services in the community and the accessibility of the primary healthcare centres were the main factors that affected utilization of community based rehabilitation services by people with disabilities.
L43 - Osteoporosis and bone health in black South African women: A 5 year follow-up

I Kruger, A Kruger, M Kruger

Africa Unit for Transdisciplinary Health Research (AUTHeR), North-West University, Potchefstroom Campus, South Africa, Food, Nutrition and Human Health, Massey University, Palmerston North, New Zealand

BACKGROUND
The long-held belief that women from African descent are less at risk for developing osteoporosis, lead to this “silent-killer” being under-diagnosed within this population. A recent report from the International Osteoporosis Foundation revealed: African women are equally at risk for low bone mass compared to Caucasian women.

OBJECTIVE
To determine bone health and possible risk factors associated with low bone mass within a group of black South African women.

METHODS
154 urban women were randomly selected from PURE-SA study. Baseline data were collected in 2005 and follow-up were done in 2010. Bone health indicators measured included: PTH, CTx, 25(OH)D levels, serum calcium and –magnesium. Bone mineral density was measured (DXA) with first follow-up year.

RESULTS
Bone health aggravated from baseline to follow-up. This was reflected by significant increases in both PTH levels (9.25%) as well as CTx levels (31.43 %). DXA scans revealed the prevalence of osteoporosis in the spine to be ~ 34%, while osteopenia was present in 39% of the women. Osteoporosis in the hip, however was much lower (13%), while osteopenia in the hip equaled that of the spine (39%). Risk factors for low bone mass included age, BMI, waist circumference, FSH and ferritin.

CONCLUSION
Prevalence of low bone mass and osteoporosis is high in urban women. This puts them at an increased risk for concomitant fragility fractures; a crippling burden and disability that affect quality of life of patients. Thus, identifying risk factors for low bone mass is of great importance for this vulnerable population.

L44 - Use of drugs for secondary prevention of cardiovascular diseases in South Africa and Zimbabwe – Findings from the PURE Study

A Kruger, J Chitamba, E Igumber, S Rangarajan, S Islam, T Puuone, B Mayosi, KTeo, S Yusuf on behalf of the Prospective Urban and Rural Epidemiology (PURE) Study Investigators

Faculty of Health Science, North-West University, Potchefstroom Campus, South Africa, Faculty of Medicine, University of Zimbabwe, Harare, Zimbabwe, School of Public Health, University of the Western Cape, Bellville, South Africa, Population Health Research Institute, Hamilton Health Sciences and McMaster University, Hamilton, ON, Canada, Division of Cardiology, Department of Medicine, Groote Schuur Hospital, Observatory, Cape Town, South Africa

BACKGROUND
Cardiovascular diseases (CVDs) are recognized as a major health problem, approaching epidemic proportion in many African countries. A number of drugs are available for preventing the incidence of CVDs and its complications, but their use in urban and rural communities in South Africa and Zimbabwe has not been investigated.

OBJECTIVE
To determine the prevalence of use of secondary prevention drugs for CVDs in rural and urban communities in South Africa and Zimbabwe.

METHODS
As part of a multi-country prospective cohort study, 5825 adults from South Africa and Zimbabwe (3759 urban, 1966 rural) were assessed for history of CVD (n = 207) and use of four selected drugs (antiplatelet drugs, β-blockers, ACE inhibitors and statins). The prevalence of use of each drug was compared for urban and rural communities and by age and gender.

RESULTS
Prevalence of use of drugs for South Africa and Zimbabwe were 6.6% and 2.8% for antiplatelet drugs, 3.8% and 0% for β-blockers, 9% and 5.6% for ACE inhibitors and 1.3% and 0% for statins respectively. Comparative proportions of use of any drug by urban/rural were 29.8%/8% for South Africa and 20.8%/2.1% for Zimbabwe, and for female/male; 23.2%/16.4% and 10.3%/0% respectively.

CONCLUSION
The use of drugs for secondary prevention of CVDs is extremely low in both urban and rural communities in South Africa and Zimbabwe. Research is needed to understand why this is the case even for inexpensive drugs such as antiplatelet agents.
L45 - Clinical Associates Session
E Leballo
Professional Association Of Clinical Associates
In South Africa

INTRODUCING THE CLINICAL ASSOCIATE PROFESSION
Clinical Associate (CA) is a new health profession in South Africa designed to strengthen the health care system in the country. This session will provide a description of the Clinical Associates professional and details of their training.

REFLECTION BY CA STUDENTS
A current CA student will describe the training including the aim of the course, the South African universities that offer the course and an outline of how the students are tested to their maximum capacity to ensure they are ready to work effectively in rural areas.

REFLECTION BY QUALIFIED CA
A qualified CA will share the experience working in the district rural hospital, and describe how clinical associates were received, what was expected from this new profession, how did other health care workers react, what changes clinical associates brought to the hospitals they served in, what the clinical associates gained and how are they working currently.

LAUNCH OF PACASA
The session will end with the official launch of the Professional Association of Clinical Associates in South Africa (PACASA) and detail its intentions, aims, mission, vision and goal, support structure and its future community and other global involvements.

L46 - From community profiling to local action: facilitating local collaboration through services-research partnerships in the DIALHS project
U Lehmann
University of the Western Cape

Planning and management are commonly investigated in organisational and policy research outside the health sector. Yet despite being critical elements of health leadership and governance, these topics are not widely considered in South African public health research.

In seeking to strengthen sub-district planning and management to support PHC improvement, the DIAHLS project in Mitchell’s Plein has adopted an action learning approach. Working through cycles of action and reflection, specific areas of activity are negotiated and agreed with local health managers. All are then implemented either by health managers, with support from the research team, or by researchers through engagement with managers. Review and documentation of activities, their evolution and rationale is part of this process, together with collaborative reflection on lessons learnt.

This paper will provide insight into one aspect of this project. It will present the rationale, process and activities of a “community profiling” activity which brought multiple stakeholders (including health service and programme managers, clinic committee members, NGO and CBO representatives and inter-sectoral partners) into conversation with each other in identifying health needs, resources and gaps in Mitchell’s Plein. These conversations, through a series of larger and smaller workshops, laid the foundations for joint local action around identified priorities. They also fed into the annual sub-district planning processes.

Lessons discussed in the presentation will include the importance of relationship-building and creation of collaborative “problem-solving interfaces”, encouraging and supporting local responsiveness and initiative, and enabling synergies between local problem solving and formal planning and management processes.
L47 - Interprofessional Communication in a Rural Hospital
C Longman, C Penn, J Watermeyer
Health Communication Research Unit, School of Human and Community Development, University of the Witwatersrand

BACKGROUND
The health community is a unique group of different professionals who are required to communicate interdependently on a daily basis to ensure the best quality of care for their patients. Little research has been done on the role of interprofessional communication in a rural setting, particularly where limited resources exist and staff face a multitude of barriers on a daily basis.

OBJECTIVE
The aim of this ongoing research project is to describe and understand communication between healthcare staff working in a rural context.

METHODS
This ongoing qualitative project involves three different sources of information about team communication: ethnographic observations of clinic activities, and focus groups and interviews. The sample will be made up of healthcare workers at Tonga Hospital and will include: doctors, nurses, clinical associates, social workers, pharmacists, dieticians, physiotherapists, occupational therapists, speech and language therapists, audiologists and admin staff. Profession-specific vignettes and case studies were used in the focus groups to stimulate discussion. Data was triangulated and explored using thematic content analysis.

RESULTS
Preliminary results suggest the emergence of the following themes: misunderstanding of instructions, staff shortages, absence of trained translators, poor flow of communication, staff attitude, isolation, minimal supervision, power, management and ethical issues.

CONCLUSION
Interprofessional communication is challenging in the rural setting and teams face many barriers to providing quality care. Intervention is needed to teach interprofessional communication skills. This study adds to knowledge in this field and raises new research questions within the rural hospital environment. Further it adds to South African specific theoretical literature in health care. The greatest implication from this study may be the potential development of communication training programmes for rural healthcare teams.

L48 - Admission trends and treatment outcomes of MDR and XDR-TB patients at Sizwe Hospital in Gauteng Province
R Louw, S Naidoo
1Sizwe Tropical Disease Hospital, Gauteng Department of Health, 2School of Public Health, University of the Witwatersrand, Johannesburg

BACKGROUND
MDR and XDR-TB is a worldwide public health crisis. Risk factors and MDR-TB outcomes have not been well described in South Africa. Admissions trends and treatment outcomes of MDR and XDR-TB were evaluated for patients admitted at Sizwe Hospital between January 2008 and December 2009.

METHODS
An analytical cross-sectional study was conducted. A retrospective record review was done of all adult MDR and XDR-TB patients admitted. Interim treatment outcomes were recorded at the end of hospitalization and treatment outcomes at the end of the study period (May 2011). Logistic regression was performed to determine factors influencing death as an outcome variable.

RESULTS
The total number of admissions for the period was 891. MDR-TB accounted for 95.3% (849) of the admissions and XDR-TB for 4.7% (42). The male admissions were higher (55.9%) than the female admissions in both years. The majority of patients were in the age group 28-32 years. The median age was 36 years and increased from 35 years to 36.5 years over the study period. Most patients (79.9%, n=676), had a previous history of TB and a significant higher proportion of XDR-TB patients (95.2%, n=40) had a history of previous TB. 74.9% (655) of patients were HIV positive, with a significantly higher proportion in males (81.5%, n=317), as compared to males (69.5%, n=338). Culture conversion decreased from 80.8% (308) to 76.7% (391) over the two years and was higher (79.2%, n=672) in MDR-TB compared to XDR-TB (64.3%, n=27). No statistical significance was found in the interim treatment outcomes and outcomes of HIV positive and negative patients. Low cure (2.4%) was achieved and treatment completed decreased from 42% (160) to 13.5% (69), when comparing 2008 figures with 2009, as a result of a significantly higher proportion (33.3%, n=170) of patients still on treatment in 2009. 196 (22%) of patients died, 185 (20.8%) defaulted, 40 (3.1%) were transferred out and 28 (3.1%) failed. Age, diagnosis and HIV were significantly associated with death using logistic regression.

CONCLUSIONS
The majority of admissions was males, in the 28-32 years age group and was MDR-TB patients for the study periods January 2008 to December 2009. The increase in the number of admissions over the study period was not significant. XDR-TB was significantly associated with a previous history of TB treatment and female gender with HIV positive status. High culture conversion was achieved in both years whilst in hospital. HIV status did not influence treatment outcomes. Low cure however was achieved mostly due to the lack of documented culture results from the clinics. The decrease in treatment success over the two years was due to the high default rate, significant increase in mortality and being still on treatment, noted during the study period. Risk factors associated with the high mortality were identified as age, HIV and XDR-TB.
**L49 - Occupational exposure to benzene and its genotoxicity among petrol attendants in eThekwini Municipality**

**M Makwela, R Naidoo**

**Discipline of Occupational and Environmental Health: UKZN**

**BACKGROUND**

Exposure to petrol is a health hazard as benzene is a group 2B carcinogen. Benzene metabolites, benzene oxide (BO) and 1.4 benzoquinone (BQ) are genotoxins. The effects of genotoxicity are seen in a metabolizing gene (CYP2E1), detoxification genes (NQO1 and GSTT1), and in DNA-repair gene (ORC1).

**AIM**

To determine if an association exists between occupational exposures among eThekwini Municipality petrol attendants’ and DNA damage.

**METHODS**

This was an analytic cross sectional study among 101 participants comprised of 75 petrol attendants and 26 low exposed controls at 8 different filling stations in the eThekwini Municipality. Researcher administered interviews were based on a validated questionnaire. The association between DNA tail length via comet assay, (as a marker of DNA damage) and the volume of petrol pumped (in litres) in the past year was analysed and adjusted for various covariates through multivariate modelling.

**RESULTS**

The 101 participants comprised 25.7% (n=26) low exposed workers and 74.5% (n=75) petrol attendants. The median duration of employment in the petroleum industry was 4.5 years (range:1-14) among the low exposed and 5 years (range:1-27) among petrol attendants. The median volume of petrol pumped by 75 petrol attendants was 182 metric tons in the past year (range:18-573). The median tail length among low exposed was 89.5µm (range:24-124) (CI:53.81-106.55, p value:0.042). The median tail length among petrol attendants was 60.5µm (range:18-149)(95%CI 45.48-67.51, p value:0.001). There was a statistically significant association between job category and tail length. Further laboratory analysis is still been processed for DNA analysis and for benzene biomarkers.

**CONCLUSION**

Our finding was that benzene exposure among petrol attendants results in increased risk of DNA damage. This suggests that despite low levels of exposure, the recent re-introduction of benzene into petrol, since the removal of lead may result in genotoxicity, and pre-dispose to carcinogenesis.

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**L50 - Implementing the PHC re-engineering strategy: An analysis of household profile registrations from 24 pilot sites of the North West province**

**T Mampe, W Jassat, C Ogunmefun, M Matse**

**Health Systems Trust**

**BACKGROUND**

The Primary Health Care (PHC) Re-engineering strategy was formulated to address poor health outcomes through provision of community based services by PHC outreach teams. The North West province has established PHC outreach teams in 24 pilot sites and household registration has been completed. The household registration is done to identify vulnerable households who require referral for services in the health facility. It is important to assess the quality of data collected and understand the profile of households in the pilot sites to further inform planning for the pilot sites.

**OBJECTIVE**

To analyse household profile registrations from 24 pilot sites conducted between November 2011 and April 2012 to identify gaps in data collection and describe findings related to vulnerable households identified.

**METHODS**

Household registration forms collected by CHWs from 24 pilot sites in the NW province were captured into Microsoft excel and analysed using STATA.

**RESULTS**

Capturing of the household registration data is underway. Preliminary results reveal challenges in data collection such as incomplete forms. Some provisional findings from the household profiles include: large proportions of children under five not weighed, with immunizations not up to date and Vitamin A not received; household members with chronic conditions not treatment adherent; and clients not HIV tested.

**CONCLUSION**

The study highlights the need for training PHC outreach teams on data quality to generate useful data. The results will further inform the planning of services required for the vulnerable households.
L51 - BCMP Students’ Experiences of Professionalism during Clinical Rotations

N Mapukata-Sondzaba
Division of Rural Health, Faculty of Health Sciences, Johannesburg, South Africa

CONTEXT
Medical professionalism as a set of behaviours that transcends personal values, beliefs and attitudes to incorporate ethical and moral principles is considered a covenant between society and the practitioners of medicine. As a desired state, an attainment of professionalism as a process obligates both academic and clinical tutors to cooperate for the good of the patient.

AIM
The aim is to assess Bachelor of Clinical Medical Practice (BCMP) students’ experiences of professionalism during clinical rotations.

METHODS
Following five week attachments in five purposely selected clinical departments, 25 final year BCMP students reflected individually on their personal experiences of professionalism in the workplace for three of the five rotations. Qualitative methods were used to group emerging themes from 69 portfolios. BCMP students’ experiences of professionalism were analysed from an ethical perspective guided by HPCSA guidelines for health care professionals.

RESULTS
BCMP students reflected positively on a range of experiences such as the respect for patients, compassion and care they observed in paediatrics. Role modelling and mentoring was experienced in emergency medicine and in the adult in-patients wards. Inadequate communication, attitudes of staff, lack of resources were cited as negative attributes. Professional integrity was recognised as a context specific attribute.

CONCLUSION
The clinical training environment is critical if, BCMP students are to emulate and experience positive behaviors of professionalism and has an extended role if, health care professionals are to fulfill the covenant between society and the practice of medicine.

L52 - Mobile Health (mHealth) to support TB/HIV management in the community’ case study-May 2011 to May 2012- from Ethekwini district

C Marra, V Vella, C Knudson, S Rushworth, J De Vos, M Ratshikana- Moloko, F Nywagi Louis, R Matji
URC MDR TB

BACKGROUND AND OBJECTIVE
Ethekwini District has the highest burden of TB in South Africa, thus requiring an efficient management information system. The objective of this study was to test the feasibility and reliability of using mHealth technology (combination of smart phones and Google EarthTM) to provide timely information on community management of TB.

METHODOLOGY
TB patients’ addresses were obtained from the Electronic TB Register (ETR) and this information was transmitted to tracing teams’ smart phones, thereafter used for locating households, following indexes, screening contacts for TB and HIV, and adequately refer. Global Positioning System (GPS) coordinates were collected; real time data were transmitted to a centralized server via a cell phone network; Google EarthTM households mapping was generated as well as automated reports of households’ data. Validation of the raw data compared with the database report and end users considerations were analysed.

RESULTS
4555 household over a target of 7436 (61%) were located, of 10469 contacts targeted, 6204 (59%) were found at the time of the tracing teams visit, 920 of them (15%) found to be TB suspect cases, of which 533 (58%) provided sputa sent to the laboratory. HIV Counselling and Testing was offered to 4738 family members, with an acceptance rate of 37%; 41 pregnant women were referred to antenatal care.

CONCLUSION
This study shows the feasibility and reliability of using smartphones to gather and transmit real time information to the TB control program. This tool has a huge potential to ease the information workload of health care workers in the community.
L53 - Who is testing for HIV? Implications for South Africa’s HIV prevention programmes

L Mashimbye, B Bello, S Johnson, L Mahlasela, R Delate

Health & Development Africa

INTRODUCTION
HIV Counselling and Testing (HCT) is central to HIV prevention programmes. Understanding contextual determinants of HCT uptake is important so that programmes can be focused to those with lower participation.

METHODS
In a multi-stage, stratified random sample survey of 9,728 people (16-55 years) in South Africa in 2009, respondents were asked using face-face structured interviews if they tested for HIV in the previous year. Data was weighted to South African population and multivariate analysis was used to control for confounding in Stata version 11.0.

RESULTS
Among 6,798 sexually active respondents, 37% tested for HIV in the past year. Significantly more women (43%) than men (30%) reported testing (p<0.001). HCT was also higher among those in urban formal settings (39%), but lowest among those in farming (34%). HCT correlated with educational attainment: 42% for those with high school and 47% for those with tertiary education. Women [Adjusted Odds ratio, AOR=1.9; CI: 1.7-2.0], those with at least high school education [AOR=1.4; CI: 1.1-1.8], those with at least medium exposure to HIV communication programmes [AOR=1.3; CI: 1.1-1.5] were more likely to have tested for HIV in the past year. Students [AOR=0.6; CI: 0.4-0.7], Older people [AOR=0.7; CI: 0.5-0.9] and those in farming settlements [AOR=0.6; CI: 0.5-0.8] were less likely to have done so.

CONCLUSION
HCT uptake is determined by individual and contextual characteristics. Underlying this could be HIV and HCT knowledge, health-seeking behaviour, stigma and access to services. HCT campaigns should tailor messages to people of lower education and choose an appropriate method of reaching them, particularly those in farms.

L54 - Planning for PHC Re-engineering: Listening to the Voices of Community through Community Dialogues in North-West Province

M Masuku, T Mampe, M Matse, W Jassat

Health Systems Trust

BACKGROUND
South Africa demonstrates poor health outcomes relative to the resources spent in the health sector compared to most middle income countries. This is due in part to the overwhelming impact of HIV. To address the poor outcomes the health minister with a team of experts proposed the Primary Health Care (PHC) re-engineering strategy. The Alma Ata conference defined PHC as essential health care based on practical, scientifically sound and socially acceptable methods and technologically made universally accessible to individuals and families in the community. This would include their full participation and at cost that the community and the country can afford at any stage of development in the spirit of self-reliance and self-determination. Individuals and communities have the right and responsibility to be active partners in making decisions about their health care and the health of their community.

METHODOLOGY
It is against this background that Health Systems Trust supported and conducted community dialogues in 11 out of 19 sub-districts in North-West province as part of planning for PHC re-engineering. The main aim of the dialogues was to mobilise communities to work together to find solution to address challenges that they face, to strengthen collaboration with partners and stakeholders within the ward. Community dialogues created a space for all participants to develop community owned and driven action plans, and gain commitment and consensus from stakeholders.

FINDINGS
Both the department of health and stakeholders identified areas that were most affecting the health and livelihood of their communities. These were discussed in commission and recommendations were set, so that both the departments and the community implement them in partnership. This paper will describe the process of conducting community dialogues and their benefits; will detail selected findings raised through this process; and the recommendations made and action plans proposed.
L55 - South Africa’s Responses to Human Resources challenges in their Implementation of ART Programmes

T Mathole, A Parsons, J Cailhol, D Sanders,
School of Public Health, University of Western Cape South Africa

BACKGROUND
Provision of antiretroviral therapy (ART) for HIV treatment is an essential part of SA’s response to the problem of high burden of HIV, but critical shortages of human resources is a challenge. In such an environment the impact of large amounts of Global Health Initiative (GHI) funding has not been considered. This paper documents the programme and policy responses of government and GHIs/Donors in addressing staff shortage in public health facilities.

METHODS
This paper arises out of a broader study on the impact of GHIs on the South African health system. Data were collected through document analysis and individual interviews. Participants were purposefully selected from among key staff involved in GHIs at government, donors/NGOs. Data analysis was an ongoing process using thematic analysis.

RESULTS
GHI funding has helped expand access to ARV treatment for thousands in South Africa. However, public sector workers generally struggle with increased workloads. The donor community has responded by seconding HRH, but only in ART clinics. This has failed to address the problem of competition for available labor by the public and private sector, including GHIs, which increases mobility. Migration of staff to other countries has increased. On average, 17% of newly qualified doctors leave for other countries annually. However, South Africa also gains professional staff from poorer countries in the region. The introduction of new cadres (pharmacy assistants, clinical associates) of health professionals is another strategy used.

CONCLUDING REMARKS
Addressing HRH challenges in South Africa is complex, as increased HRH production by itself is not sufficient. Controlling the movement of health professionals has been difficult, but is evident that any solution requires global, regional as well as local action.

L56 - Human health in Southern Africa under a changing climate

M Matooane, R Garland, M Bopape, F Engelbrecht, N Phala, C Wright
Council for Scientific and Industrial Research (CSIR), Natural Resources and the Environment

BACKGROUND
Modelled climate change projections suggest that southern Africa may warm by 4-6°C. Excessive temperatures are known to negatively affect human health. The types of impacts, their magnitude and potential vulnerability of populations to heat for southern Africa are not clearly known. The study aims to understand how excessive temperatures are likely to affect human health in the region. Known vulnerability to heat factors were used to highlight potential hot-spots for heat-related health problems within South Africa.

METHODS
A six-member ensemble of climate simulations of the conformal-cubic atmospheric model (CCAM) was used to model the annual average number of hot days for southern Africa for the period of 1961 - 2100. The US NOAA heat-health index was used to determine the potential severity of health effects that the region’s populations are likely to experience from these projections. Potential vulnerability to heat factors were evaluated based on international literature.

RESULTS
Substantial increases in the annual frequency of hot days were projected across the southern African region, particularly for the northern, western and eastern parts of the region. As a result, people in the region are likely to experience an increase in hot weather-related health conditions. The effects may potentially be enhanced by important vulnerability to heat factors.

CONCLUSION
While the research is on-going, the results indicate that the projected temperatures are likely to negatively affect the health of the region’s populations. The influence of vulnerability factors on the temperature-health relationship for the region needs to be investigated further.
L57 - Strategic leadership and planning in the implementation of PHC Re-engineering in the North West province

P Matse, T Mampe, W Jassat
Health Systems Trust

BACKGROUND
In response to the current health burden, the political leadership of South Africa committed itself to a substantial overhaul of the public health sector. The central focus of this strategy is PHC Re-engineering which includes: PHC Outreach Teams, School Health Services and District Specialist. The North West (NW) province was selected to pilot implementation of the three streams. HST provided technical support.

OBJECTIVE
To demonstrate how strategic leadership and planning can lead to successful implementation of a national mandate, without extra resources and get desired results.

RESULTS
The NW Department of Health established a Provincial Task Team as an advisory body to the senior provincial leadership for PHC Re-engineering. The establishment of the Task Team, with clear terms of reference, embedded provincial commitment and support to the process and contributed to the success of the project.

The provincial PHC Re-engineering Strategy and Implementation Plan were developed; districts developed plans informed by the provincial plan. Districts established 24 pilot sites to implement PHC Outreach Teams in each sub-district. Community health workers (CHWs) and professional nurses selected to participate in the PHC Outreach Teams were trained. Pilot sites completed registration to identify vulnerable households for implementing household and community interventions. A five-year provincial communication and marketing strategy and costed HR Plan for PHC Re-engineering were developed.

CONCLUSION
Having the Provincial PHC Re-engineering task team driving the process has demonstrated that where there is team effort, political will and leadership, districts and sub-districts are able to respond to challenges affecting service delivery.

L58 - Impact of a new SMS reporting system on reporting of infant HIV results in Thyolo District, Malawi

I Zulu, I Panunzi, I Kanjizila, S Muhammad, K Hermann, C Metcalf, Banda, Likaika, R Guede, C Mwase

BACKGROUND
In infants, prompt diagnosis of HIV infection is necessary to minimise delays in starting treatment, preventing adverse health outcomes and deaths. In 2011, SMS reporting of infant HIV test results was implemented in 9 rural clinics and the district hospital in Thyolo District, Malawi. The laboratory in Blantyre sent results by SMS to a mobile phone at 5 clinics (including 4 clinics without electricity), and by SMS to a GSM printer at 4 clinics and the district hospital.

OBJECTIVE
To evaluate the impact of the SMS reporting system on the time taken to from testing to the clinic receiving test results.

METHODS
Reporting of results during the 6 months after introducing SMS reporting was compared to the previous 4 months, using information from clinic and laboratory records.

RESULTS
During the pre-SMS period, the date on which the clinic received the result was recorded for 162/627 tests. Of the 162 tests, the median turn-around time was 65 days, and 57 days for positive results. After introducing SMS reporting, the date on which the clinic received the results was recorded for all 787 tests. The median turn-around time was 29 days, and 35 days for positive results.

CONCLUSIONS
SMS technology may be useful to improve reporting of test results in rural settings. More efficient reporting is only of value if this leads to earlier treatment. We are currently evaluating the impact of SMS reporting on the time to treatment initiation among HIV-infected infants.
L59 - Factors influencing patient adherence to tuberculosis treatment in Thaba-Nchu, Free State Province, South Africa

M Modise
SAFELTP Fellow

INTRODUCTION
South Africa has one of the highest TB incidence rates in the world. This problem is compounded by poor TB treatment outcomes, with treatment interruption being a major challenge. The aim of this study was to provide insight into the determinants of TB treatment adherence in Thaba-Nchu town, 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. All TB patients attending the five clinics in Thaba-Nchu on the days of the interviews were consecutively sampled until a sample size of 150 non-adherent and 150 adherent patients was reached. Face to face interviews, using questionnaires, were conducted with adult patients. We performed univariate and multivariate logistic regression to determine factors associated with non-adherence.

RESULT
Sixty-nine percent of both groups had pulmonary TB and their mean age was similar (p=0.251). However cases were more often males (61%, p =0.001), divorced, separated or widowed (56%, p<0.001), HIV positive (90%, p<0.001) and only attended primary school (46%, p<0.001) and stayed in an informal 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).

CONCLUSION
Increasing patient support systems, alleviating poverty and improving education regarding TB may help to increase adherence to TB treatment.

L60 - Establishing Partnerships between Non-Profit Organisations and the Department of Health for Delivery of PHC services Including HIV&AIDS and TB

S Moko
Department of Health - Eastern Cape

OBJECTIVES
To establish and strengthen the delivery of district PHC services (including HIV and AIDS) by supporting the development of partnerships between Government and Non-Profit Organizations.

METHODOLOGY
The establishment of partnerships is through Contracting NPOs to deliver PHC Services and funded for the duration of 12 months. (1) Feasibility study was conducted in 2001 by DFID in the country (2) NPO funding assessment conducted (3) Implementation of M&E system integrated into the national DOH information system (4) data collected for the period of 12 months through M & E tools.

RESULTS
The Programme piloted in three sub-districts; 14 staff were appointed to manage 54 funded NPOs: Buffalo City (n=27), King Sabatha Dalindebo (n=18), and Lukhanji (n=9). Care packages offered by NPOs include HP (n = 8), VCT (n= 2), Victim Empowerment (n = 3), Safe Male Circumcision (n = 4), OVC (n=4), HBC (n=42). Data was collected by Community Health Workers using daily tally sheets and monthly summary report forms. HBC =82,522 and HP =22,555 clients reached, Male condom distrib =407,000, Female condom distrrib =2,230, VCT pre-counseled= 772, Tested (VCT) positive=100(13%), Post counseled=97(97%), referred for HIV/AIDS management=85(85%), OVC median monthly no. of OVC supported by NPOs=303. Provided financial assistance in the form of stipends to more than 566 CHWs and more than 192 of other NPO staff.

CONCLUSION
Development of policy on NPO supervision and referral system will further strengthen Public Private Partnership’s relationship.
L61 - Developing a land use regression model for NOx exposure assessment
1S Muttoo, 2R Naidoo, 3Kees Meliefste
1Department of Occupational and Environmental Health, South Africa
2Institute for Risk Assessment Sciences, Utrecht University, the Netherlands

BACKGROUND
Adverse effects of air pollution, have been known to manifest during the prenatal period by increasing the risk of intrauterine growth restriction, low birth weight, and preterm birth, even at low air pollution levels. The characterization of prenatal exposure to air pollution, in determining exposure-outcome relationships, remains a challenge in environmental epidemiology. Land use regression (LUR) modeling has proved to be a promising technique in addressing this.

OBJECTIVE
To develop a LUR model to determine and compare NOx exposure among pregnant women residing in South Durban (SD) to those residing in North Durban (ND).

METHODS
The LUR model regresses monitored NOx levels, determined using passive sampling (for both summer and winter accounting for seasonal variation) against geographic predictor variables such as land cover, traffic volume and meteorology to produce a prediction map.

RESULTS
NOx was measured as proxy for both industrial and traffic emissions and the mean levels observed were 54.99 ug/m3 and 32.01 ug/m3 in summer and 13.98 ug/m3 and 11.33 ug/m3 in winter for the SD and ND respectively. Despite its prominent association with traffic emissions, traffic count data available for two different time periods showed a strong correlation (r=0.71) with minimal variation and thus cannot be considered as an isolated contributing factor to the observed NOx levels.

CONCLUSION
Significant seasonal variation observed, elicit that NOx levels are not solely influenced by traffic and industrial emissions, but environmental factors and seasonal modifications also impact exposure levels, hence incorporating these factors when assessing exposure is essential, thus warranting the use of exposure assessment techniques such as LUR modelling.

L62 - Primary health care implementation of an antiretroviral treatment failure clinic model in rural KwaZulu-Natal
K Naidu, R Lessells, C Seebregts, C van Vuuren C, T Rossouw, N McGrath, M Newell, T de Oliveira

BACKGROUND
In rural Hlabisa, KwaZulu-Natal (KZN) with good antiretroviral therapy (ART) coverage in 17 primary health care (PHC) clinics, 23% of 5719 patients on ART by September 2008 had a detectable viral load one year post initiation.

AIM
To describe a model for PHC implementation of HIV treatment failure clinics (TFC) in rural settings using a public health approach.

METHODS
The Southern African Treatment and Resistance Network (SATuRN) HIV-TFC model provides an accessible service by reducing genotype cost, free open source applications, and a virtual network for healthcare provider training. Patients failing ART receive genotype testing and adherence counselling. Results are presented to HIV specialists who assist remotely regarding future treatment. Patients are then switched to appropriate second regimen at PHC level within two weeks of genotype.

RESULTS
Of 17543 patients on ART in Hlabisa by June 2012, a representative sub-sample of 324 adult patients, approximately 50% of patients with HIV treatment failure (2 consecutive viral loads > 1000) was genotyped; prevalence of drug resistance mutations was 87.3%. The remaining 12.7% did not have any drug resistance mutations. Of the 283 who required drug changes, the standard second line therapy (TDF/AZT+3TC+LPVr) was appropriate in over 90%. A total of 75 medical personnel, including 58 nurses, were trained on the system.

DISCUSSION
We demonstrate a scalable public health model to limit HIV drug resistance which also allows for real time surveillance and operational research. Policy makers are currently discussing a national strategy for HIV treatment failure management based on this model.
L63 - The contribution of patient-related factors to tuberculosis treatment outcomes: A case-control study. Umgungundlovu health district, KwaZulu-Natal

Z Ndewandwe
Department of Health KwaZulu Natal

KwaZulu-Natal has the highest burden of tuberculosis (TB), but less than 50% were cured in 2008, many from rural areas, informal settlements, poor social and economic circumstances and with inadequate health care. HIV associated TB frequently require more effort to achieve meaningful outcomes.

Poor TB treatment outcomes in Umgungundlovu Health District led to this investigation of the patient-related factors associated with this problem in a high disease burden district of KwaZulu-Natal in 2011.

METHODS
A retrospective case-control study was conducted comprising 300 adults cases of TB who failed to complete 6 months of ambulant therapy and 300 unmatched controls who completed therapy. A random sample of 15 primary health care clinics was selected from where consecutive cases and controls were selected with probability proportional to the number of TB patients seen at the clinic. Data was extracted from patient records and interviews. Processed data was analyzed to identify risk associations multivariate logistic regression.

RESULTS
After adjusting for confounding statistically significant risk factors associated with poor TB treatment outcomes were unemployment (Odds Ratio (OR) 16.0; 95% CI: 6.7 to 37.8), living in rural areas (OR 14.3; 95% CI: 1.1 to 1.8), distance from home to clinic (OR 1.4; 95% CI: 1.3 to 1.6), living with HIV (OR 2.3; 95% CI: 1.1 to 4.7) and being very ill (OR -5.0; 95% CI: 2.1 to 11.9).

CONCLUSIONS
Although determinants of poor TB treatment outcomes in patients receiving six-month ambulatory care are diverse and multifactorial, non-adherence to TB treatment is significantly associated with identifiable patient related factors independent of the health system. Rigorous intervention strategies should prioritize at least five major risk factors, and TB control programme should go beyond the health systems issues to include intersectoral collaboration to address socio-economic barriers to adherence to TB treatment.

L64 - A pilot evaluation of the routine health information systems in South Africa

E Nicol, D Bradshaw, L Dudley
MRC Burden of Disease Research Unit, Division of Community Health, Stellenbosch University

BACKGROUND
NDoH has developed a District Health Information System (DHIS) to collect monthly facility based data. Audits of the human resources and equipment have been undertaken but there has not been a comprehensive evaluation.

OBJECTIVES
This study seeks to evaluate the RHIS in two districts using the Performance of Routine Information System Management (PRISM) framework, structured on relationships between technical, behavioural and organizational determinants of the routine information (RI) processes and performance.

METHOD
Data were collected from a convenience sample of 39 health information personnel in 12 health facilities, 5 sub-districts and 2 districts offices, using structured interviews and self-administered questionnaires to assess confidence and competence levels of RI tasks, problem solving skills, data quality checking skills, data accuracy, completeness, quality, and use. Data were captured using the PRISM customised data entry and analysis tool (DEAT) and analysed using simple descriptive statistics.

RESULTS
Preliminary findings suggest that 44% of the respondents have poor numerical skills and limited statistical and data quality checking skills. Observed competence level of RI tasks among respondents is 26% compared to reported confidence levels (71%). Data accuracy at the facility level was 68%, data completeness (83%) and Data quality (78%). Use of information (49%) appears to be affected by limited information feedback to facilities and the inability of personnel at facility level to analyse data.

CONCLUSION
The investigation suggests a limited culture of information use at facility and sub-district levels. Institutional capacity to improve RHIS processes, problem solving and data quality checking skills should be encouraged.
L65 - Non-communicable disease mortality trends in South Africa
B Nojilana, D Bradshaw, N Somdyala, V Pillay-van Wyk, Msemburi and the SA National Burden of Disease Research Team
Burden of Disease Research Unit, South African Medical Research Council

BACKGROUND
South Africa is experiencing a complex epidemiological transition resulting in an increase of chronic non-communicable diseases (NCDs) with cardiovascular diseases, cancers, diabetes and respiratory conditions being the most common. This paper presents the trends in NCD mortality in the past decade (1997-2009), using Stats SA data adjusted for under-registration and misclassification.

METHODS
An adapted version of the 1990 Global Burden of Disease list of causes was used. Misclassified HIV/AIDS deaths were estimated and the ill-defined causes were redistributed proportionately by age and sex. The ASSA 2008 model was used to obtain estimates of the population size to calculate rates.

RESULTS
NCDs were the leading causes of death for adults 60+ years during this period, however, there has been little change in the level in both the 15-59 year and the 60+ age groups. The most common NCD causes in the 60+ age group were cardiovascular and diabetes. In men both ischaemic heart disease and stroke accounted for 14.6%, hypertensive heart diseases 9.4%, whereas in women hypertensive heart disease was the most common cause, accounting for 16.3%. While some cancers showed an increased, others declined during this period.

CONCLUSION
Despite considerable change in mortality from HIV/AIDS, there has been little change in overall mortality rates from NCDs during this period. The growth in numbers of people 60+ has resulted in an increased burden from NCDs while the changing risk factor profile may be expected to contribute to an increased burden if not reversed.

L66 - Using primary health care ‘weighing stations’ as an entry point for paediatric HIV treatment and care in KwaZulu-Natal
L Ogle, T Govender, A Ramkissoon
MatCH [Maternal, Adolescent and Child Health, Dept of Obstetrics & Gynaecology, University of the Witwatersrand.

BACKGROUND
Treatment of HIV infected children lags behind that for adults in SA; children account for only 8% of people on ART despite HIV-related childhood mortality remaining unacceptably high. Although >80% of children attend PHC clinics routinely, very few receive HIV screening or testing. Public sector ART for children is largely hospital-based, with minimal transfer of paediatric HIV care to PHC.

OBJECTIVE
Since children are weighed at every PHC visit, piloting the use of weighing rooms as ‘entry points’ into care for HIV exposed/infected children was investigated to increase provider-initiated paediatric HIV case-finding and minimise missed opportunities.

METHOD
PHC staff at paediatric services (minor ailments, IMCI, EPI) in 23 clinics were trained on identification of children for HIV testing (assessing growth parameters/failure to thrive, TB/HIV history-taking; checking for frequent hospitalisation and/or minor ailments); and care-giver education, All children identified received HIV/PCR testing between Nov 2010- Sept 2011 and were followed up and referred into care.

RESULTS
1,240 children aged ≤15 years were tested for HIV over the11 month period. Age/date of birth was not recorded in 30% of cases. Of the remainder, ¼ were <1 year old (n= 213). Overall, 22% of children were HIV/PCR positive and enrolled into HIV treatment and care (6% <1 year old).

CONCLUSIONS
Monitoring growth parameters, improved history-taking and vigilance at PHC paediatric services provides a cheap and effective method of identifying children requiring HIV care, especially in older children who are not routinely tested; and should be scaled up nationally.
L67 - Implementing the PHC re-engineering strategy: An audit of community health workers (CHWs) in the districts of the North West province

C Ogunmefun, R Madale, M Matse, W Jassat, T Mampe, F Tlamama, M Masuku

Health Systems Trust

BACKGROUND

The establishment of Primary Health Care (PHC) outreach teams, in line with the PHC re-engineering strategy, is dependent on the recruitment, training and deployment of community health workers (CHWs). However, empirical information on CHWs in the North West (NW) province, to guide the development of PHC re-engineering implementation plans, is still deficient.

OBJECTIVE

To conduct an audit of CHWs in the districts of the NW province, in order to assess coverage and identify gaps in the training and provision of community-based health services.

METHODS

The study used a mixed-methods approach. A quantitative questionnaire was used to collect data from 5167 CHWs in four districts of the NW province. In-depth interviews were also conducted with 29 CHW managers. Quantitative data was analysed using STATA, while the qualitative data was analysed using thematic content analysis approach.

RESULTS

Results show that the CHWs provide a range of services such as HBC, OVC and health promotion; however, there is a gap in the provision of IMCI and school health services, which are core to the PHC re-engineering strategy. Findings also revealed that 17% of the CHWs report having no training. Furthermore, CHWs in the NW province are currently operating below the expected level, as the current CHW to household ratio is 1:17, instead of the suggested norm of 1:250.

CONCLUSION

The study shows that there are gaps in the training of CHWs and the provision of community-based services, which must be addressed to successfully implement the PHC re-engineering strategy in the NW province.

L68 - Factors associated with non-completion of isoniazid preventive therapy in HIV-infected patients in Cape Town

1,2T Oni, 1R Tsekela, 1B Kwaza, 1L Manjedi, 1N Bangani, 1,4K Wilkinson, 5D Coetzee, 1,2,4R Wilkinson

1Clinical Infectious Diseases Research Initiative, Institute of Infectious Diseases and Molecular Medicine, Faculty of Health Sciences, University of Cape Town, 2Division of Medicine, Imperial College London, 3Khayelitsha Day Hospital, Site B Khayelitsha, 4MRC National Institute for Medical Research, Mill Hill, London, 5Centre for Infectious Disease and Epidemiology Research, School of Public Health, University of Cape Town

BACKGROUND

TB incidence in South Africa remains high despite high rates of successful treatment suggesting ongoing transmission and a large reservoir of latently infected persons. Isoniazid preventive therapy (IPT) is recommended as preventive therapy in HIV-infected persons. However, implementation has been slow, impeded by barriers and challenges including the fear of non-adherence. The aim was to measure IPT completion rates within a research setting and to evaluate predictors of IPT non-completion.

METHODS

As part of a larger study, we recruited 164 antiretroviral therapy (ART)-naïve HIV-infected adults from Khayelitsha day hospital. All underwent TB screening to exclude active disease prior to initiation of 6 months IPT with monthly follow-up visits. Adherence was encouraged initially during monthly visits only and subsequently using telephonic reminders or home visits.

RESULTS

The overall completion rate was 69%. In multivariable analysis, self-reported alcohol drinkers (OR 4.05; 95% C.I. 1.89-9.06) had a 4-fold higher risk of non-completion, with a strong association between alcohol drinkers and smoking (\( \chi^2 \) 27.08; p<0.001). There was a 29% decrease in risk of non-completion for every year after HIV diagnosis (OR 0.81; 95% C.I. 0.68-0.98). Adherence improved from 42% to 75% when telephonic reminders and home visits were used.

CONCLUSION

We identify patients with a recent HIV diagnosis and self-reported alcohol drinking and smoking as being risk factors for non-completion of IPT, suggesting these groups should be identified and targeted for adherence interventions. Our results also suggest that interventions to improve adherence should be considered when implementing IPT on a wider scale.
L69 - The Good Practice Project: Creating momentum towards health service excellence

T Padayachee, R English
Health Systems Trust

BACKGROUND
Good Practice within the public health sector often exists as islands of excellence in different parts of the country. Without rigorous documentation of how success was established and maintained, there is little chance for the wider adoption of effective models of practice. This study aimed to engage provinces in identifying Good Practices to create the momentum for different departments of health across the country to replicate successful and effective practices in other contexts.

OBJECTIVE
To identify Good Practices in the implementation of healthcare policy in South Africa with a focus on innovative Primary Health Care (PHC) initiatives, human resources, financial management, logistics management, or health information innovations.

METHODOLOGY
The UNAIDS and WHO Framework for identifying best practices was adapted for use in this study. Descriptive in design, the study employed a mixed method approach which included a review of relevant documents, interviews with key stakeholders as well as observations of the selected practices.

RESULTS
Sixteen vastly different good practices were identified and documented. These included successful PHC models, improved financial management systems, breast milk donation programmes in neonatal wards and mental health support programmes in resource constrained contexts. The majority of good practices focussed on efforts to improve service delivery and patient satisfaction.

CONCLUSION
The process of documenting good practices encouraged involvement from key stakeholders across the country thereby increasing awareness of standards of good practice in healthcare.

L70 - Global funding for antiretroviral therapy: Thoughts on the development of South Africa’s national art programme

A Parsons, T Mathole, D Sanders
School of Public Health, University of the Western Cape, South Africa

BACKGROUND
HIV antiretroviral therapy (ART) is essential to the long-term health of people living with HIV/AIDS. Providing ART in South Africa was historically fraught. National ART rollout from 2003 took place against a backdrop of changing institutional relations in the health system, as well as national department denialism, as part of a re-alignment towards Primary Health Care (PHC). In the same period, Global Health Initiatives (GHIs) variously funded ART provision by both national and provincial governments as well as NGOs.

METHODS
95 in-depth interviews were conducted in KZN and at national level from 2008 to 2010. Participants were purposefully selected from government, NGOs and ART recipients. Data were thematically analysed. This research was aligned to a larger project examining the general impact of GHI funding on southern African health systems.

RESULTS
GHI policies on ART differed from conventional donor funding in their positivist approaches to goal setting, focus on ART and vertical structures, dominating both KZN and national ART decision-making. Though external funding of the overall health system was minimal, Global Health Initiatives (GHIs) funding of ART provision by both national and provincial governments as well as NGOs was significant. GHI and government policies pre-determined what ART services were supported, despite the resource constraints faced by KZN, with ART clinically orientated and designed independent of local contexts.

CONCLUSIONS
Local needs were rarely communicated to or incorporated by global funders, limiting the potential impact of ART services in terms of both coverage and effectiveness.
L71 - The inception phase of PRIME-SA. Developing a district mental health plan for the integration of mental health into the re-engineered PHC service platform in the Dr Kenneth Kaunda district

1I Petersen, 1,2A Bhana, 1,4Faisal, 1T. Kathree, 1,2O Selohiwe, 3C Brooke-Sumner, 1O Sibanyoni
1University of KwaZulu-Natal, 2Human Sciences Research Council, 3University of Cape Town, 4Department of Health, South Africa

BACKGROUND
Policies and legislation which support the integration of mental health into primary health care are not sufficient to ensure transformation of the health care system towards integrated primary mental health care. Although South Africa has a draft policy as well as legislative imperatives to integrate mental health into primary health care (PHC), a review of recent studies indicates that there is a large gap between these imperatives and implementation (1). Mental health plans need to accompany these policy and legislative imperatives which ensure sufficient resources, capacity building and supervisory structures are in place to support integration. The current re-engineering of the PHC system in South Africa as well as the introduction of National Health Insurance (NHI) provides a window of opportunity for inserting integrated mental health care plans that have potential for scaling up.

OBJECTIVE
To describe the formative phase of the Programme for Improving Mental Health Care in South Africa (PRIME-SA) which has focused on the development of a district mental health plan that will facilitate the integration of mental health into the re-engineered PHC service platform in South Africa for four priority disorders (depression co-morbid with HIV infection, maternal depression, alcohol misuse and schizophrenia).

METHODS
Formative qualitative interviews with service providers and service users as well as participatory Theory of Change (ToC) workshops involving policy makers, managers, service providers and service users from national, provincial and district levels were held to inform the development of a mental health plan for Dr Kenneth Kaunda district in the North West Province, where both the re-engineered PHC system and NHI are being piloted.

RESULTS
An appropriate and feasible integrated district mental health plan that optimizes the use of existing resources within a task shifting approach has been developed in partnership with key stakeholders from national through to district level. Key features of the plan include i) the training of PHC nurses in Primary Care 101 which incorporates a local adaptation (Primary Care 101) the World Health Organisation’s Mental Health Gap Action Programme (mhGAP) intervention guide; ii) the development of adjunct psychosocial interventions to be delivered by community health workers and lay counsellors within the re-engineered PHC system in the case of maternal depression and depression comorbid with HIV respectively, and auxiliary social workers from the Department of Social Development in the case of schizophrenia; and iii) diversification of the roles of mental health specialists within the specialist team to provide training, supervision and support to these generalist health care workers.

CONCLUSION
The challenge going forward is the implementation of this plan. Here, PRIME-SA will employ an iterative process, with key stakeholders involved in the initial ToC workshops meeting periodically to identify and implement solutions or innovations to bottlenecks identified within the system. Further, nurturing good governance will be a key intervention to ensure accountability to the commitments made in the mental health plan.

L72 - Evaluation of tuberculosis treatment outcomes in Limpopo Province, South Africa, 2006-2010

1M Pilane, 2L Kuonza, 3E Maimela
1School of Health Sciences and Public Health, University of Pretoria, 2South African Field Epidemiology Laboratory Training Programme, 3Limpopo Province Department of Health

BACKGROUND
Tuberculosis [TB] is a leading cause of disease and death in South Africa. The TB programme in the country aims to cure at least 85% of new TB patients and at least 80% of patients re-treated for TB. We evaluated the treatment outcomes of patients treated for TB in Limpopo province between 2006 and 2010.

METHODS
We analyzed TB treatment data collected by the Limpopo provincial TB control programme between 2006 and 2010. We used the STATA statistical software to calculate treatment outcomes and the factors associated with the favourable outcomes (cure or treatment completion) as opposed to unfavourable outcomes (died, defaulted, failed).

RESULTS
Cumulatively, 116 066 TB patients were diagnosed with TB between 2006 and 2010, and among them 14, 006 (12%) had been previously treated for TB at least once. The provincial tuberculosis incidence rate increased from 172/100,000 in 2006 to 411/100,000 in 2010. Out of those with treatment outcomes, the mean cure rate was 65.5%; the mean treatment failure rate was 2.1% while the mean defaulter rate was 7.1%. Compared to patients who had favourable treatment outcomes, patients who were smear-negative Odds ratio [OR] = 0.36, 95%Confidence interval [CI]: 0.35-0.38, or were on re-treatment for TB [OR=0.79, 95%CI: 0.760-0.827], or had extra-pulmonary TB (OR=0.66, 95%CI: 0.643-0.688) were less likely to have favourable treatment outcomes.

CONCLUSION
The mean cure rate was below the national target of at least 85%. Large proportion of patients without treatments outcomes is a cause for concern. We recommend improved patient counselling with every contact, home visits and enhanced program supervision. Transfer outs should be well arranged with patient involvement.
L73 - Using a Baseline Evaluation to Inform the Capacitation of Clinic Committees in High Prevalence Areas of Gauteng, KwaZulu-Natal and Mpumalanga Provinces in South Africa

1R Rapiti, 1N Nkhwashu, 1R Malahlali, 1G Guloba, 1,2,3F Cleghorn, 1*Madibane in collaboration with the South African National Department of Health
1Sexual HIV Prevention Programme, 2Wits Reproductive Health and HIV Institute, 3Futures Group International and 4United States Agency for International Development

BACKGROUND
The USAID Sexual HIV Prevention Programme (SHIPP) is South Africa’s flagship programme aimed at promoting sexual combination prevention strategies and strengthening leadership using appropriate capacitation interventions. SHIPP takes a multi-sectoral approach by linking the departments of health, basic education, social development and public servants and administration at a national, provincial and local level to align its prevention strategies to the National Strategic Plan for HIV, STIs and TB 2012 – 2016 (NSP).

METHOD
SHIPP works in the following high prevalence provinces: Gauteng, KwaZulu-Natal and Mpumalanga to advocate for HIV combination prevention. Districts with the greatest needs were identified by the provinces. These were:
- Gauteng: City of Johannesburg
- KwaZulu-Natal: Zululand
- Mpumalanga: Gert Sibande and Nkomazi

During February and July 2012, SHIPP initiated a series of health capacitation activities at the district level. One of SHIPP’s aims was to use a baseline survey to capacitate members of the clinic committees. SHIPP developed a survey questionnaire to conduct a. baseline evaluation on the following main variables:
- Functionality of the clinic committees,
- Activities of the clinic committees,
- Role of the clinic committee members,
- Challenges of the clinic committees,
- Best Practices of the clinic committees,

RESULTS
The survey was conducted at twenty primary health care facilities within SHIPP supported districts. Results revealed that:
- Clinic committees were not functional as prescribed by its governance structures.
- A significant proportion of members were unaware and had limited knowledge of relevant health documents i.e. NSP, Provincial Strategic Plan (PSP), DSP and the Integrated Development Plan (IDP).
- There were no well – defined role clarification amongst the local people
- Members were not aware of their roles and responsibilities.
- Minutes of previous meeting were not recorded and documented.

SHIPP documented best practices which clinic committee members cited as means to improve the functionality of the committees within their specified committees.

CONCLUSION
SHIPP used the results to develop interventions aimed at capacitating the clinic committees. These were:
- Develop a framework of coordination for HIV prevention related activities between local political stakeholders, health care workers and the community members.
- Coordinate resources geared towards HIV combination prevention services.
- Capacitation of members on clinic committee’s and its role in advocating HIV combination prevention activities within communities.
- Aligning activities to the District Strategic Plan (DSP) and the needs of the community, using their available resources.
- Capacitating members to monitor implementation of agreed activities as aligned to the DSP.
- Capacitate committee members to develop a framework encapsulating best practices.
L74 - Predictors of unprotected sex among bar patrons in bars and taverns in rural areas of North West province, South Africa

E Rich, S Nkosi, N Morojele
Alcohol and Drug Abuse Research Unit (ADARU), Medical Research Council, Pretoria, South Africa

BACKGROUND
Unprotected heterosexual sex is associated with both alcohol use and sexual relationship power. However, few studies have examined the relative importance of alcohol consumption and sexual relationship power in predicting unprotected sex among bar patrons in South Africa.

OBJECTIVE
To determine the relative importance of alcohol consumption and sexual relationship power in predicting unprotected sex among bar patrons in four bars, in two rural villages in North West province.

METHOD
Fieldworkers administered a structured questionnaire between January and March 2012, in face-to-face interviews, to 406 male and female patrons, of 1472 who were approached during afternoon and early evening hours, in four bars/taverns. The questionnaire assessed patrons' demographic characteristics, alcohol use, sexual relationship power and sexual risk behaviour. A random sampling approach was used to select participants. Bivariate and multivariate logistic regression analyses were performed.

RESULTS
The sample comprised 314 (77.3%) males and 92 (22.6%) females. Their mean age was 31 years (SD=9.93; range=18-62 years). The significant risk factors of unprotected sex were: age 25-29 years as opposed to >34 years (Adjusted OR (AOR)=2.8, 95% CI: 1.37-5.8); Grade 12 education as opposed to >grade 12 (AOR=1.9, 95% CI: 1.0-3.3); non-single as opposed to single status (AOR=3.4, 95% CI: 1.8-6.5); monthly income of R1601-R6400 (AOR=3.3, 95% CI: 1.4-7.6) and above R6400 (AOR=2.6, 95% CI:1.0-7) as opposed to no income; probable alcohol dependence (AOR=2.6, 95% CI: 1.1-5.7) as opposed to low-risk drinking. Sexual relationship power (AOR=1.0, 95% CI: 0.9-1.0) was only marginally significant.

CONCLUSION
In this sample, sexual relationship power was less important as a risk factor for unprotected sex than alcohol dependence. Sexual risk reduction interventions should focus on reducing alcohol consumption and increasing sexual relationship power, particularly among non-single individuals between the ages of 25-29 years with a grade 12 education, and a regular income.

L75 - Rapid health system assessment of human immuno-deficiency virus and tuberculosis services in eight districts in South Africa

C Rousseau, W Jassat, K Rendall-Mkosi
1Health Systems Trust, 2Health Systems Trust, 3University of Pretoria

Addressing the HIV and TB burden in South Africa requires an effective health system. The health system effectiveness needs to be assessed to determine the implications that it has on the current HIV and TB outcomes. The rapid assessment of HIV and TB services was done in eight health districts in South Africa. Understanding the context and status of the HIV and TB services within the public health system would allow the stakeholders within the health system to prioritise and plan appropriate interventions. An assessment and understanding of a health system’s strengths and limitations is needed to design appropriate, specific and sound strategies and interventions to strengthen the health system.

The study is a rapid assessment of HIV and TB services, using the Health Systems Assessment Approach and National Strategic Plan for HIV, AIDS, TB and STI (2012 to 2016), to give a cross-sectional view of the districts and provide Health Systems Trust, the district management and district HIV, AIDS, STI and TB (HAST) programme team with the necessary information to determine current health system performance. This is an observational, descriptive study that applies a variety of qualitative and quantitative instruments to gather data relating to the six building blocks of the district health system as defined by the World Health Organization. Provincial co-ordinators and district mentors who are employees of Health Systems Trust will assist with data collection.

Analysis will include ranking of districts for each of the main programmatic components to identify the districts that need to be prioritized for early interventions and identifying strengths and weaknesses within the District Health System. This will facilitate the development of strategies, using the multi-criteria decision analysis (MCDA) approach, to strengthen the HIV and TB care model in each district. The results and recommendations of the study will be presented.
L76 - Documenting Good Practices in KwaZulu-Natal

T Seunanden

BACKGROUND
The Primary Health Care (PHC) re-engineering strategy aims to strengthen district health care systems by the deployment of PHC outreach teams and clinical specialist teams to improve maternal and child health and strengthening school health services. Documentation of good practices enables an evaluation of PHC re-engineering by disseminating lessons learned from the implementation of PHC initiatives.

OBJECTIVE
To document PHC initiatives implemented in KZN and share lessons learned and challenges.

METHODOLOGY
The HST consulted with key stakeholders from the National Department of Health to select 9 PHC initiatives that required documentation. Qualitative research methods were used to conduct a series of 44 key stakeholders-interviews, 26 staff-focus group discussions, and 16 field observations for the initiatives. A thematic analysis was conducted and the themes were supported by quantitative data and literature reviews.

RESULTS
The study identified lessons learned and challenges across nine sites. The factors that ensured sustainability and replicability included community ownership, community mobilisation, collaboration between DoH and stakeholders, and transition plan for scaling up small NGO-run models to full-scale implementation by the DoH. Some of the challenges highlighted included inconsistent funding, resource challenges, capacity for follow-up care and resources and equipment.

CONCLUSION
KZN has a long and rich history implementing PHC. It is important to document the experiences in order to highlight the challenges and lessons which can inform NDOH and other stakeholders on how to support and scale up PHC initiatives.

L77 - Community dialogues and household survey as innovative strategy for community participation in health

W Shasha
Letsema Circle Trust

BACKGROUND
Community participation in health has been talked about but implementation has been a problem

OBJECTIVES
1. To conduct community dialogues with a view to determine health priorities, and discuss intervention strategies. 2. To determine the oral/reported prevalence and distribution of tuberculosis, HIV/AIDS, diabetes, and hypertension. 3. To test effectiveness of a new TB scale/Chart for monitoring TB control at community level.

METHODS
1. Three community dialogues were conducted by Facilitators from Letsema NGO for determining health priorities, and training of clinic committees, community health workers. 2. The survey was implemented by 30 unemployed youths using GPS enabled mobile phones that relayed the data to an internet server, whence it was downloaded for analysis and creation of disease maps. 3. The new TB scale/chart was tested using existing datasets

RESULTS
1. The community dialogues brought together all the key stakeholders and community leaders, including traditional leaders, councillors, and senior officials from government departments; and also facilitated training of clinic committees, and community health workers. 2. 4,574 households were interviewed, with a population of 16,151 and average family size of 3.53. The reported prevalence of TB, HIV, Diabetes, and hypertension, was 1.8%, 0.9%, 2.5%, and 0.9% respectively. 3. The new TB Chart, developed on the basis of international norms for TB control, provided a suitable illustration of levels of TB in the community

CONCLUSION
Community dialogues plus household survey can serve as a key strategy for facilitating community engagement in the control of the disease burden
L78 - Paediatric death auditing – starting up ChIP in a district hospital
A Smith
Church of Scotland Hospital, Tugela Ferry

BACKGROUND
The burden of child mortality in South Africa is high, especially in rural areas. In order to be able to target interventions towards reducing mortality at a district level, accurate data on causes of mortality is required. The Child Problem Identification Programme (ChIP) provides a means of auditing deaths to identify both causes and associated factors in childhood mortality and is a tool to develop appropriate interventions.

OBJECTIVE
To set up ChIP in a district hospital paediatric ward, generate data for analysis, inform hospital policies, and target interventions to reduce childhood mortality in our district.

METHODS
Beginning February 2012, all paediatric deaths audited in ward. ChIP database set up, 2011 data entered retrospectively. Ward meetings held to discuss cases. Data and cases presented to PHC and doctors meetings. ChIP data analysed in order to identify areas for improvement.

RESULTS
The major findings included a very high case fatality rate for malnutrition (33%), with sepsis as the most common cause. Based on findings of common modifiable factors, interventions were implemented, including malnutrition training for doctors and sisters, improving ward monitoring, addressing malnutrition and HIV at clinic level, and engaging with the community regarding herbal enemas.

CONCLUSIONS
With appropriate support, adequate expertise, sufficient motivation and an enthusiastic team, it is possible to set up a paediatric death auditing programme and use data to change policy and practice on a local level.

L79 - “Are we actually doing what we think we are doing”. A review of morbidity and mortality meetings at an academic hospital in Gauteng
A Takalani, J Moorman
University of Witwatersrand, School of Public Health

BACKGROUND
The successful implementation of National Health Insurance requires the improvement of quality of care and clinical outcomes. The systematic review of diagnosis, care and treatment against explicit criteria (clinical audits) is essential to improving clinical outcomes and morbidity and mortality (M&M) meetings are core to these audit processes. Such meetings are held in some hospitals, albeit in the absence of a national or provincial policy framework to guide their execution and there is no clear indication that these meetings in their current form contribute to the improvement of clinical outcomes.

OBJECTIVES
The study was undertaken to determine the frequency and effectiveness of M&M meetings at one large academic hospital.

METHODS
Questionnaires developed from international guidelines for M&M meetings were used to interview senior clinicians from twenty clinical units and four clinical executives about the purpose, preparation and execution of meetings. The researcher observed and audited the execution and effectiveness of meetings in six units.

RESULTS
Two thirds of the clinical units hold M&M meetings but they tend to be ad hoc and unstructured. The organisation of meetings with regards to scheduling, attendance, minute taking, case selection and ensuring a non-persecutory environment did not facilitate the achievement of the objectives of meetings – providing teaching opportunities, improved quality of care and identification of clinical management error.

CONCLUSION
Morbidity and mortality meetings need to be part of a broad clinical governance policy framework and institutional guidelines should direct the objectives for meetings, adequate planning and preparation and how the meetings should be conducted before they can be used as an indicator for compliance with the National Core Standards and contribute to improved quality of care.
L80 - Use of the AUDIT / AUDIT C to identify peri-urban primary child carers at risk of alcohol abuse in KwaZulu-Natal, South Africa

M Taylor

University of KwaZulu-Natal

BACKGROUND
A community study investigated alcohol abuse among child carers. Aim. To screen carers of 4-6 year olds in KwaZulu-Natal for alcohol abuse and investigate associated factors.

METHODS
A cross sectional study used the AUDIT /AUDIT C to screen for hazardous / harmful use of alcohol. Associations were investigated between alcohol abuse and socio--demographic factors, HIV status of carer /child, child’s disability, and carer mental health disorders.

RESULTS
Of the 1434 carers (97.8% females) 15.9% reported alcohol consumption and 12.7% drank occasionally, but 2.2% reported consumption of alcohol that placed them in the hazardous range, and 1.0% indicated harmful use of alcohol. The statistically significant factors associated with alcohol abuse were the HIV positive status of the carer and whether the carer perceived the child to have a severe disability. The odds of alcohol abuse increased almost five times (P=0.001) if the carer was HIV infected, OR 4.97 (95% CI 1.86, 13.26); and decreased if the carer did not report a child with a serious disability, OR 0.29 (95% CI 0.10,0.88) (P=0.03). The odds of a carer abusing alcohol also increased significantly (by 1.25 times), P=0.01, 95% CI 1.05, 1.48, if the household had experienced hunger in the past week. Alcohol abuse by the carer was not found to be significantly associated with the child’s HIV status nor with the caregiver’s mental health status.

CONCLUSION
Screening for alcohol abuse and counseling is therefore required in primary health care settings to address the particular needs of HIV positive carers.

L81 - A day in the life of a community health worker: Exploring the roles of community health workers working on non–communicable diseases in an urban township

1L Tsolekile, 1T Puoane, 1H Schneider, 1N Levitt, K Steyn

1University of the Western Cape, School of Public Health
2Chronic Disease Initiative in Africa, University of Cape Town

BACKGROUND
Community Health Workers (CHWs) have provided health care for decades. In many developing countries in the 90s there was a renewed interest on CHWs propelled by AIDS epidemic, the emergence of other communicable diseases and the inability of the formal health system to provide adequate care for people with non-communicable diseases (NCDs). This burden of disease posed a challenge to human resources in the health settings; however CHWs have been suggested as a solution to this crisis. There is a need to explore the use of CHWs in the prevention of NCDs and to also clarify their roles in the prevention and control of NCDs.

AIM
To explore the roles and activities of community health workers belonging to an NGO contracted by government to provide care for chronic non communicable diseases in urban Cape Town

METHODS
A qualitative study using participant observations of daily activities of 10 CHWs was conducted. Data was analysed through thematic content analysis.

FINDINGS
Analysis of the field notes revealed several primary themes. Themes identified included advisory, facilitation, liaison and education roles. In addition, CHWs delivered medication, conducted physical activity sessions and took anthropometric measurements. Provision of health information was important and crucial in the prevention of NCDs. However, lack of uniformity in health messages and availability of educational material was a challenge that affected the delivery and quality of education sessions.

CONCLUSION
Community health workers perform multiple tasks which require specific skills. Understanding the daily activities of CHWs is important in creating appropriate curriculum relevant to their roles.
L82 - Evaluation of the program for prevention of vertical transmission of HIV at National District Hospital

M van Lill, W Steinberg, P Chikobvu
Department Family Medicine, UFS, Bloemfontein

INTRODUCTION
A study was done in 2010 to evaluate the program for prevention of vertical transmission of HIV from mother to child at National District hospital in Bloemfontein. The study also aimed to determine the vertical transmission rate. A previous study in the same area showed a transmission rate of 21% prior to the introduction of intervention.

METHOD
A prospective cohort study of mother infant pairs participating in the PMTCT program in the Free State was conducted. A cohort study design was the most suitable for the purpose of evaluating the effectiveness and success of the PMTCT program. The method of data collection for this study was to conduct an interview, administration of a questionnaire and drawing some blood for testing. The data required for this study were medical history, physical examination, breastfeeding practices, demographic information and blood test results.

The main purpose of the study was 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 Free State Province. Authorization to do the study was obtained from the Ethics committee of the University of the Free State.

Participants were recruited at the Labour ward in National District Hospital. Information was obtained by completion of questionnaires by recruiting doctors.

Results were analysed by the Research Unit, Universitas Hospital and presented in several figures in this document.

RESULTS
The results were obtained by including 121 participating mother infant pairs. Although only 29 infants were returned for HIV testing, a total of 65 infants’ HIV PCR results were known. The additional 36 results were obtained from local clinic where infants were tested.

CONCLUSION
The study showed a vertical transmission rate of 3.1%. This result correlates with figures demonstrated, that were obtained from NHLS department of Virology and a National study of the MRC which showed a vertical transmission rate of 3.5%. When compared to a similar study in 2000 where there was no antiretroviral intervention in the same area there is a definite decrease in the vertical transmission rate of HIV from mother to child a decade later with preventive measures available.

L83 - Task-shifting in practice: Activities performed and training and supervision of community health workers in three Local Service Areas of the Free State

E Janse van Rensburg-Bonthuyzen, N Jacobs, N Kigozi, A Rau, M Engelbrecht
Centre for Health Systems Research & Development, University of the Free State

BACKGROUND
For more than a decade now, South Africa has been facing a debilitating TB/HIV syndemic amidst acute professional health worker shortage. As this situation prevails in most developing, resource constrained countries, the WHO released task-shifting guidelines in 2007 to help resolve professional health worker shortages. The guidelines contain a list of important HIV programme-related activities that different health worker cadres are able to execute safely and effectively.

OBJECTIVE
This paper reports on tasks performed by community health workers (CHWs) in three Local Service Areas in the Free State in relation to the WHO list of tasks that can be (safely and effectively) performed by CHWs. It further considers their training and the supervision of their work.

METHODS
Personal interviews were conducted with 209 CHWs linked to 28 clinics and communities, in both rural and urban areas. Data was analysed quantitatively using bi- and multivariate tests, and qualitative using content analysis.

RESULTS
Preliminary analysis suggests that tasks performed by the CHWs are well within the scope of WHO recommendations. However, the training to perform tasks and supervision thereof proved to be lacking. Most CHWs were trained to perform their respective tasks but a substantial proportion (64.9%) stressed a need for additional training. Furthermore, CHWs reportedly received inconsistent and insufficient supervision.

CONCLUSION
While the tasks performed by the CHWs were predominantly in line with WHO recommendations, additional training and supervision of their work requires attention especially in the wake of the implementation of primary health care re-engineering in the Free State.
L84 - Lay perspectives on the influence of HIV/AIDS prevention programmes among South African adults

H Van Zyl

SA Medical Research Council

BACKGROUND
The HIV/AIDS epidemic is in its 4th decade; while the UNAIDS recommended HIV/AIDS prevention programmes as critical tools to reduce HIV incidence. The question arises why South Africa still has the largest burden, 5.6 million people, living with HIV/AIDS.

OBJECTIVE
To explore lay perspectives of rural and urban South African adults on influences of HIV/AIDS prevention programmes, recommending strengthening of public health strategies.

METHODS
Epistemologically, an interpretivist qualitative approach from a social constructionist perspective guided the research, examining how lay people make sense of HIV/AIDS information, linking meaning to their experiences and construct perspectives. Purposive sampling guided recruitment of 12 rural coloured and 12 urban black participants for separate male and female focus group discussions; and 8 whites for individual interviews between ages 20-50 years. Thematic content analysis enabled systematic reviews of transcribed interviews. Emerging themes were compared and contrasted, leading to a 2-layered analysis that showed inter-relationships, patterns and deviant cases.

RESULTS
Main themes influencing participants’ lay perspectives included HIV/AIDS knowledge; sources influencing knowledge; how knowledge was internalised and perspectives formed. South Africans displayed high levels of HIV/AIDS knowledge but a disconnect among coloured and white participants emerged of not being at HIV-risk due to the general focus on blacks. People made sense of HIV/AIDS within their social realities, predicted by the health belief model, determined by perceived risk and self-efficacy to change behaviour.

CONCLUSION
HIV/AIDS prevention programmes made valuable contributions to educate some groups. The key recommendation was reorientation of programmes to be socio-culturally adapted to all South Africans for greater public health impact on HIV incidence.

L85 - Assessment of the therapeutic efficacy of artemether-lumefantrine in the treatment of uncomplicated Plasmodium falciparum malaria in northern KwaZulu-Natal

1H Vaughan-Williams, 1U Raman, E Rasweisi, E Immelman, H Reichel, K Gate

1Umkhanyakude Health District Office, 2Malaria Research Unit, South African Medical Research Council, 3Malaria Control Programme, Umkhanyakude, 4Manguzi Hospital, 5Mosvold Hospital, 6Bethesda Hospital

BACKGROUND
Artemether-lumefantrine (AL) has been used as the first line treatment of uncomplicated Plasmodium falciparum malaria in northern KwaZulu-Natal since 2001. The recent history of malaria epidemics in KwaZulu-Natal indicates that the therapeutic effectiveness of the anti-malarial medication used to treat patients suffering malaria is vital for malaria control and must be regularly assessed.

OBJECTIVES
To quantify the failure proportion after 28 days of a sample of patients treated for uncomplicated P. Falciparum malaria with artemether-lumefantrine, and search for molecular markers of resistance to artemether-lumefantrine and chloroquine.

METHODS
An observational cohort of patients diagnosed as suffering from malaria by rapid diagnostic tests had blood spots taken for molecular analysis at diagnosis and after 28 days.

RESULTS AND CONCLUSIONS
The findings will be presented, including a discussion of logistical challenges inherent in studying antimalarial drug resistance during a period of low malaria incidence.
L86 - I manage to bring them up with it although this money is too little: Mothers experiences of the child support grant in South Africa

Wanga Zembe-Mkabile, Tanya Doherty, David Sanders, Debra Jackson

¹ Health Systems Research Unit, Medical Research Council, ² School of Public Health, University of the Western Cape, ³ Department of Social Policy and Intervention, Oxford University

BACKGROUND
Child cash transfer programmes are increasingly being used as policy instruments to address child poverty and improve child health outcomes in developing countries. There is very little literature on the contribution of the South African Child Support Grant (CSG) to poor households and how being in receipt or not in receipt of the CSG makes a difference in the lives of children.

OBJECTIVE
We explored the experiences and views of CSG recipients and non-recipients from four diverse settings in South Africa.

METHODS
A qualitative sub study of a large randomised controlled trial, PROMISE-EBF. Thirty two in-depth interviews and a focus group discussion with 7 women were conducted with recipients and non-recipients of the CSG in 4 diverse settings in South Africa, namely Paarl (Western Cape), rural Rietvlei (KZN), Umlazi (KZN), and Site B Khayelitsha (Western Cape).

RESULTS
Mothers expressed that the CSG is an important source of financial support for their children. Many mothers reported being reliant on the CSG as their only source of income. While many mothers acknowledged the usefulness of the CSG in their households, they also emphasised its inadequacy to fully meet the basic needs of their children. CSG recipients experienced frequent food shortages and often turned to informal credit to make it through each month. This highlights that the CSG is not enough on its own to lift children out of poverty.

CONCLUSION
To maximise its impact, the CSG needs to form part of a basket of poverty alleviation strategies directed at children and their families.
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Posters
P001 - The hearing abilities of employees in a glass and aluminium workshop

S Abdoola

University of Pretoria

The study aimed to determine the hearing abilities of employees in a glass and aluminium workshop. Employees in industry are at risk of noise induced hearing loss if they are exposed (without hearing protection) to a loud noise level i.e. more than 85dB (A) averaged over an eight-hour working day. It is imperative to achieve synchrony between the legislation regarding hearing conservation in industry and implementation of hearing protective measures to protect employees, promote productivity and prevent loss of human life or money. It is therefore crucial to determine the effect of noise on the hearing abilities of the employees. A quantitative and qualitative contextual descriptive survey was utilized to explore the aims of this study. It was conducted at an industry where a Hearing Conservation Programme was implemented, focused on the use of hearing protection devices. Noise levels were measured and employees’ hearing was tested to evaluate the effect of noise on their hearing. Although noise has been proven to affect hearing abilities, the results of this study show that the participants, although exposed to noise daily, do not have hearing loss. This may be attributed to the fact that the participants use hearing protectors when exposed to noise at work. Included in the study are limitations and implications for further research.

P002 - Traditional herbal medicines as an emerging healthcare system for the treatment and maintenance of diabetes and hypertension in South African communities

O Aboyade, G Hughes, T Puoane

University of the Western Cape

INTRODUCTION
Traditional herbal medicines (THM) are widely used throughout South Africa for chronic conditions. Chronic diseases (CD) are growing burden worldwide and account for 63% mortality globally and 86% in South Africa. Hypertension and diabetes alone accounted for 7.6 million and 4.6 million deaths worldwide in 2007 and 2011 respectively. This study investigated the use of THM targeting key CD to provide better understanding of the treatment patterns by participants in South African communities.

METHOD
A cross-sectional study design using the Prospective Urban Rural Epidemiology (PURE) cohort was conducted to determine the self-reported prevalence and reason for THM use among South African adults for chronic conditions: diabetes and hypertension. Participants (N=443) were recruited from both rural Eastern Cape and urban Western Cape regions of South Africa.

RESULTS
The overall prevalence of THM use was 31%, of which 17% was for chronic conditions. Eleven percent of these were for diabetes and 20% for hypertension. THM was primarily recommended by family/friends/self-administered (46%/67%); used 1-3 times daily (40%/49%) for several years (67%/74%) for the diabetic and hypertensive cohorts respectively. Most participants used THM for prevention/maintenance of good health (30%) and treatment of chronic conditions (34%).

DISCUSSION
Health workers should be aware of the dual use of THM and conventional medicines by diabetic and hypertensive patients including the potential for herb/drug interaction which have implications for drug adherence.
P003 - Far East Rand Hospital (FER) Home Brewed Alcohol Poisoning, 5-9 September 2011

F Abrahams, K Tint, L Kuonza, R Kellerman, J Leballo, C Mahlase, S Seroka

School of Health Systems and Public Health-University of Pretoria, South Africa Field Epidemiology and Laboratory Training Program, Ekurhuleni Department of Health and Social Development, Far East Rand hospital

BACKGROUND
Home brewing of alcohol is common in informal settlements. The practice of home brewed alcohol is not well regulated. The police are responsible for monitoring premises serving alcohol and not the environmental health practitioners (EHP) who are only responsible for food premises. Far East Rand Hospital notified 5 cases of alcohol poisoning in September 2011. Seven men were given the homemade brew by a neighbour in the informal settlement.

OBJECTIVES
To describe the demographic profile, severity and cause of the alcohol poisoning and make recommendations to reduce future incidents.

METHODS
Descriptive case study, using hospital records and interviews with two surviving cases to identify the source of the poisoning.

RESULTS
Seven men consumed the alcohol, aged 22-29 years. All were unemployed and reside in an informal settlement. Five men became ill (attack rate 71%) and were admitted to FER hospital, two died (case fatality rate 40%). Both the deceased had less alcohol but it was their first time to consume home brewed alcohol. Police tried to locate the source, but was unsuccessful. Autopsy results confirmed one death due to pneumonia and the second of unknown cause. Toxicology results are still outstanding.

CONCLUSION
Home brewed alcohol can be lethal (CFR 40%) Stricter regulations and policing are needed to ensure safe alcohol brewing. As environmental health practitioners are inspecting food premises, including alcohol premises will assist in enforcing regulations. Health education

P004 - The role of environmental health services in primary health care in South Africa

M Agenbag
Joe Gqabi District Municipality

BACKGROUND
The health care system in South Africa (SA) mainly focuses on the secondary level of Primary Health Care (PHC); therefore it makes health care delivery inefficient and unsustainable in the context of a developing country. With the re-engineering of PHC this model is maintained.

OBJECTIVE
To inform health policy and decision makers about the role, potential and impact EHS can and should play in reducing the burden of diseases through preventing ill health in achieving some of the MDGs.

METHODS
A record review and a completed case study in the North Eastern Cape will serve as the basis to highlight the role that Environmental Health Services (EHS) can play in attaining sustainable and efficient health care delivery.

RESULTS
EHS can assist the health system to a great extend to focus on the primary- and primordial levels of PHC.

CONCLUSION
EHS should enjoy more focused developmental attention and consideration.
P005 - The level of compliance with the current tobacco control legislation with regard to smoking restrictions in public places in Thulamela municipality, Vhembe district, Limpopo Province, South Africa

H Akinsola, T Nemakhani,
Dept. of Public Health, University of Venda, Thohoyandou

The rapid increase in tobacco consumption and its spread around the world represents a great concern to public health both globally and at the national level. Tobacco is a very particular good/commodity, it is legal, but its consumption represents serious health risks. Tobacco is the second major cause of death in the world and the fourth most common risk factor for disease worldwide; it kills 4.9 million persons each year, which is equivalent to one in ten adult deaths worldwide. This trend is rendered even more alarming when looking at the projections showing that the number of deaths will double in the next 20 years. The aim of the study was to evaluate the level of compliance by smokers and the owners of places of entertainment with the current tobacco legislation with regards to smoking restrictions in public places in Thulamela Municipality. The target population consisted of all the registered licensed places of entertainment in Thulamela municipality. A convenient sample of 56 places of recreation/entertainment was taken and data was collected with the use of an observation log/checklist. Data was analysed descriptively using the SPSS 14.0 version. The result of the study showed varying level of compliance with the legislations, ranging from medium, low to very low. Furthermore, over 98% the establishments did not effect structural changes/alteration as required by the legislation. The result showed that whether the places of entertainment were located in the town or a village, compliance to the legislation was poor. The study recommended that the environmental health officers working in the municipality should develop interventions to promote compliance to the existing Act and legislation on smoking by both the smokers and the owners of the places of entertainment.

P006 - Indoor air risk factors and respiratory health across five sites of Johannesburg

P Albers, N Naicker, A Mathee
Environment and Health Research Unit, Medical Research Council

BACKGROUND
Indoor air pollution is of great concern as a result of indoor fossil fuel burning, indoor smoking and dampness and mould, which can result in a number of respiratory complications.

OBJECTIVE
To assess prevalence, risk factors and related respiratory health outcomes in five urban settlements.

METHODS
Data were collected through an indicator study conducted across five sites in Johannesburg (Hillbrow, Bertrams, Riverlea, Braamfsherville and Hospital Hill). The Health Environment and Development (HEAD) study, collected a broad spectrum of data on various topics in order to assess living conditions and health status over a five year period (2006-2010).

RESULTS
The prevalence of acute respiratory symptoms in children under 5 years over the five year period ranged from 53% in Bertrams and Hillbrow to 71% in Braamfsherville. The prevalence of acute respiratory symptoms in adults ranged from 49% in Hillbrow to 64% in Braamfsherville. Risk factors such as housing type, leaking roofs and pipes and mould were examined. Some behavioral risk factors were also examined such as indoor smoking and indoor fossil fuel use. Bivariate analysis found some risk factors to be significantly associated with respiratory symptoms in adults and children under five years; these include lack of ventilation and mould. Further logistic regression will be carried out in order to better understand these relationships.

CONCLUSION
These preliminary results demonstrate the possible importance of poor quality housing in preventable respiratory conditions around Johannesburg. This reveals an excessive burden placed on the health care system. Therefore, it is of great importance to lower the prevalence of acute respiratory symptoms through addressing some of the root causes.
P007 - Unpacking capacity development: a systemic investigation of an inter-country collaborative capacity development initiative to strengthen leadership for health workforce development

W Amde, U Lehmann-Grube
School of Public Health, University of the Western Cape

BACKGROUND
The paper draws on a collaborative capacity development initiative of four African universities to build leadership capacity for health workforce development. This paper hopes to contribute to discussion on capacity, which is shrouded with lack of conceptual clarity on what it means and how it can be developed.

OBJECTIVE
To explore how and why conditions at individual and organizational level and surrounding environment interact to enable or constrain realization of capacity development.

METHODS
A qualitative research approach, specifically case study, is adopted. Participants are selected purposively and include actors and stakeholders in the partner institutions and outside. Data is collected using participant observation, interviews, and document reviews. The collated data is analysed using thematic analysis. Triangulation is used to generate valid and reliable information. Reflexivity in navigating insider and researcher positionality and implications for the research is applied.

RESULTS
Implementation of activities was complex and non-linear, which is attributed to organizational culture, and complex relationship between multiple actors in academic institutions, ministries of health, and multilateral organizations. With local actors leading the process in their respective context, the initiative is making progress. However, lack of autonomy and institutional capacity to champion the initiative has made realization of capacity development precarious.

CONCLUSION
Building individual, organizations and systems capacity is complex and multifaceted. It depends on interaction of numerous factors internal and external to actors- individuals or organizations, and hence requires a systemic approach to navigate the process.

P008 - Vitamin A status in a cohort of pregnant women from areas with different levels of air pollution and HIV Status

1 K Asharam, 2 F Veldman, 3 R Naidoo, 4 A Chuturgoon
1,3Discipline of Occupational and Environmental Health, 2Discipline of Dietetics and Human Nutrition, 4Discipline of Medical Biochemistry, University of KwaZulu-Natal, South Africa

BACKGROUND AND AIMS
Disorders in childhood are probably initiated in-utero, compounded by adverse birth outcomes. Environmental pollution, nutrition and genetic polymorphisms interact to result in adverse outcomes. The aim of this investigation was to establish whether an association exists between vitamin A status of pregnant women, stratified by HIV status, from an industrially polluted south Durban as compared to less polluted north Durban.

METHODS
This secondary analysis formed part of pilot birth cohort study of 102 pregnant participants (Durban South: n = 51; Durban North: n = 51). A nutritional questionnaire was administered and blood vitamin A levels measured. Participants were stratified by HIV status, because of the association between HIV and vitamin A status.

RESULTS
The prevalence of adverse birth outcomes was higher in south Durban (odds ratio=1.3, 95% CI: 0.4-3.6), adjusted for ethnicity, education, income, HIV status and cigarette smoke (personal or passive). Within the overall sample, the actual blood vitamin A levels were significantly lower (p<0.05) in the HIV negative group, compared to the HIV positive group, which is consistent with the scientific literature. In contrast, the reported intake of Vitamin A in the HIV positive group was significantly higher when compared to the HIV negative group. Among those HIV positive, vitamin A concentration was lower in the south Durban women (0.31±0.16mg/l compared to 0.35±0.10mg/l). This difference was negligible in the HIV negative group (0.36±0.07mg/l compared to 0.37±0.11mg/l).

CONCLUSIONS
In this study it is evident that HIV significantly confounds the impact of environmental pollution on vitamin A status in pregnant women.
P009 - Abstract for presentation on student satisfaction in CLC's

M Bac
University of Pretoria

BACKGROUND
The Department of Family Medicine of the University of Pretoria started a new course for mid-level medical health workers in 2009. These Clinical Associates do a 3-year Bachelor's degree at the University of Pretoria. Most of their training takes place at 18 rural district hospitals in the Mpumalanga and Gauteng provinces.

METHODS
In 2010 and 2011 a survey was done using the MedEd IQ questionnaire to measure BCMP II and III student satisfaction and to assess the functionality of a rural teaching platform in district hospitals.

RESULTS
The results show that most students were satisfied with the learning opportunities, the learning environment and their preceptors. The students want more learner’s involvement in the programme and this was especially the case with the final year students. The Med IQ is a useful instrument to monitor the development of the BCMP programme and plan interventions for improvement.

P010 - Context, culture and disability: A narrative inquiry into the life experiences of individuals affected by disability in a rural area.

1J Barratt, 2C Penn

1Department of Speech Pathology and Audiology, School of Human and Community Development, University of the Witwatersrand,
2Health Communications Project, University of the Witwatersrand

BACKGROUND
Despite the high prevalence of disability in South Africa, a paucity of knowledge exists regarding the lived experience of individuals affected by disability. Previous research has primarily depended on quantitative measures, or has relied on reports by family members and caregivers acting as proxies, thus perpetuating the notion of voicelessness and marginalisation amongst adults with disabilities.

OBJECTIVE
The project aimed to document the lived experience of 30 disabled adults living in 12 rural villages in Mpumalanga, South Africa.

METHODS
A qualitative design underpinned by the principles of narrative inquiry was employed. Data were analysed using a combination of Clandinin and Connelly’s (2000) Three Dimensional Narrative Inquiry Space and thematic analysis. Interpretation of experiences involved examining the relationship between personal and social perspectives, by scrutinizing the reflexive interplay between content of narratives and the way in which stories were told.

RESULTS
Results revealed that adults with disabilities experience structural, physical, emotional, sexual and financial abuse, affecting the development of strongly constituted identities, and threatening the ability to live up to gender and cultural expectations. Infiltrating the narratives was the ominous presence of death within the community. This combination of factors prevented participants from envisaging any form of individual or collective future.

CONCLUSION
Narrative inquiry proved to be a powerful tool for understanding the participants’ lifeworld and highlights how personal and social perspectives are mediated through context. This holds implications for service provision, policy evaluation and implementation and provides a new framework for understanding identity formation amongst persons with disabilities.
P011 - Service delivery & disability: Perspectives of service users in a rural community in the Eastern Cape

M Booi
University of Cape Town

Using participatory rural appraisal (PRA) methodology this case study aimed to describe the perspectives of people in a rural village, in the Eastern Cape, South Africa, regarding disability inclusive public sector service delivery in health, education and social development services. Since the advent of democracy in South Africa, rural poor and disabled people have always lagged behind in terms of their enjoyment of socio-economic rights.

Participatory mapping and trend analysis methods were used to obtain participants' perspectives pertaining to disability inclusive service delivery in Mpoza village. Through the village gatekeepers, key informants between ages of 17 and 72 years were identified for participation in the study.

The study revealed that challenges to disability inclusive service delivery in Mpoza area were multi-layered. There were challenges related to physical infrastructure, personal (behavioural) and administrative (systemic) challenges. Approaches to improving service delivery should be structured to deal with these challenges. Putting policies and improving infrastructure should be regarded the beginning of a process towards disability inclusion. Planning should also be cognisant of the fact that the history of poor services in rural areas has shaped the perspectives of rural people in a particular way. There should also be efforts to understand local beliefs and power issues that may affect disability inclusion to avoid unintended consequences.

P012 - Providing neurodevelopmentally appropriate care for premature neonates

E Bostock
Witbank Hospital

Prematurity, which is more common if the mother is HIV-positive, is associated with many long-term health problems and premature babies are known to be more at risk of developing disorders such as Autism Spectrum Disorders and learning problems than their full-term peers. However, there are simple, low-cost, low-tech measures that can be implemented to minimise the effects of prematurity on the infant’s growing brain. Environmental modifications to better simulate the intrauterine environment and infant-friendly handling techniques (including recognising and reducing the infant’s stress), not only encourage better development, but also enhance the mother’s relationship with her new baby. Lower stress levels also make the baby more physiologically stable and immunologically stronger, resulting in healthier babies who grow faster and can be discharged earlier.

Environmental modifications include interventions such as reducing noise levels, providing day/night cycles and implementing Kangaroo Mother Care. Handling techniques include aspects such as using sucrose solutions for pain relief for painful procedures, providing boundaries, calming touch and techniques to safely work with premature infants. The techniques promote better bonding and also empower mothers to care for their babies, reducing the likelihood of them suffering from postnatal depression.

The target would be delegates from all professions. The workshop would give them the basic knowledge and skills to implement neurodevelopmentally friendly changes to the neonatal unit of any hospital. Ideally two hours would be needed for the workshop.
P013 - Using theory of change as an approach to design complex mental health interventions: Lessons from PRIME

E Breuer, M DeSilva, R Shidaye, T Petersen, A Fekadu, N Naiku, M Jordans, R Ramaswamy, C Lund

1 Alan J. Flischer Centre for Public Mental Health, Department of Psychiatry and Mental Health, University of Cape Town, 2 London School of Tropical Medicine and Hygiene, 3 Public Health Foundation of India, 4 University of Kwa-Zulu Natal, 5 Addis Ababa University, 6 Makerere University, 7 Healthnet TPO, Nepal, 8 University of North Carolina, Chapel Hill

BACKGROUND
There is growing recognition that many health interventions are necessarily complex and require careful consideration of their design, evaluation and synthesis (1, 2). Theory of Change (ToC) is a structured participatory approach to design and evaluation originally developed for the evaluation of complex community initiatives (3) which have many commonalities with complex health interventions.

OBJECTIVE
The purpose of this study is to describe how a ToC approach can be used in the design of complex mental health interventions.

METHODS
The ToC approach was used in the planning stages of the Programme for Improving Mental Health Care (PRIME), which aims to integrate mental health care into primary and maternal healthcare in pilot districts in Ethiopia, India, Nepal, South Africa and Uganda. ToC was used within and across countries and included workshops with researchers and stakeholders in all five sites. We describe this process, compare the experiences of the investigators across countries and describe how the process contributed to the development of district mental health care plans.

RESULTS
ToC provides a systematic approach to designing complex mental health interventions by explicitly mapping the causal pathway that will lead to expected outcomes and compelling stakeholders to articulate their assumptions and the rationale underlying the interventions. In addition, ToC workshops create a forum for knowledge exchange between researchers and other stakeholders, particularly those in implementation sites.

CONCLUSION
ToC is a useful approach which can be used to guide the design of complex mental health interventions.

P014 - Healthy eating through the eyes of South African primary school learners

C O’Brien, D Pio, V Trivella, N Mbethe, S Mthembu, M Makwela, L Naples

School of Health Systems and Public Health, Faculty of Health Sciences, University of Pretoria

INTRODUCTION/ AIM
The main aim is to establish how much primary school learners know about health and healthy eating as well as what they view as barriers preventing them from eating healthily and what they find encourages/helps them to eat healthily.

METHODS
Interviews were then conducted with the 37 grade 6 learners whose parents consented and whom also signed their own consent form. We divided them amongst the researchers and interviewed them in private. The data was tabulated and the different questions were presented as pie and bar graphs.

RESULTS
It was found that the girls had a better understanding of what healthy food is but in general most students knew that fruits and vegetables are healthy. Despite knowing this, most of them had sandwiches in their lunch boxes and not much fruit and vegetables. We found that a large proportion of learners eat healthy at home, but those that don’t, say it’s mainly because their parents don’t think it’s necessary to cook healthily every day. Generally, learners felt that their tuck shop does not sell healthy food but also that they aren’t tempted to eat unhealthily by their friends. When asking about the promoters they experienced we learned that their school has a vegetable garden and that they are taught about healthy eating in school.

CONCLUSION
From our study we can see that the learners we interviewed knew a substantial amount about health and healthy eating, education in class being a major promoter of this knowledge, but they did not necessarily implement it.
P015 - Evaluation of oral health education and promotion services offered as part of maternal and child health services in the Hammanskraal area

A Brooks, M Rosslee, N van der Westhuizen, B Sumbulu, A Ayo-Yusuf

1 School of Health Systems and Public Health, Faculty of Health Sciences, University of Pretoria
2 Department of Community Dentistry, Faculty of Health Sciences, University of Pretoria

INTRODUCTION

Early childhood caries (ECC) is a significant public health problem in South Africa. South Africa has therefore adopted a strategy to integrate oral health promotion with maternal and child health care, but only limited information is available on the level of integration of these services in practice.

OBJECTIVES

To determine the degree to which pregnant women and caregivers, to children under the age of four, receive oral health education services and to determine caregivers’ preferences regarding oral health services at a local primary health care clinic.

METHODS

This was a descriptive cross-sectional study that involved a convenience sample of 56 pregnant women and caregivers of under-four children attending the clinic over the three days of the study. Providers (n=6) were also interviewed on the oral health services they offer and on any possible constraints that may be considered a barrier to offering oral health education to expectant mothers and new mothers.

RESULTS

Of the study participants, 94.6% (n=53) were females and 91.1% (n=51) have ≤Grade 12 education. About 80% felt they could do something to prevent their child from getting dental cavities and that it was wrong to put a baby to sleep with a bottle. Over 60% reported that they had never received oral health education either during ante-natal visits or immunization visits, but 95% indicated that they would like to receive oral health education during these visits.

CONCLUSION

This study has identified high level of unmet need for oral health education within maternal and child health services.

P016 - Measuring the impact of a Rural Doctor’s Support Programme to improve the clinical effectiveness of doctors in remote public sector facilities across South Africa

B Carpenter

Africa Health Placements

BACKGROUND

South Africa’s (SA) rural public health sector is critically understaffed – 43% of the population is served by less than 8% of doctors, and doctor-to-patient ratios are five times less than urban areas. Research has indicated that doctors working in rural areas receive inadequate management support, which can lead to a sense of personal and professional isolation.

OBJECTIVE

The programme’s aim is to reduce professional and personal isolation and other factors affecting attrition, including morale in the workplace and relationships with hospital management. Through this programme AHP ultimately hopes to retain more doctors in public healthcare facilities in deep rural areas.

METHODS

In response, we have designed and implemented a programme of intervention through the appointment of independent Practice Managers (PM) assigned to rural facilities which provide HIV services. Started in January 2011, the programme now provides support to 8 districts. These PMs were tasked with reducing isolation and improving motivation levels amongst doctors.

RESULTS/LESSONS

During 2011, the programme successfully facilitated 527 support visits to health care facilities where PMs have provided much needed support. As independent facilitators, they have been able to leverage key relationships at all levels to quickly resolve crippling issues and to help PEPFAR-partners and government managers to identify systemic issues critical to successful healthcare.

CONCLUSION

This programme illustrates that a grassroots approach, where doctors are supported through addressing day-to-day problems and improving relationships between management and doctors, can help to address the challenges faced by rural doctors.
P017 - The non-initiation of anti-tuberculosis therapy in smear-positive pulmonary tuberculosis in eThekwini district of KZN, 2007

INTRODUCTION
Tuberculosis (TB) is the leading cause of disability and death from a curable infectious disease globally, with the greatest burden in the low income countries. Early detection and prompt treatment of patients with sputum smear-positive pulmonary tuberculosis (PTB) is key in reducing the spread of TB, as these patients represent an infectious pool if left untreated.

AIM
To evaluate the magnitude of and the category documented for non-initiation of anti-TB treatment (primary default) among sputum smear-positive TB cases, from the high burden facilities of eThekwini Health District.

METHOD
A secondary data analysis of the registers for TB suspects was done and all new patients that were diagnosed as sputum smear-positive in 2007, were identified and a list created. Data included the demography, dates of specimen collection and result return, treatment status, date of treatment initiation and treatment status and the break down of records with no lab result. The TB treatment registers were used and linked with TB suspect registers by using the patient’s names, sex and age and home address as a link. The case definition of “primary or initial defaulter” is a patient who did not have a treatment start date in TB suspect register and whose name did not appear on the treatment register after one week of diagnosis. Analysis of data was done using Epilinfo (version 3.5 1).

RESULTS
A total of 44,987 TB suspects were registered within the high burden facilities of eThekwini in 2007. Of these 4049 (9%) were diagnosed as sputum smear-positive. The age ranged from 4 to 83 years (mean age 33.8 ± 11.8 years). Smear positivity was statistically high among the females of 15 – 29 age group and among the males in the age group of 30 and above at \( \chi^2 = 38.78, p \text{-} value < 0.001 \). The overall cumulative incidence of TB smear-positive for the high burden health facilities was 260 per 100,000 population (95% CI 252.2 - 268.0). The cumulative incidence was higher among the males than the females with 286.5 cases (95% CI 274.5 - 299.1) and 231.4 cases per 100 000 population (95% CI 225.8-247.5) respectively, and this difference was statistically significant. Primary default among the sputum smear-positive PTB patients was 725 (17.9%) in 2007. There was no statistical difference between the male and female patients who were not initiated on anti-TB treatment. Among the 114 primary defaulters that were traced, 53 (47%) patients were traced but not found while sixty (53%) patients were reported to have died before the commencement of treatment. Overall, only 42% of the total sputum samples had the sputum turn-around time that was less than 48 hours. Among the TB suspects that had no record of the laboratory results, the main problems were related to incorrect specimen collection and handling.

CONCLUSIONS
The high primary default rate of 17.9% among sputum smear-positive patients is a serious issue that undermines the national goals of the TB Control Programme (NTCP) and that needs to be addressed urgently.

P018 - Clinical predictors for the need for relaparotomy in complicated appendicitis

B Bulajic, V Kong, S Van der Linde, C Aldous, D Clarke

Department of Surgery, Department of Community Medicine, Postgraduate Research Facilitator, Pietermaritzburg Metropolitan Hospitals Complex, Nelson Mandela School of Medicine, University of KwaZulu Natal, South Africa

INTRODUCTION
Complicated appendicitis associated with severe intra-abdominal sepsis is common in the developing world. There is currently limited evidence in predicting which patient requires relaparotomy for control of on-going sepsis in the setting of complicated appendicistis. This prospective study aimed to construct a clinical prediction model to aid the decision making process.

METHODOLOGY
A prospective database was maintained and all cases of acute appendicitis from Sep 2010 to Mar 2012 were reviewed. ‘Simple’ was defined as any non perforated appendix, while ‘complicated’ denotes perforation, with associated intra-abdominal contamination. Logistic regression analysis was carried out and a clinical predictive model was constructed using clinical parameters available (basic demographics, clinical presentation, laboratory results and operative findings).

RESULTS
A total of 300 cases were reviewed, of which 120 required relaparotomy, while the remaining 170 did not. Both samples were statistically comparable for the purpose of analysis. The most significant factors predictive of the need for relaparotomy were: female gender and intra-operative finding of four quadrant sepsis. The overall predictive success was 90.7% (sensitivity: 82.5% and specificity: 96.1%). The ROC curve indicates an AUC of 0.949 (CI 95%: 0.923 – 0.975) with p-value < 0.001.

CONCLUSIONS
Patients with complicated appendicitis often require relaparotomy for control of on-going sepsis, but delay in decision making is common due to its uncertain clinical course. Our proposed model may be useful in selecting those at high risk of which a mandatory relaparotomy is absolutely essential as a part of the definite management.
P019 - The quality of free health care: the perceptions of the patients of Lyttelton clinic

J Piper, R Coetzee J Constantino, M Ferreirinha, B Louw, J Ribeiro, L Wolvaardt
School of Health Systems and Public Health, Faculty of Health Sciences, University of Pretoria

INTRODUCTION
For the Public Health Care System to function in South Africa, it is imperative that patients comply with the structure of the system. Failures to comply within the structure may be due to the lack of value of Public Health Care perceived by its patients.

OBJECTIVES AIM
To determine the perceived value of the service provided by a district-level clinic to its patients by ascertaining a financial quantitative value and understanding the qualitative reasoning behind this assignation.

METHOD
A cross-sectional descriptive observational study of a hundred adult patients of the Lyttelton district-level clinic was undertaken.

RESULTS
Despite many respondents being unable to convey their evaluation of the service as a single financial value, respondents still indicated that they valued the service. The response rate of the study was 100%. The return rate to the clinic was recorded as 99% and the majority (64%) of those returning claimed that this was due to the excellent treatment and care that they receive at the clinic. The majority of respondents (69%) that had visited a private general doctor in the past indicated that they perceived the service administered by the clinic to be of equal value to that received in the Private Health Care System.

CONCLUSIONS
The majority of patients do perceive that the service provided by this district-level clinic is beneficial and adequate. However, due to the number of patients visiting the clinic from outside the district, it may be concluded that other clinics may not offer the same level of service.

P020 - How does the transition from being a professional nurse to becoming a PHC facility manager influence leadership and management in Mitchell’s Plain, Cape Town, South Africa?

J Daire, N Nqana, L Godlwana
University Cape Town

On behalf of the District Innovation, Action and Learning for Health System Development (DIALHS) project, a partnership between the health departments of 1. the City of Cape Town and 2. the Provincial Government of the Western Cape and the Schools of Public Health at the 3. Universities of Cape Town and 4. the Western Cape

Planning and management are critical elements of leadership and governance within the South African health system. However, they are rarely considered in South African research that seeks to strengthen public health systems. In seeking to strengthen sub-district planning and management, DIAHLS project has adopted an action-learning approach. Working through cycles of collaborative action and reflection in Mitchell’s Plain sub-district of Cape Town, specific areas of activity are negotiated and agreed with local health managers. All are then implemented either by health managers, with support from the research team, or by researchers, through engagement with managers.

This poster will provide a detailed overview of the approach and methods of one activity which seeks to understand whether and how the transition from being a professional nurse to becoming a PHC facility manager influences leadership and management practice. Through engagement with the primary researcher, participating facility managers have reflected on: their life and work, in life history interviews; critical managerial incidents which they have recorded in personal diaries; and colleagues’ perceptions about their leadership practices gathered by the researcher. Researcher field notes and journaling have also fed into these reflective engagements. Analysis of the patterns of experience will then inform a two stage collective reflection process among participating managers and with a wider group of sub-district managers, intended to generate ideas about how, in future, to support managers in their transition from nursing to leadership positions. The reflection process will also consider the value and challenges of this approach to health systems research.
P021 - Bridging the gap: Quality improvement for National Core Standards

1S Davids, 1N McCreadie, 2A Mkhize
1BroadReach Healthcare, 2Gert Sibande District Department of Health

BACKGROUND AND OBJECTIVES
Achieving facility compliance to National Core Standards (NCS) is imperative to the success of National Health Insurance (NHI). During baseline NCS audits, all facilities in Gert Sibande District (GS), a pilot district for NHI, were determined to be non-compliant. GS Department of Health (DoH), with support from BroadReach Healthcare (BRHC), developed an approach to support quality improvement (QI) initiatives aligned to NCS for implementation in four sub-districts.

METHODS
Mixed methods were used to collect data, including structured interviews, reviewing routine monitoring data and assessing training and workshop evaluation forms.

RESULTS
Thirty-four GS DoH delegates attended a one-day facilitative management and leadership training in the context of QI and a one-day quality action plan (QAP) development workshop. A quality assurance (QA) mentor provides technical assistance with QAP-related queries and offers motivation on an on-going basis. All mentored facilities (29) in the four supported sub-districts have completed facility-level QAPs and operational managers have assumed responsibility for their implementation. Notable self-reported results include improved and engaged attitudes, superior planning and acceptance of accountability by key stakeholders and improved communication and collaboration between different levels of DoH.

CONCLUSION
Facility non-compliance with NCS is a ubiquitous and timely issue in South Africa, and the development and implementation of QA activities is a first step towards reaching compliance. This approach shows promising results of being a scalable way to transform QA skills and capabilities while accomplishing rapid change and work results in resource limited settings.

P022 - Developing team communication skills and reducing barriers to adherence in an HIV/AIDS clinic using drama techniques

M Dawson, C Penn, J Watermeyer, P Mdluli
Health Communication Project, University of the Witwatersrand, South Africa

HIV/AIDS has significantly changed health care practices. The need for high adherence and regular clinic visits places pressure on health care providers (HCPs) and patients. Nurturing successful communication within the health care team and between HCPs and patients becomes an important goal for promoting adherence to antiretroviral therapy. This poster will describe a longitudinal study conducted at a rural HIV/AIDS clinic in South Africa. Using ethnographic methods and interviews with patients and HCPs, the main challenges and barriers to care were highlighted with thematic content analysis principles. A two-day intervention programme for HCPs at the clinic was planned based on this analysis with the goals of enhancing communication processes and team building and offering opportunities to practice communication skills and techniques. Drama was an essential ingredient of the workshop, particularly aspects of psychodrama and forum theatre as described by Augusto Boal and Judith Butler. The workshop was documented using video recordings and the impact of the workshop was measured immediately afterwards as well as 5 months later via questionnaires and interviews. This poster will report on the aspects of team communication which seemed to be sensitive to these training methods as well as those which were not. Implications for the use of these techniques in the training of health care workers and teams will be discussed.
P023 - The Implications of Trans-disciplinary Roles, and Varying Communication Techniques on Primary Health Care and Service Effectiveness

M Dawson

ACTS Clinic, Health Communication Project, University of the Witwatersrand, South Africa
Health communication, Trans-disciplinary role, PHC

In global HIV management, adherence to life-long anti-retroviral drugs is emphasised and is also a vital necessity that is to be addressed at a Primary Health Care (PHC) level. However, the challenge to ensure this need is complex and goes beyond the medical model of care and towards psychosocial behavioural model as well as varying communication techniques, is real yet key to moving forward. This challenge of tackling behavioural change will be shared by an occupational therapist (OT) whose role has evolved and developed into being that of provocateur and catalyst for facilitating interaction and communication between health care providers and community members in such a way that mutual empowerment and ownership of one’s own health care is ignited. The dynamics of this role are enriched when the OT also takes on a researcher role and effectively becomes a participant-observer. This presentation will thus describe the perspectives of a participant observer/OT in a longitudinal health communication project involving a drama intervention. The presentation will focus on the trans-disciplinary role that is required in the context of an HIV clinic and the impact of drama on the perspectives of a team delivering care to a rural population. Insight into the process embarked by researchers, and the consequent development of community and work relationships and its impact on PHC, will be shared and explored to highlight characteristics that speak to health ownership and service effectiveness.

P024 - Does primary care have a role in meeting the health care needs of transgender persons?

E de Vries

Mitchell’s Plain District Hospital, Cape Town Metro District Health Services and School of Public Health and Family Medicine, University of Cape Town

BACKGROUND
There is an international trend in the medical care of transgender persons to move away from an over-emphasis on highly specialised care, towards including primary care providers. The World Professional Association for Transgender Health published the 7th version of the Standards of Care for the Health of Transsexual, Transgender, and Gender Nonconforming People in 2011 (SOC 7).

OBJECTIVES
The aim of this critical analysis is to identify the potential for the new SOC 7 to improve access to care in the context of primary care in South Africa. Objectives include reviewing current services in South Africa, identifying obstacles to care and identifying enabling factors.

METHODS
A review of current services in South Africa in both primary and tertiary settings has been undertaken. Information was obtained from literature, conference proceedings, verbal communication with providers as well as clients’ narratives.

RESULTS
Centralised care is unsustainable and inequitable. Primary care settings may have the potential to manage transgender clients. The SOC 7 framework lends itself to supporting devolvement of the psychological and endocrine aspects of care. Localisation of the SOC 7 recommendations is needed. To be formally operationalised, guideline development as well as sensitisation of health professionals are critical.

CONCLUSION
SOC 7 provides a framework to enable increased access to transgender care in South Africa.
P025 - Transforming Medical Students into Socially Accountable Agents of Change: A community service group activity

V Dorsamy, S Knight, L Ticha
School of Laboratory Medicine and Medical Sciences

BACKGROUND/RATIONALE
The challenge for educators in the 21st-century is to enhance formative and transformative education to ensure health professionals are socially accountable and become change agents to strengthen health systems in an interdependent world. A novel community service activity was introduced for first year medical students from University of KwaZulu-Natal in 2012. Self-selected groups of students identified disadvantaged communities in proximity to their term-time residence in which to carry out 16 hours of community service in a programme called ‘Making a Difference: community service group activity’. We describe the types of communities identified by the students in which they conducted their community service.

METHODS
This education systems research used an observational descriptive sectional study design. Data was collected from all the groups about their chosen disadvantaged communities.

RESULTS
All 208 students were organised into 55 groups of 3 or 4 students. One third of groups elected to work with youth groups. A quarter identified orphanages or places of safety and another quarter targeted non-governmental organisation involved in HIV care and prevention activities. The rest identified a range of communities including communities of the homeless and street children.

CONCLUSION
In an innovative approach to formative education, first year medical students self-selected a wide variety of disadvantaged communities which formed the basis for their community service group activity. This is first attempt to move away from facility or home-based informative learning.

P026 - Psychiatric co morbidity in people living with HIV in Africa - an explorative and prevention intervention study

M dos Santos
Foundation for Professional Development

BACKGROUND
Psychiatric and HIV co morbidity are not well understood within the African context. Studies have shown that up to half of people infected with HIV have a current psychiatric disorder.

METHOD
PubMed, Google scholar, CAB Abstracts and article references were searched to identify studies published in English between 2003 and 2011 that reported mental health and HIV co morbidity in health care and community settings. Twenty-two eligible studies were examined and information on study characteristics extracted. All of the identified studies were conducted in Africa and varied in terms of study design and population. Based on this critical need to reach some of the most vulnerable people living with HIV and AIDS (PLWHA), the investigator proposes to provide a combination prevention intervention approach that optimizes the test, treat, and retain (TTR) strategy to reach high-risk, vulnerable, PLWHA. A randomized clinical trial (RCT) design will be implemented with an estimated 1000 PLWHA to compare the Mental Health Intervention (MHI) program plus HIV counseling and testing (HCT), with HCT alone as standard practice. The tracking of PLWHA participants’ viral load, CD4 count and ARV adherence will be undertaken so as to determine if mental health intervention has a favorable impact on these indicators, in comparison to HCT alone participants. A clinical interview and the Rorschach Inkblot Test will be conducted prior to the RCT on a small sample of participants so as to explore potential mental health co morbidity and psychodynamics of PLWHA.

RESULTS
Recent advances in the treatment of HIV-infected individuals has led to an increase in the life expectancy of people living with HIV, turned HIV into a chronic condition and increased the likelihood of neuropsychiatric manifestations of the disease. Studies have shown that up to half of people infected with HIV in Africa have a current psychiatric disorder. The rates of mental disorders in HIV infected populations are in excess of that found in the general African population. In some patients, especially in resource poor settings, psychiatric disorders are the initial presenting clinical manifestation of HIV disease.

CONCLUSION
Despite well established relationships between mental health and HIV/AIDS, and the WHO recommendation that attention to the psychosocial needs (which includes prevention and treatment of mental health problems) of people with AIDS, mental health care is yet to be integrated into HIV treatment programmes in many African and other resource poor countries. The findings of this review of African research strongly support the compelling necessity for integrated HIV and mental health services in various African settings, and for the need for further empirical study.
P027 - Perceived benefits of male traditional circumcision at Libode rural communities in the Eastern Cape Province of South Africa

M Douglas, T Maluleke, M Ntsaba, M Nakin
Department of Health Promotion, School of Allied Health Professions, Faculty of Health Sciences, Walter Sisulu University, Mthatha

INTRODUCTION
In South Africa, male circumcisions are performed by various cultural groups on young adults as a rite of passage from childhood to manhood. At the end of 2010, around the Eastern Cape Province statistics showed that there was a total of 3438 hospital admissions of initiates, 147 of initiates with penile amputations and 277 of deaths, 244250 legal initiates, 12226 illegal initiates and 132 police arrests related to traditional circumcision illegal offences.

AIM
The aim of this study is to explore information regarding perceived benefits of traditional circumcision related to boys aged 12-18 years at Libode rural communities in Eastern Cape Province of South Africa.

METHODS
The study is a mixed method study that composes both quantitative and qualitative approaches. Cross-sectional survey was conducted in the form of a self-administered questionnaire and key informant interviews conducted using semi structured interview guide. Qualitative methods allow for greater exploration of issues and concerns. These methods also offer the opportunity to develop rapport with rural communities, to generate networks, and to encourage community involvement in the process. Qualitative data collection methods used included key informant interviews and focus group discussions.

RESULTS
In response to the benefits of circumcision, 38.9% of the circumcised respondents (n=1036) wanted to be respected in their communities, 33.5% respondents indicated that they wanted to be able to keep their private parts clean, 12.2% wanted their families to host a party in their honour, 12% were not sure about benefits of circumcision, 3.4% their benefits were to get new clothes after circumcision initiation. The excerpt further supports the benefit of circumcision as being prevention of Sexually Transmitted Infections (STI’s) and HIV and AIDS. The key informant explained that the foreskin stores dirty substance after sexual intercourse which conveys STI’s from one partner to another.

P028 - Superheroes of Primary Health Care

A Dreyer
Centre for Rural Health, University of Witswatersrand

INTRODUCTION
As part of the Primary Health Care (PHC) revitalization drive by the Department of Health, the category of ‘Community Health Worker’ will be formally established. (Versteeg, 2011) These Community Health Workers (CHWs) will be employed by Government; form part of the ward based PHC outreach team and at a household level, strengthen health promotion and prevention so as to improve the health in their communities.

This research will explore the current knowledge and skills among Community Health Workers relating to Health Promotion in Ramotshere Moiloa Sub District, Ngaka Modiri Molema District, North West Province.

METHODS
The methodology used for this research is a focus group discussion to develop the questionnaire that will be used to collect the required data. The study population is 300 Community Health Workers working in the Ngaka Modiri Molema District. The online survey in the form of a questionnaire will be completed used once before the training intervention is received and once after training has been received. Pre and post-test comparisons will be made.

CONCLUSION
This study will highlight the training gap and demonstrate the impact of direct capacity building among a group of people who can directly influence community health. The study will also identify other challenges experienced by Community Health Workers such as the lack of co-ordination, lack of supervision and the absence of evidence to evaluate the impact of health promotion activities.
P029 - Exercise model in harmony with community lifestyle

S Glangkarn, V Prommasatayaport
Assistant Professor, Faculty of Public Health, Mahasarakham University, Mahasarakham Province, Thailand

BACKGROUND
Regular exercise is good for health but it is quite difficult for people in local community because they have to spend their times on work rather than doing exercise. Thus exercise model that can be integrated with people’s lifestyle need to be considered. If people can do exercise as part of their daily lives regularly, they will be healthy and fit.

OBJECTIVES
The purpose of this project was to make exercise a part of community lifestyle that can be run continuously and long lastingly.

METHODS
A descriptive study had been conducted in 20 villages in Wungsang Sub-district, Kaedum District, Mahasarakham Province, Thailand. Data were collected using questionnaires, recording form of physical fitness test and observational record.

RESULTS
The findings from a survey revealed that most people in communities needed to participate in an exercise project. The participants undertook physical fitness test including grip strength, muscle strength, flexibility, lung explanation, and body mass index before starting exercise program. There were exercise trainings by the sports science professionals such as stretching, Pong-Thai (long stick) exercise, elastic exercise, and aerobic dance. Exercises have been successfully run in communities regularly and continuously. People accepted benefits of exercise on their health, not only physical health but also mental and social health.

CONCLUSION
The effective exercise project led to the health promotion for people in Wungsang Sub-district. The local administrative organisation, therefore add this project in the master plan every year as the public policy due to community need, benefit, and ownership.

P030 - The role of intermediate care facilities (ICF) in addressing the present and future rehabilitative health care needs of people with disabilities in the Western Cape, South Africa

C Goliath
Health Systems Research, Division of Community Health, Faculty of Health Sciences, Stellenbosch University

BACKGROUND
De-hospitalised care component of community based services was renamed intermediate care and reviewed to be aligned with Healthcare 2020. The aim of the survey was to identify gaps in services for rehabilitative health care needs.

OBJECTIVES
To conduct an audit of adult patient needs and services at ICF.
To describe the current human resource and skills mix required to provide rehabilitation services within ICF.

METHODS
A cross sectional survey of ICF facilities were done. The facilities were stratified, patients randomly selected and health care staff and facility managers were conveniently selected. Health care staff, facility managers and patients were requested to complete questionnaires. A statistician assisted with the statistical analysis of data.

RESULTS
14 facilities, 138 patients, 134 staff and 14 facility managers participated in the study.
The clients’ level of independence is highest on feeding (n=92) and dressing (n=75). The areas where patients are dependent relate to stairs (n=119) and mobility (n=107). Participation in life activities and getting around is the most limiting activities. The staff (n=83) indicated that there is a need for a worker that could assist with rehabilitation. The facility managers raised concerns regarding the costs of employing additional categories of staff, and the risks of poorer quality of care. The staff identified feeding (40%), bathing (33%), wound care (32%) as the activities that they spend most of their time on.

CONCLUSION
Little emphasis and support for rehabilitation is being provided at ICF. Rehabilitation has been identified as a need to be provided as part of holistic care by these facilities.
P031 - Socio-economic status and body composition in urban South African women

1P Gradidge, 2N Crowther, 3S Norris, 3L Micklesfield

1Centre for Exercise Science and Sports Medicine, Faculty of Health Sciences, University of the Witwatersrand, South Africa, 2MRC/Wits Developmental Pathways for Health Research Unit, South Africa, 3Department of Chemical Pathology, National Health Laboratory Service, University of the Witwatersrand, Johannesburg, South Africa, 4UCT/MRC Research Unit for Exercise Science and Sports Medicine, Department of Human Biology, Faculty of Health Sciences, University of Cape Town

As South Africa has undergone nutritional and epidemiological transitions, the prevalence of obesity has increased significantly. Previous work has shown that nutrition indices, such as obesity prevalence, increases with socio-economic status (SES) in children, however, this has not been investigated in adult South African women. Thus, the aim of the present study was to investigate body composition in relation to SES in urban black South African women. Anthropometric and SES data were collected in the mothers/caregivers of the Birth to Twenty cohort, Soweto. The key domains of SES investigated included household asset ownership (for example television (TV) ownership), household access to electricity, water, and sanitation, and educational attainment. The sample consisted of black women from urban areas in and around Johannesburg, South Africa (n=1251). The study showed that 50% of the study population were obese. When adjusted for age, BMI (p=0.01) and hip circumference (p=0.0004) both increased with SES. These variables are both markers of subcutaneous adipose tissue volume. However waist circumference, which is a proxy indicator of visceral fat volume, showed no relationship with SES (p=0.81), and consequently waist-to-hip ratio (WHR) correlated negatively with SES (p=00004). This data demonstrates a differential effect of rising SES on proxy measures of body fat depot sizes in African urban females, an observation that must be confirmed by the specific assessment of visceral and subcutaneous adipose depot volumes.

P032 - Bridging the gap: exploring attitudes and beliefs of nurses and patients about co-existing traditional and biomedical healthcare systems in a rural setting in KwaZulu-Natal, South Africa

M Grant

Centre for Rural Health, University of KwaZulu-Natal

BACKGROUND
Healthcare in South Africa takes place within a diverse cultural context, with perceptions about health strongly linked to cultural beliefs and values. Biomedical health care professionals, particularly nurses, are exposed to and expected to cope with cultural challenges on a daily basis with little or no training on how to do so. In this paper, we explore nurse and patient attitudes to and beliefs about how the systems of healthcare co-exist, what issues this raises, and how nurses and patients address these issues in their daily practice.

METHODS
Four in-depth focus group discussions were conducted with nurses and patients at a deep rural, district hospital in northern KwaZulu-Natal, South Africa. Participants were selected based on availability and their willingness to contribute to the discussion.

RESULTS
Traditional and biomedical healthcare co-exist and are used simultaneously with the healthcare seeking pattern of patients traversing multiple systems of care. Currently both patients and nurses have developed strategies to address this by steering a pragmatic course to minimize risks and, by doing so, bridging the gap between the two mediums of healthcare.

CONCLUSION
More research is needed to understand what illnesses are mostly seen as traditional, how this gap can be effectively addressed, and how models of co-delivery of different types of healthcare can be best evaluated.
P033 - Cause-of-death data at the health district level of the Western Cape, South Africa

P Groenewald, I Neethling, D Bradshaw, W Msembsri, R Matzopoulos, T Naledi, J Daniels, M Dombo
1Burden of Disease Research Unit, Medical Research Council of South Africa, 2Department of Health, Provincial Government of the Western Cape, 3Cape Metropole Health Information Group, City of Cape Town

INTRODUCTION
The local level mortality system was upgraded to full ICD-10 coding of cause-of-death using IRIS automated software. This paper illustrates how mortality data can be utilized in the context of uncertain data quality.

METHODS
Deaths from natural causes were coded to ICD-10 using batch processing in IRIS. Injury deaths were obtained from mortuaries and external causes assigned to ICD codes. Deaths were tabulated according to the South African national burden of disease list, and ill-defined causes were proportionately redistributed to specified causes by age and sex. Baseline rates for each health district were calculated for 5 major aggregations selected on the basis of the burden magnitude and concerns about mis-attribution of causes: cardiovascular and diabetes, major infectious diseases, cancers, respiratory causes and injury deaths.

RESULTS
In 2009, 19.5% of all deaths in the Western Cape were coded as ill-defined, while completeness of death registration was estimated at 83.7%. Based on broad groupings, cardiovascular and diabetes death rates were highest amongst all the districts, whereas respiratory death rates were the lowest. Central Karoo district had the highest death rates for all the major causes.

CONCLUSION
Data quality issues such as medical certification, data capturing, coding as well as complete capture of deaths needs to be addressed. While data quality is being improved, the broad groupings of causes provide useful mortality rates that can be used to inform health services.

P034 - Use of EMLA to decrease venepuncture pain in children: A technique that equally comforts patients, parents and clinicians

T Gwetu, M Chhagan
University of KwaZulu-Natal, Durban

BACKGROUND
Children in health care centres undergo multiple painful procedures daily. However, little is known about frequency of these procedures and interventions to manage the pain. Eutectic mixture of local anaesthetics (EMLA) is currently the most frequently prescribed topical agent. This study reviews evidence for the use of EMLA cream to reduce the pain children experience during venepuncture.

OBJECTIVES
1. Describe the efficacy of EMLA in treating pain.
2. Discuss the potential adverse effects of EMLA in children.

METHODS
Systematic review of randomized controlled trials and a cross-sectional survey of children aged 6 to 8 years from rural KwaZulu-natal. The primary outcome was analgesic efficacy.

RESULTS
EMLA cream was effective for paediatric venepuncture pain during both intravenous cannulation and phlebotomy. Results from trials comparing the efficacy of EMLA with infiltrated local anesthetic were inconsistent. EMLA was well tolerated and safe in older infants and children. Local side effects reported include temporary erythema, oedema, allergic contact dermatitis and hyperpigmentation. Methemoglobinemia was the most concerning and potentially life-threatening complication, particularly in neonates.

CONCLUSION
Children generally find needles threatening and anxiety provoking. Routine and appropriate use of topical agents will comfort not only young patients, but also the families and paediatric practitioners. EMLA is the yardstick by which other topical agents are measured. Well-designed clinical trials are needed to further assess newer topical agents in regard to relative efficacy, safety, and feasibility in children.
P035 - Attitudes of nurses to patient care at a district hospital in KwaZulu-Natal

L Haskins, N Mbaso, Z Masinga, M Khumalo, C Horwood
Centre for Rural Health, University of KwaZulu Natal, Durban; Department of Health, KwaZulu Natal.

BACKGROUND
The quality of patient care is influenced by the attitudes of nurses. Attitudes mimic a person’s beliefs about situations which influences the way individuals act or behave. It is important that nurses have appropriate and positive attitudes towards patient care if good quality care is to be provided.

OBJECTIVE
To explore the attitudes of nurses towards patient care at a rural district hospital in KwaZulu Natal from the perspective of nurses and patients.

METHODS
We conducted an explorative qualitative study in one district hospital; focus group discussions were conducted with professional nurses, enrolled nurses, enrolled nurse assistants and with patients. Data was audio-recorded, transcribed and analysed using a thematic approach.

RESULTS
A total of 13 focus groups discussions were conducted in October 2010, nine with nurses and 4 with patients. While some nurses loved nursing for altruistic reasons other nurses actively disliked nursing because of staff shortages, high patient loads, absenteeism, and poor interpersonal communication which affected the care they gave to their patients. Nurses blamed their poor behavior on management issues. Patients described both good and bad nursing care they had received.

CONCLUSIONS
Even though some nurses blamed poor nursing practice on unresolved management issues all nurses should be personally accountable for the care they provide.

P036 - Factors influencing recruitment and retention in a rural district in KwaZulu-Natal

L Haskins, S Phakathi, M Grant, N Mntambo, C Horwood
Centre for Rural Health, University of KwaZulu Natal, Durban

BACKGROUND
There is a global shortage of health professionals, particularly in developing countries. In South Africa most health professionals work in urban areas leaving rural areas underserved. Recruitment and retention of health workers in rural areas is vital to improve the quality of health care provision in these areas.

OBJECTIVE
To investigate factors influencing recruitment and retention of health professionals in one rural district in KwaZulu Natal

METHODS
We conducted a cross-sectional descriptive quantitative study of health professionals working in all 8 hospitals in the selected district. A structured questionnaire was given to all health professionals on duty on the day of data collection and collected within 24 hours. Data was entered using EpiData 3.1 and analysed using SPSS (v18).

RESULTS
A total of 417 self-administered questionnaires were completed between June and July 2011 from 3 urban and 5 rural hospitals. The proportion of respondents with a partner and children was similar in urban and rural hospitals but significantly fewer rural health professionals lived with their partner and children. Hospital accommodation was considered unsatisfactory in rural and urban areas, but rural health professionals were significantly more likely to live in hospital accommodation. Rural health professionals reported that both family and accommodation would influence them to leave the hospital. Job satisfaction was similar among both urban and rural health professionals.

CONCLUSIONS
Providing family accommodation could improve recruitment and retention of health professionals in rural areas.
P037 - The WRHC Taung career counselling outreach; The first three years
J Heese, D Hlawe, A Juggernath, N Laxa, McMoloke, M Neumann, N Nhlapo
Wits Rural Health Club, University of the Witwatersrand, Gauteng, South Africa

BACKGROUND
For the third year now, the Wits Rural Health Club went to Taung to present to high school learners there the multitude of professions available in the healthcare sector. The first chairperson of the WRHC is from the area and we have since established a good working relationship with the schools we visit.

OBJECTIVE
In order to address the vast shortages of health care workers in rural areas; we aim to improve health care worker recruitment from the rural area of Taung. Research shows that students recruited from rural areas are most likely to go back to work there.

METHODS
A group of volunteer students in the Faculty of Health Sciences present to grade 11 & 12 high school students on the various career possibilities in the health care sector. The learners are also informed of bursaries available to them, such as the Wits Initiative for Rural Health bursary for students of North-West.

RESULTS
At the moment, a process is underway of assessing if there has been an increase (and if so, to what extent) in applications from the three schools we have been visiting in the last three years. For this we have approached the Wits’ Student Enrollment Centre.

CONCLUSIONS
As we are still analysing our results, no firm conclusions can be drawn. However, we are confident that whatever we find, it will be helpful in advising other University Clubs who plan to do a similar program in how to best make use of their available resources.

P038 - The role of HR in the retention of public health-care professionals in the rural areas
M Hlongwa
Foundation for Professional Development

BACKGROUND
Urbanisation has been a serious concern for rural health-care institutions. Many rural health-care institutions face challenges of service delivery due to shortage of health professionals among other things. These professionals come-and-go in the rural communities, resulting to patients not getting the service they deserve.

OBJECTIVE
Research shows that HR plays a vital role in retaining employees. Lack of adequate professionals and resources compromises service delivery. The main objective here is to indicate possible interventions for retaining health-care professionals in rural areas.

METHODS
The study was quantitative in nature. The cross-sectional correlation research design was applied with the measuring instruments collated into a questionnaire format. The study focused in health-care professionals of one district in the rural area.

RESULTS
There were more than 130 participants. The analysed data indicated that health-care professionals aged 18-35 seem to be the ones interested in leaving, yet participants above 35 years were keen to stay in the rural area. Lack of resources was the main issue. In addition, poor working conditions and training were among the negatives raised by the participants.

CONCLUSION
The results indicate a need for HR to design and implement significant retention and HR plans to overcome high vacancy rates in the public health-care institutions in rural areas, to improve performance in the public health system. There are further suggested interventions aiming at retaining professionals in rural areas.
P039 - The perceived roles of CCGs and the acceptability of implementing a community-based maternal, neonatal, child and women’s health intervention in KwaZulu-Natal, South Africa

C Horwood, L Haskins, M Grant, N Mntambo
Centre for Rural Health, University of KwaZulu-Natal, Durban

BACKGROUND
Community caregivers (CCGs) could provide accessible, appropriate community-based services to women and children and improve coverage of interventions during pregnancy and the post-natal period. This study aimed to assess perceptions of CCG roles and explore the acceptability of implementing a community-based maternal and child health (MCH) intervention.

METHODS
Focus group discussions (FGDs) were conducted to explore perceptions, attitudes and experiences with CCGs, and investigate the acceptability of a community-based MCH intervention. A structured questionnaire was administered to mothers of children under 5 years attending clinics.

RESULTS
Data were collected in KwaZulu-Natal between August and December 2011. FGDs were conducted with professional nurses (5), CCGs (5), and child carers (9) in five districts; interviews were conducted with 1192 women attending a clinic in each of nine districts. Reported CCG coverage was low; current roles of CCGs were identified as primarily providing health education, treatment support and home-based care. Relationships between CCGs and health professionals was poor at times, and referral and reporting systems were not standardised. Although community members felt the proposed MCH intervention was acceptable, concerns were expressed about home visits by male CCGs or conducted during the early postnatal period or to discuss HIV. Lack of trust in CCGs were raised as a major barrier by both professional nurses and community members.

CONCLUSION
Provision of a community-based MCH intervention was largely acceptable to the community members, but CCG roles will change substantially. Reporting and supervision of CCGs should be improved and issues of trust and professionalism should be addressed.

P040 - The Sociocultural-Linguistic Barriers in Health Care - A case-study of health professional-patient relationships in a rural South African hospital

N Hussey
Rural Support Network of UCT

BACKGROUND
Language barriers exist between the isiXhosa-speaking patients and the English-speaking staff in hospitals. This becomes a barrier to patients’ access of health care and prevents health professionals providing the best possible care. There is a need to understand the effects of the language barrier in the context of health care provision and to develop effective solutions.

OBJECTIVES
The case-study at Madwaleni hospital was designed to understand and explore this communication problem, to understand the adaptive mechanisms used to overcome it and identify possible future solutions.

METHODS
Qualitative interviews were conducted during December 2011. Seven doctors, one occupational therapist and one physiotherapist were formally interviewed to find out what impact communication problems had on their work and what were possible solutions. Nurses were also informally interviewed.

RESULTS
The language barrier decreased the efficiency of work and the provision of holistic treatment, increased frustration levels, was time consuming and decreased empathy, approachability, and confidentiality. This extended beyond language into a culture of paternalistic medicine practiced and desired – which affects patients understanding of their disease, consent and treatment adherence. The current adaptations to overcome problems include use of untrained ineffective interpreters - usually overworked nurses - linguistic code switching and a selection of key isiXhosa vocabulary.
Recommendations to improve communication include promoting a culture of multilingualism (including language education as a part of professional development), the use of trained interpreters and patient empowerment. Additionally health professionals see policies, leadership, organisational culture and infrastructure as additional barriers to effective care that needs to be addressed.

CONCLUSION
The English-speaking staff of Madlaweni have adapted and found temporary solutions. A greater dialogue around the effects of the language barrier needs to occur with a focus on finding workable, sustainable solutions.
P041 - Translation of research into action within the Gauteng Health Department

B Ikalafeng, R Kellerman, Shaik, V Figueora, M Letebele
Gauteng Health Department

INTRODUCTION
Translation of research into action should consequently lead to actual improvements in health care delivery (Albert, 2007). Emphasis should be made to decision makers that, utilization of research is not a separate entity which is independent of other duties (Rogers, 1994). The planning phase of research into action requires involvement of the program implementer to promote utilization of PHC research findings.

OBJECTIVES
• To assess the number of research findings used in departmental plans.
• To assess the influence of research on decision making.
• To describe opportunities or challenges of implementing research findings.
• To improve ways of “research” management for decision makers to utilize research.

METHODS
Cross sectional study employing both qualitative and qualitative methods. Phase 1: Audit of research reports presented to the Department. Phase 2: A questionnaire survey to assess the knowledge, attitudes and practices of managers. Phase 3: Assess whether research findings influence decision making within GDH.

RESULTS
Direct correlation of a research finding was not always specified in plans, but it was discovered that the research finding have influenced a particular motivation or activity such a training need, skills audit, inter sectoral collaboration, etc. Districts that had managers with “Research” as one of the Key Performance Areas (KPAs) implemented more findings than the others. Very few research reports are being presented to the Health Department. The process of encouraging “Translation of research into action” requires a lot of capacity and needs designated research staff in districts, to promote implementation of research findings.

CONCLUSIONS
Presentation of research findings to HOD / facility / community where research was done is strongly encouraged. The Policy dissemination and strengthening processes should be strengthened. Assessment should be made to explore barriers for policy implementation. A repository for “good reports e.g website should be developed as strategy to communicate research “findings” presented at local and national conferences. A book / journal for research reports should be compiled in order to improve access of research findings. Every facility should be provided with at least one computer that has access to journals / web links or facilities should be fed with the articles and findings, through research co-ordinators. It is the responsibility of the planning manger and / programme implementer to ascertain that research is translated into action. The research unit should utilise the opportunity of Joint Posts, to strengthen partnership between government and universities. Strengthening of capacity building programmes, such as trainings and workshops for researchers and managers, should be done. Research should have a slot at districts quarterly Monitoring and Evaluation meetings, to promote the model on “translation of research into action”. Research should be encouraged as KPAs for managers. The Planning unit overshadows the research unit due to competing priorities, therefore the research unit should be converted to a chief directorate.
P042 - Children exposed to elevated indoor air pollution reported more pulmonary tuberculosis symptoms

N Jaffa, R Naidoo, P Jeena

1 Discipline of Occupation and Environmental Health, University of KwaZulu-Natal, 2 Discipline of Paediatrics and Child Health, University of KwaZulu-Natal

BACKGROUND
Indoor air pollution has been associated with increased risk for lung diseases including tuberculosis.

AIM
The aim of this study is to investigate the association of environmental factors including indoor air pollutant levels with tuberculosis and pulmonary tuberculosis (PTB) symptoms in children.

METHOD
In this on-going case-control study, cases are children less than 15 years old with confirmed PTB. Controls are recruited from the same neighbourhood as cases and matched for age and sex. Children’s health questionnaire is administered to the caregivers and environmental assessments of the homes are conducted using walkthrough checklist and monitoring of indoor air pollutants.

RESULTS
In the 50 children’s (30 cases and 27 controls) homes assessed, occupancy averaged 7 people per room. PM10 (n=28) and NO2 (n=30) levels were significantly higher in homes using paraffin as a cooking fuel with median (range) of 55.1(10.9-253.2) µg/m3 and 13.6(4.4-85.9) µg/m3 respectively. No significant difference of SO2 (n=30) levels was observed in homes with different characteristics although this pollutant was significantly correlated to NO2 (r=0.496; p=0.005). Use of wood as a cooking fuel was associated with increased reporting number of classical TB symptoms like loss of weight, fever, short of breath and feeling tired. None of the PTB symptoms or the PTB disease in children was associated with pollutant levels monitored in the homes.

CONCLUSION
Indicators of indoor air pollution are important determinants of exposure and they may be sensitive compared to objective measurements when looking for association with respiratory symptoms in children.

P043 - A pilot study to assess recruitment strategies and tools used to measure stress, job satisfaction, burnout and general health among South African nurses

N Khamisa
Monash University

BACKGROUND
Global research suggests that specific work related stressors contribute to low job satisfaction, high burnout and poor general health among nurses. Before confirming the relationship/s within the South African context it is important to conduct a pilot study to assess recruitment and measurement tools.

OBJECTIVE
The main aim of the pilot study was to test the feasibility of three recruitment methods as well as measurement tools previously used among samples of South African nurses.

METHODS
200 nurses working in various departments in a private hospital in Johannesburg were recruited. Two recruitment strategies involved verbal information sessions, provided to two groups of nurses by the researcher and the nursing supervisor respectively. The third recruitment strategy, involved only a written information sheet. Five tools including the Nursing Stress Indicator (NSI) were administered and reminders were issued 2 weeks later to all nurses.

RESULTS
An overall response rate of 81% was achieved. This had been boosted by 10% when the reminders were sent out. The response rate was the highest for the second group of nurses who received information from their supervisors (78.3%). Of the returned questionnaires 88.3% were completed and 11.7% were incomplete. Of the 11.7% incomplete questionnaires, the majority (84.2%) were incomplete for the NSI which consisted of 116 items.

CONCLUSION
The involvement of a familiar person in the recruitment process and reminders were successful in boosting response rates. A shorter version of the NSI may improve the completion rate. Further testing in public hospitals may improve generalisability.
P044 - Perceptions of condom use among bar patrons in rural areas of North West province, South Africa

N Kitleli, S Nkosi, K Ngako, E Rich, N Morojele
Alcohol and Drug Abuse Research Unit (ADARU), Medical Research Council, Pretoria, South Africa

BACKGROUND
Numerous studies have indicated that alcohol consumption is a key contributor to inconsistent condom use among bar patrons and heavy drinkers in South Africa. However, previous research has given scant attention to other potential contributors to condom use among bar patrons in particular.

OBJECTIVES
To identify factors associated with condom use among bar patrons in rural areas of North West province.

METHODS
Data were collected between December 2009 and January 2010 via four all-male and four all-female Focus Group Discussions (FGDs) which were conducted during the day, by trained facilitators with bar patrons in two rural areas of North West Province. Each FGD comprised four to nine participants who were recruited by purposive sampling. Data were analysed using thematic content analysis and themes most relevant to condom use were extracted.

RESULTS
Alcohol consumption appeared to be a key contributor to engagement in unprotected sex, through reducing inhibitions and impairing judgement. Other perceived contributors were gender dynamics such as sexual relationship power. Both male and female patrons had minimal knowledge of female condoms. They also perceived government-issued condoms to be of inferior quality and they felt the limited availability of condoms in drinking venues also contributed to unprotected sex. Some female patrons mistrusted their partners to use condoms consistently, especially following alcohol consumption, but felt disempowered to take control. Male patrons reported that government-issued condoms often “burst”, smelled unpleasant, and caused a rash.

CONCLUSION
There is a need for interventions in bars and taverns to promote condom use. Negative perceptions of government-issued condoms need further examination. Condom programmes should be focused on empowering female bar patrons to negotiate condom use, and ensuring increased condom availability in drinking venues.

P045 - Prevention and Paedodontic Treatment under General Anaesthesia in Pretoria, South Africa

Y Kolisa
University of Pretoria

OBJECTIVES
The study’s objectives were to profile the children who received dental general anaesthesia (DGA) and compliance to 6-month follow-up visit after DGA at the Pretoria Oral/ Dental-Hospital, South Africa within a 2-year period.

METHODS
Retrospective hospital records review of all children treated under DGA over a period of 24-months was done from January-2009 to December-2010.

RESULTS
There were 78 children, 79.5% of them were 1-4 years (mean 3.7-years; SD: 2.01) and 54% were female. More than half (56.4%) of their parents were unemployed. Majority (55.2%) of the children did not have a medical condition prior to DGA. Majority of the treatments performed were extractions (mean=4.71 teeth/child). The next frequent treatment was restorations (mean=3.44 teeth) and the least common was placement of stainless-steel crowns (mean=2.14 teeth). No preventive treatment was performed. Only thirteen (16.7%) children returned within fifteen months for follow-up treatment. Seven of the children were re-booked for a second DGA appointment while the rest received preventive treatment. Children who were female (OR: 0.28; p=0.059), had no medical condition (OR: 0.20; p=0.04) were less likely to return for follow-up visit. Those children with employed parents tended to be more likely (OR: 3.50; p=0.093) to return for follow-up visit.

CONCLUSION
Most of children received more curative treatment than preventive. The compliance level to follow-up visit was very poor, most (n=7/13) required a second GA appointment due to extensive treatment required. This study highlights the importance of preventive treatment prior and during DGA especially in a setting where unemployment is high.
P046 - The cost of acute appendicitis in a developing country
V Kong, J Handley, C Aldous, D Clarke
Department of Surgery, Department of Anaesthetics, Postgraduate Research Facilitator
Pietermaritzburg Metropolitan Hospitals Complex, Nelson Mandela School of Medicine
University of KwaZulu Natal, South Africa

INTRODUCTION
Secondary prevention of appendicitis centres on early surgical intervention but requires an efficient healthcare system to provide adequate access. There is a paucity of research focusing on the cost of appendicitis in developing countries. This prospective study from a regional hospital in South Africa attempts to construct a robust cost model.

METHODOLOGY
A prospective audit of all cases with appendicitis from September 2010 to September 2011 was reviewed. The micro-costing approach was used and a cost model was constructed based on the estimated cost of operative intervention (operating theatre time), perioperative intervention (analgesia and antibiotics), and length of hospital stay (including intensive care unit admission).

RESULTS
A total of 185 cases were reviewed and divided into four subgroups for cost analysis. 71 had uncomplicated appendicitis. The total cost was 467003 ZAR (cost per patient 6578 ZAR). 51 had perforated acute appendicitis with localised sepsis. The total cost was 754341 ZAR (cost per patient 14791 ZAR). 63 had perforated acute appendicitis with four quadrant soiling. The cost for the 43 who did not require ICU admission: Total cost was 1497583 ZAR (cost per patient 34838 ZAR). For the 20 who required ICU admission: Total cost 1363010 ZAR (cost per patient 68151 ZAR). The total cost for all patients was 4081937 ZAR.

CONCLUSIONS
Early uncomplicated appendicitis if treated appropriately has little morbidity and is relatively inexpensive to treat. As the pathology progresses from localized perforation to generalized perforation with sepsis so the cost of treating the disease rises exponentially. Improvements in so-called secondary prevention of this disease process will reduce morbidity and provide major cost savings.

P047 - Male Homicide Victimisation in Johannesburg: A Retrospective Intra-City Analysis
S Kramer
Institute for Social and Health Sciences

There is evidence to indicate that the majority of homicides in South Africa occur in urbanised areas with victims comprising mostly young adult males. Given the health and economic costs associated with violence a key priority for the prevention agenda is to closely examine those locations characterised by the greatest homicide magnitude within these urbanised areas in order to further identify neighbourhood or community attributes specifically related to homicide incidence. This study aimed to identify those neighbourhoods in urbanised Johannesburg most at risk for male homicide and delineate particular neighbourhood attributes that are predictive of this risk. A factor analysis of characteristics that typically define Johannesburg neighbourhoods, as indicated by Census 2001 data, was used to generate overall neighbourhood constructs. These constructs were then regressed onto homicide variables to indicate their predictive power. Homicides among males 15 years and older occurring in Johannesburg during 2001 to 2005 were drawn from the National Injury Mortality Surveillance System (NIMSS) and police records. This analysis was further supported by a calculation of the annual male homicide averages as well as spatial lags to indicate the potential effects of characteristics belonging to adjacent neighbourhoods. Results are reported with reference to male homicide differences across racial and age categories as they relate to neighbourhood characteristics and other area level features. By way of conclusion we raise implications for prevention and violence determinant studies.
P048 - TB and HIV community-outreach training project in a higher education institution

G Lourens
University of Stellenbosch

BACKGROUND
At the request of the South African Department of Health’s Western Cape Provincial Tuberculosis Control Directorate, the Cape Peninsula University of Technology, a Higher Education Institution, developed and implemented a Tuberculosis and Human Immunodeficiency Virus community outreach train the trainer project to train community members about Tuberculosis and Human Immunodeficiency Virus.

STUDY AIM
This study aimed to provide a historical overview of the Cape Peninsula University of Technology Tuberculosis and Human Immunodeficiency Virus project and describe the experiences of the trainers involved.

METHODS
A descriptive case study design, using a qualitative approach was applied during this study.

RESULTS
The historical overview of the project showed the need for a broad base of networking, securing funding and a project facilitator from the outset of such a project. This study found that trainers had experienced self-development in terms of knowledge, skills and self-confidence and that the training had far-reaching effects by spreading Tuberculosis and Human Immunodeficiency Virus information in diverse community settings, despite notable challenges experienced in the community settings.

CONCLUSIONS
Community outreach training projects from a recognized training institution have a positive impact at community level. However, political commitment and development of the course content into a registered learnership are required for sustainability.

P049 - Reasons given by inpatients for not seeking information about their clinical conditions from their health care professionals at Dr George Mukhari Hospital in Pretoria, South Africa

L Mabuza, J Ndimande, O Omole, I Govender, H Schoeman
University of Limpopo, Medunsa Campus

OBJECTIVES OF THE STUDY
In their interaction with inpatients, health care professionals (HCP) are supposed to inform patients on their clinical conditions. Some patients seek clarity on what they did not understand while others do not. The study sought to determine if patients regarded it their responsibility to seek clarity, and to explore the reasons why they did not seek clarity where they did not understand.

METHOD
This was a sub-study under the survey on “Hospitalized patients’ awareness of the reason for the admission and management plan of their clinical conditions at Dr George Mukhari Hospital”. A random sample of 264 was drawn from a population of 972 in-patients. Data were collected by means of a researcher administered questionnaire. The qualitative questions were on whether patients regarded it their responsibility to seek clarity on information given, and what led them not to ask for clarity. Data gathered was analyzed into themes.

RESULTS
Of the 264 questionnaires, 259 responded to the question (98% response rate), of which 189 (73%) responded in the affirmative, and 70 (27%) in the negative. Theme that emerged: HCPs were perceived too busy, a negative attitude towards patients, they “knew best”, no reason for not asking, fear of HCPs, patient’s poor clinical condition, Language barrier, lack of communication by HCPs and lack of knowledge by the HCPs.

CONCLUSION
Most patients acknowledged their responsibility to seek clarity about their clinical conditions. Reasons given for not seeking clarity were mainly based on patients’ perceptions of the HCPs.
P050 - A rapid appraisal for the need for dental services in Olivenhoutbosch (Pretoria area)

T Madiba
University of Pretoria

BACKGROUND
Olivenhoutbosch Primary Health Care Clinic does not have a dedicated dental health service provider. This study sought to determine the need for such a service.

OBJECTIVE
The aim of the study was to determine barriers of the community when seeking dental care, determine patients' perceptions of and satisfaction with current dental health services located elsewhere and providers of health at Olivenhoutbosch perceptions of access to dental services.

METHOD
Observational descriptive study, conducted by means of a survey. Clinic patients were asked to complete an anonymous questionnaire. Working from the assumption that 10% of the population would have had access to dental care in the past and a 95% confidence, it was estimated that 138 questionnaires would have to be completed. Providers of health at the clinic also completed a questionnaire.

RESULTS
Of the patients, 59.3% perceived their oral health as good, 17.9% had medical aid and 75.7% had dental problems in the last 6 months. The most common problems were toothache and bleeding gums. Of those that had problems, 17.9% reported that they did nothing, while 29.3% and 27.3% consulted a dental clinic and a medical practice respectively. Those with medical aid were more likely to have made a dental visit (24.4% vs. 50.0%; p=0.02). Of the respondents, 87% said that they would make use of the dental health care services if made available.

CONCLUSION
The study findings suggested a need for dental services.

P051 - Developing South Africa's scarce specialist health care resources: Lessons from the Discovery Foundation


1Health and Development Africa, 2Tshikululu Social Investments

BACKGROUND
The Discovery Foundation aims to develop South Africa's scarce specialist health care resources by providing grants to promote academic medical training, to fund training posts for sub-specialists and building capacity in rural health.

OBJECTIVE
Our study sought to understand whether the Foundation’s strategy is filling a gap in improving human resources for health.

METHODS
Data from 57 quantitative interviews were analysed in Stata version 11.0. The qualitative study comprised key informant interviews and in-depth interviews. Thematic content analysis was undertaken using ATLAS.ti version 5.2.

RESULTS
Overall, respondents thought that the strategy was correct: 'Investing in HR is a much better way of improving health care. [It] has a much longer impact than investing in equipment or infrastructure' They also felt that the programme is filling a niche gap in human resources for health and acknowledged that one organisation could not strengthen all aspects of the health system: ‘...there are gaps because we cannot cover everything... Do what you can do and do it very well...there are other players who can cover the areas that you have not covered.’ However, the impact of the awards is largely dependent on selecting the right individuals. Institutional support and supervision are also critical success factors.

CONCLUSIONS
There are signs that the Foundation’s focused strategy is developing South Africa’s scarce specialist health care resources. However, fewer, more focused awards to specific institutions rather than individuals could create a critical mass of specialists and would also mean a less ‘scatter gun’ approach.
P052 - Early loss to follow up of babies in the PMTCT programme: Lost opportunity for early initiation of paediatric HIV treatment?

F Makhanya, M Kawonga

Wits School of Public Health, Faculty of Health Sciences, Gauteng Provincial Government, Department of Health and Social Development

Prevention of mother-to-child transmission of HIV (PMTCT) programmes can contribute to early initiation of paediatric antiretroviral treatment (ART) by following-up babies born to HIV-positive mothers after birth until HIV diagnosis can be made. The referral of HIV-exposed babies from postnatal wards to HIV testing sites and the extent of their retention in the PMTCT programme until HIV PCR testing have however never been documented in our study setting. This study aims to determine the retention of HIV-exposed babies prior to HIV diagnosis in the PMTCT programme of a district in Gauteng province, South Africa. Records of 887 infants born of HIV-positive mothers during July 2005 to December 2005 were reviewed. Data collected included: whether baby was referred to a PMTCT follow-up site, whether showed up at the referral site, whether and age HIV PCR testing was done at site referred to. Data were captured and analysed in STATA. Of the 887 infants, 299 (34%) attended the PMTCT follow-up sites they were referred to. Of these, 226 (75.6%) attended the six-week follow-up visit, and 20 (6.7%) had 6-week PCR. Six weeks HIV PCR testing coverage for the whole cohort of 887 babies was 8.4%. The probability of an infant remaining in the PMTCT programme was 0.5 at six weeks. Two-thirds of all HIV-exposed babies dropped out of the PMTCT programme before HIV PCR testing, which is a missed opportunity for early initiation of ART. Policy-makers and health authorities should find ways of optimizing early retention of babies in the PMTCT programme.

P053 - No more graves for Children: Integrating Family Planning and HIV Services critical in Masvingo

L Makonese

Rhodes University

BACKGROUND
HIV remains the leading cause of maternal and infant mortality in most districts in Zimbabwe. As most districts are committing to strive for: Zero new HIV infections, Zero Discrimination and Zero AIDS related deaths; Integrated Family Planning and HIV services is a critical component for delivering on those commitments in Masvingo District.

OBJECTIVES
The objectives of the study are to explore whether the existing Family Planning services in the district are addressing the needs of people living with HIV, to find out whether there is a relationship between family planning coverage and high rates of children born with HIV, as well as exploring barriers to accessing family planning.

METHODS
This is an exploratory study using quantitative and qualitative methods of social inquiry. Primary and secondary document review was conducted across all the service providers in the district. Interviews were conducted with key stakeholders and focus group discussions were conducted with HIV positive pregnant women and their partners.

RESULTS
The findings of the study include high rates of HIV among children and adults of child bearing age. HIV positive pregnant women are lost during the referral system in the current sectoral health system, and there is low male-involvement in Family Planning services.

CONCLUSIONS
Integrating HIV and Family Planning services is essential as a way of addressing the challenge of HIV and AIDS. Integrating Family Planning in HIV prevention, care and support sites will increase access to Family Planning services for clients of HIV services.
P054 - Rewards and stress experienced by healthcare workers in the era of increased access to antiretroviral treatment in Limpopo province

T Malatji, I Couper
University of Witswatersrand

BACKGROUND
Concern about the impact of working with people living with HIV/AIDS (PLWHA) on healthcare workers has been highlighted in the literature. Most studies have reported high stress levels among healthcare workers (HCWs) working with PLWHA. Some researchers have suggested that working with PLWHA in the era of antiretroviral treatment is more rewarding than stressful.

OBJECTIVE
The aim of this study was to determine the stress and rewards among HCWs working with PLWHA in the antiretroviral treatment era.

METHODS
A cross sectional descriptive study was conducted in four Antiretroviral (ARV) clinics in Polokwane municipality area during October 2009. Forty-four HCWs completed a self administered questionnaire. The questionnaire consisted of demographic data, the Maslach Burnout Inventory (MBI), the AIDS Stress Scale and questions about the stressors and rewards of HIV/AIDS work.

RESULTS
A total of 44 healthcare workers completed the questionnaires. The response rate was 82%. The majority of the healthcare workers (HCWs) were female (77%) and the mean age was 39. The biggest professional group were nurses (46%) followed by lay counsellors (25%). Half of the respondents (52%) had high level of emotional exhaustion and depersonalisation. Moderate to high levels of personal accomplishment were found among 75% of the HCWs. A majority of HCWs (95%) reported that they enjoy their work with HIV/AIDS patients.

CONCLUSION
Despite the high levels of burnout, the majority of HCWs in the HIV clinics find HIV/AIDS work rewarding. Positive aspects of HIV/AIDS work need to be further investigated and thus enhanced as a strategy to neutralise stress.

P055 - Human capabilities, mental health and housing: Perceptions of the impact of an environmentally sustainable housing intervention in Khayelitsha, South Africa

S Mall
Centre for Public Mental Health, UCT

BACKGROUND
Conditions of poverty are known to increase risk for a number of illnesses such as tuberculosis (TB), HIV/AIDS and mental disorders all of which result in deprivation of capabilities. Both TB and HIV/AIDS are linked to negative mental health outcomes. It is important that interventions target the social as well as biological determinants of these illnesses.

OBJECTIVES
This study aims to qualitatively explore the perceptions of an environmentally sustainable housing intervention in a high TB prevalence area.

Methods: Approximately 36 adult participants residing in households that received the intervention were recruited to four focus groups discussions (FGDs). Ten individuals were then recruited to individual, semi-structured interviews (SSIs). FGDs and SSIs explore participants’ perceptions of the intervention, and the effect on their general health status including their mental health.

RESULTS
Results, analysed according to Sen’s capability approach, show that prior to the intervention, symptoms of common mental disorder, such as depression and anxiety were widely reported, and formed a key feature of participants’ experience of poverty and illness. Subsequent to the intervention, the majority of participants described a positive impact of the intervention on their capabilities including better TB prognosis, eradication of other respiratory illnesses and improvement of mental health status.

CONCLUSION
Most interventions that seek to address or mitigate the effects of deprivation, such as housing interventions, do not consider the importance of mental health, either as a cause or consequence of reduced capability. Sen’s capability approach provides a useful framework for understanding and integrating these phenomena and designing appropriate interventions.
P056 - Asthma and use of biomass fuel amongst children in Limpopo Province

K Maluleke

The SASSA

BACKGROUND
Recognition of global increase in pediatric asthma; recognition of adverse health effects of unclean energy used indoors; ISAAC studies prompting investigations into pediatric asthma; rural households being disproportionately exposed to unclean energy use; unknown public health impacts of unclean energy on rural people formed the context of the study. Primary purpose of the research to demonstrate the impact of household indoor pollution on children’s respiratory health.

METHODS
A quantitative, cross sectional study using a PPS sampling strategy based on (education districts, schools, class rooms and individual students). The Research & Ethics Committee of Pretoria University permitted the study and Limpopo Education gave access to respondents. Structured questionnaires adapted from the ISAAC protocol collected primary data from respondents. Official records provided information on area electrification, water supply and general infrastructure. Quantitative categorical data collected and analyzed. Relevant prevalence statistics computed. Binary logistic regression and multi-level logistic regression techniques generated odds ratios, p values and confidence intervals.

RESULTS
Sample asthma prevalence was 28%. Prevalence among the exposed was 33%. Age, gender, place of residence were not confounders as the adjusted OR was not significantly different from the crude OR (1.54 p 0.01 vs. 1.50 p 0.01). The OR 1.50 suggested the exposed were 1.50 times more at risk of asthma. Conclusion. Females, older age group, rural children had higher prevalence rates.

CONCLUSION
Study suggests clean energy policies to be formulated as a strategy to maintain public health particularly for rural people.

P057 - An outbreak of diarrhoeal disease in Verkeerdevlei, Free State Province February 2012

1M Manesen, 2J Thomas, 3B Archer, 3C Jacobs, 1L Kuonza, 1R Mogketle, 1K Tint

1South African Field Epidemiology and Laboratory Training Programme (SA-FELTP), 2School of Health systems and Public Health, University of Pretoria, 3Outbreak Response Unit, National Institute for Communicable Diseases (NICD)

BACKGROUND
A notification of a diarrhoeal outbreak in Tshepong Township in Verkeerdevlei was received from the Free State Provincial Communicable Control Diseases Directorate in February 2012.

OBJECTIVES
The aim of the study is to identify the possible source of the outbreak and combat further spread.

METHODS
A descriptive study was performed which include line listing, laboratory testing of stool specimens, water samples and an environmental investigation.

RESULTS
A total of 337 cases were identified, with children age 5-19 years (73%) most affected. Laboratory investigations revealed the presence of Shigella dysenteriae (n=2, 50%), Norovirus (n=4, 100%) and Astrovirus (n=2, 50%), and water sampling results indicated the presence of E. coli (16/100ml) and total coli forms (233/100ml). Municipality records indicated inadequate levels of chlorination (0 - 0.2 HTH) of the Tshepong reservoir environmental water testing of three boreholes indicated the presence of E. coli (43/100 ml), total coli forms (>1 100/ml) and Norovirus.

CONCLUSIONS
This multi-pathogen contamination of groundwater may be as a result of the formation of a subterranean bio-slime plume due to increased rainfall experienced in the area. The installation of automatic chlorinators, strengthening of health promotion efforts and intensifying diarrhoeal disease surveillance in this area were carried out.
P058 - Healthy Mother Healthy Baby Programme© and Community Awareness and Prevention Intervention

M Martin, M Urban, M Chersich, L Olivier, D Viljoen

1Division of Molecular Biology and Human Genetics, Faculty of Health Sciences, University of Stellenbosch, 2South Africa Centre for Health Policy, School of Public Health, Faculty of Health Sciences, University of the Witwatersrand, South Africa, 3International Centre for Reproductive Health, Department of Obstetrics and Gynaecology, University of Ghent, Belgium Foundation for Alcohol Related Research (FARR), 4Foundation for Alcohol Related Research (FARR), Cape Town, South Africa

BACKGROUND

In 2009 – 2010 FARR did a FASD Prevalence Study (Phase Two) involving all the schools in the area. 1010 children were clinically examined and, where appropriate, neuropsychometrically appraised. Maternal interviews were conducted with the mothers of the indicated children. All indications are there that the FASD Prevalence rate in this area is alarmingly high, with a rate of 73 per 1000 of the population or 7.3% for FASD. The concern is that the governmental departments are focussing their limited resources on the wrong areas within this district and are therefore wasting valuable and extremely limited resources. Prince Alfred’s Hamlet was selected for a focused FASD prevention programme as this town had the highest prevalence rate in the district. The project will implement services to decrease alcohol intake among pregnant women attending the Antenatal clinic in Prince Alfred’s Hamlet. This mainly involves motivating women to abstain from alcohol consumption during pregnancy. A secondary aim is to assess the impact of repeated Brief Interventions on the drinking behaviour of a group of pregnant women at high risk.

OBJECTIVES

The general aims of this implementation project are:
1. To reduce fetal alcohol spectrum disorders by assisting pregnant women to cease alcohol intake for the remainder of pregnancy, and change their alcohol behaviours thereafter; and
2. To develop a service delivery model to reduce the risk of FASD among pregnant women in the Western Cape
3. Universal awareness with the community highlighting FASD

METHODS

This quantitative research design is expected to run over three years. 120 pregnant women will be recruited per year over 3 years. When attending Antenatal Clinics, pregnant women will receive the standard package of antenatal services already provided by the Department of Health. In addition, during their first ANC visit they will meet with a counsellor, trained by the Foundation for Alcohol Related Research (FARR) who will use the AUDIT, to determine the woman’s. Brief interventions and support will be provided to the pregnant mothers throughout their pregnancy and a clinical evaluation will be conducted with the infants at 9 months of age in order to screen for FASD.

RESULTS

The project started on 1 April 2011. Women involved in the project report either total abstinence of alcohol or lighter drinking. The first children will be accessed in September 2012.

CONCLUSION

The same model was implemented in De Aar where there was a 30% decrease in the community FASD prevalence rate over a 3 year period. Effective FASD Interventions shows that support during pregnancy and universal awareness in communities decreases the rates of FASD in communities.

P059 - Use, acceptability and benefits of patient medical passport in Mpumalanga province, South Africa

M Masha, F Senkubuge, T Mantshule, J Ngomane

University of Pretoria

BACKGROUND

Fragmentation of medical records in the South African health facilities has become a critical problem since the introduction of antiretroviral treatment (ART). Antiretroviral clinics, also known as wellness clinics are separated from the rest of outpatient clinics in most health facilities. They are standalone clinics using their own patient files which remain at the wellness clinic. Patients receiving ART end up having two files in the same health facility which do not talk to each other. The patient medical passport or patient-held record (PHR) was therefore seen as a tool that would bridge the gap between the two files, strengthen continuity of care, minimise duplication of investigations and ensure seamless flow of communication amongst health care providers.

OBJECTIVES

The aim of the study was to determine whether age, gender or level of education had an effect on the use and acceptability of the patient medical passport, to assess benefits to patients or staff and the willingness of staff to use it for other chronic diseases.

METHOD

A cross-sectional analytic mixed method design was used for this study.

RESULTS

A positive finding from the study was the statistically significant association between use of medical passport and healthcare facility. Qualitative analysis also confirmed that the attitudes and actions of health care providers had a positive influence on the use and acceptance of medical passports by patients.

CONCLUSION

This study demonstrates the pivotal role that health care providers play in influencing patients to accept and use PHRs.
P060 - What drives the rampant HIV epidemic in the Gert Sibande district?

L Mashimbye, S Johnson, C Chikwava, L Mahlasela, R Delate
Health & Development Africa, Johns Hopkins Health and Education South Africa

BACKGROUND
Gert Sibande district in Mpumalanga province has the second highest HIV prevalence in South Africa. This study aimed to identify the key drivers of the local HIV epidemic and to inform responses to the HIV epidemic in the district.

OBJECTIVE
To identify drivers of HIV epidemic in the Gert Sibande district

METHODS
A multi-stage, stratified randomised survey of 750 respondents (16-55 years) was conducted in the Gert Sibande district. Face-to-face interviews were conducted in the local language using a structured, pre-tested questionnaire. Data were analysed using STATA 11.0 and compared to the provincial data from the National Communication Survey 2009.

RESULTS
Of the total sample (mean age=30.4 years), 33% were male. More men and women (44% and 10% respectively) in the district reported multiple sexual partners (MSP) in the past year, in comparison to the province (19% and 1% respectively). Shebeens were identified by more than half the respondents as the most common places where people meet sexual partners. In an adjusted logistic model, people drinking alcohol were more likely to have had MSP (OR 4.1; 95% CI 2.4; 6.9). Condom use among sexually active respondents was at 57%, and only 25% of males reported being circumcised.

CONCLUSIONS
The severe HIV epidemic in Gert Sibande district is driven by a pattern of multiple sexual partners, fuelled by alcohol use and worsened by a low level of male circumcision. HIV prevention programmes in the area need to address these issues, and programmes based in and around shebeens are a priority.

P061 - Supporting the implementation of a data management improvement intervention in the Western Cape Province – Compliance and Audit Readiness Assessment tools

N Massyn, L Shand, B Adams, L Grebe
Directorate: Information Management, Western Cape Department of Health, Western Cape Department of Health, Health Systems Trust

BACKGROUND
The Auditor-General South Africa (AGSA) issued a report based on an audit conducted on predetermined objectives (performance information) for 2009/10. Internal control deficiencies were identified as a major problem. A detailed action plan was developed by the Western Cape Department of Health’s Directorate: Information Management in an effort to address the deficiencies in terms of these objectives. One of the initiatives in the action plan to ensure legislative and audit compliance.

AIM
To develop an internal checklist tool to be used to conduct in-house facility supervisory visits at various levels of the organisation.

METHODS
Tools were developed and tested at facilities which were randomly selected by the Information Management staff. To determine the tool’s relevance and feasibility, it was presented to the facility managers who provided feedback on its content and applicability. The tool was then tested and revisions were made based on this feedback.

RESULTS
Two types of tools were developed, namely, Compliance and Audit Readiness Assessment tools for hospitals and PHC facilities. The tools were first implemented in November 2011 and results were used to address deficiencies with regard to data and information management issues.

CONCLUSION
The development, tailoring and testing of tools to support the interventions in response to key policy changes in order to ensure audit readiness are vital for guiding IM processes.
P062 - The national health research database

T Mbatha, T Padayachee, R English
Health Systems Trust

BACKGROUND
The National Health Research Database (NHRD) serves as a repository of health-related research which has been and is currently being conducted in South Africa. Funded by the National Department of Health, the database has been developed to assist the National Health Research Committee and the nine Provincial Health Research Committees (PHRCs) in monitoring and managing all health related research in the country.

OBJECTIVES
As a tool the NHRD aims to:
- Assist the Health Research Committees in setting health research priorities, for the provinces and the country;
- Provide standardised criteria for research conducted in the public health facilities;
- Increase transparency regarding ethical considerations in health research
- Assist researchers to collaborate through sharing of research information
- Reduce duplication in research efforts
- Facilitate the best use of limited research resources

RESULTS
The NHRD has undergone further refinement and is currently undergoing a process of validation. The upgrade includes functionalities that will assist PHRCs to map research being conducted in various geographic areas and health facilities across South Africa. This will provide researchers and PHRCs with a snapshot of all current and past research conducted in the country.

CONCLUSION
Refinements to NHRD will be on-going as new research monitoring requirements emerge. The upgraded NHRD is scheduled to be piloted in September 2012.

P063 - Reducing patient waiting time for service in outpatients and related departments - Lebowakgomo hospital

M Mbuyane
Foundation for Professional Development

Patient waiting time in hospital Outpatient Departments is often the major reason for patient’s complaints negatively affecting the quality of services offered. Therefore patient satisfaction with waiting time plays a crucial role in the process of health quality assurance and quality management. Generally patients appear reasonably satisfied if they wait not more than an hour after arrival. This study reports the outcome of action research undertaken at Lebowakgomo District hospital to reduce the length of waiting time for services in Outpatients and related departments.

Lebowakgomo hospital conducts waiting time studies periodically to identify the extent of the problem. During 2010/2011 waiting time studies showed the following average waiting times: Medical records 1h22 minutes, Nurses vital signs area 52 minutes, Doctors consulting 1h37 minutes and Pharmacy 1h08 minutes. To establish the baseline data several variables were monitored number of staff on duty at a time, work processes, filing practices, queue management etc. Data was collected using observations, self administered questionnaire and interviews, consultations and field notes.

Focusing on the principle of maximal utilization of existing resources the following measures were undertaken in an effort to improve the situation: restructuring of staff shifts to increase the numbers on duty in the morning, introduction of a fast lane queue incorporating a moving help desk; coordination of services with primary health care facilities and outreach by doctors; review of the filing system; introduction of an appointment system; review of the referral system. Monitoring and evaluation of effectiveness of measures are currently in progress.
P064 - The essential medicines list as the basis for national health insurance benefits: Could this worsen access to medicines?

S McGee
Sanofi South Africa (Pty) Ltd

BACKGROUND
In discussions on the benefit package of the proposed National health Insurance (NHI) for South Africa, the Minister of Health has made mention that the essential drugs list (EML) will form the medicines benefits under the NHI, along with a complimentary list approved by the minister.

OBJECTIVE
To evaluate the differences what molecules are listed on the Essential Medicines Lists, and compare with the range of molecules that are currently being utilized by patients in the public sector, to establish whether strict application of the EML to the NHI benefits could leave patients more deprived than before.

METHODS
Molecules on the EML were tallied from the existing Standard Treatment Guidelines and EDL booklets distributed by the Department of Health, and compared to the numbers of molecules purchased by the public sector during 2011, according to the IMS database.

RESULTS
There are nearly 400 molecules listed as essential medicines by the National Department of Health, but state institutions purchased over 1,000 molecules in 2011 for treatment of patients. Certain disease areas have smaller gaps in this regard than others.

CONCLUSIONS
Broadly assuming that the essential drugs list will be sufficient to provide national health insurance benefits may be inappropriate, as patterns of utilization currently indicate access to a far broader range of medicines. Mechanisms beyond the EML processes may be necessary to maintain and enhance the public’s access to medicines under NHI.

P065 - Reflective practise and hospital data

P Mcneill
Centre for rural health University of KwaZuluNatal

This presentation will be a report on a project carried out by the Centre for Rural Health at UKZN at a rural district hospital in KZN. The aim of the presentation will be to highlight the importance of reflecting on the data generated by district hospital programmes in a meaningful and productive manner. And to encourage others to use a similar methodology to analyse their own data and improve their practise.

The methods used in the project were:
To identify the relevant vertical programmes that exist in a district hospital,
With the help of the programme managers to identify what data generated by the programme and collected by the DHIS data system would be useful to present to a broader hospital forum for reflection.
To synthesis the data into logical presentations by the programme managers that could be updated each month to allow ease of presentation and understanding.
To present the data at a hospital forum (information committee) on a monthly basis
To establish reflection on the data as an integral part of the management process

The result:
The development of standardised presentations of data for the following programmes;
Hospital management data,
TB control programme,
HIV/ART programme,
Maternal and child health programme,
Mental health programme,
Primary health care programme.
Each presentation was accompanied by targets for the various indicators that are routinely collected and reported on for the DHIS.
Based on the specific requirements of the sub district in question.
Each programme manager was encouraged to present their data in a logical sequence thereby engaging with the audience and allowing for active participation and allowing for the establishment of reflective practise as a part of the management process.
The conclusion is that only if data generated by programmes is, collected, presented and interrogated regularly can hospital staff can improvements of programme outcomes be achieved.
P066 - Addressing the challenges facing the implementation of the national guidelines for antenatal screening in the Acornhoek district (2005 - 2012)

B McIntosh
University of Limpopo

The aim of this study was to evaluate the implementation of the national guidelines for antenatal screening in the Acornhoek district, Mpumalanga.

METHODS
It was a prospective, cross-sectional study of the antenatal screening programme in the Acornhoek district. Data was collected from an analysis of antenatal records of all women who received antenatal care in the Acornhoek district and ultimately delivered at Tintswalo Hospital during the study period of one calendar month. Standardised questionnaires were administered at each of the 15 antenatal clinics referring to Tintswalo Hospital to identify the challenges preventing the effective implementation of the national guidelines for antenatal screening that were experienced at the clinics.

RESULTS
428 women were interviewed postpartum. 335 were eligible for the study. 14.3% of women had not been tested for syphilis, 15.2% had not been tested for anaemia, 27.2% had not had blood taken for Rhesus factor and only 35.8% had not had pre-test counselling for HIV. 14.3% of women did not have their blood pressure checked at every visit and over 31.4% did not have urine dipstick tests done at every visit. Of the women who had had antenatal blood screening tests done, 18% had not received results by the time of delivery. Major challenges identified at the clinics included poor knowledge of antenatal screening requirements by some clinic staff, lack of HIV counsellors, lack of telephone lines to trace results, lack of working BP equipment and urine dipstick, infrequent specimen collection, no onsite testing for RH, HBs or RPR and a poor approach to problem solving.

CONCLUSIONS
At the time of the study, screening for HIV, anaemia, GPH, syphilis and Rhesus disorders was suboptimal in the clinics referring to Tintswalo.

RECOMMENDATIONS
Interventions such as in-service training of clinic staff in antenatal screening, appointing lay counsellors at every clinic and offering opt-out testing for HIV, improving infrastructure such as installing telephones at every clinic, increasing the laboratory courier service to 5 days a week, introducing on site testing of syphilis, haemoglobin and Rhesus factor and a rapid pro-active approach to problem solving by district and clinic staff to manage barriers to antenatal screening such as broken equipment and out of stock supplies.

CHALLENGES SUCCESSFULLY ADDRESSED SINCE COMPLETION OF STUDY:
1. The laboratory now visits each clinic daily (Monday to Friday)
2. Satellite phones have been installed at all clinics and are consistently functioning
3. On site testing for syphilis, haemoglobin and HIV is now available
4. In service training on maternal health has improved
5. HCT is offered by lay counselors at every clinic

I plan to examine a sample of antenatal cards this year to determine whether the above improvements have resulted in an improvement in antenatal screening.

P067 - Investing in the workforce: The Malamulo scholarship initiative to improve retention of health workers in Thyolo District, a rural district in Malawi

1K Hermann, 1A Banda, 2U Kallangwe, 3A Likaka, 3C Metcalf, 4E Nkhono, 4P Moyo
1 Médecins Sans Frontières, Thyolo, Malawi, 2 Ministry of Health, Thyolo District, Malawi
3 Médecins Sans Frontières, Cape Town, South Africa, 4 Malamulo College of Health Sciences, Thyolo, Malawi

BACKGROUND
In Malawi, there are 2.3 doctors and 36.8 nurses per 100,000 population, and the overall number of health professionals is considerably below the 228 per 100,000 population recommended by the World Health Organization (WHO). Health worker shortages are particularly severe in rural areas. In 2010, Médecins Sans Frontières (MSF) and the Ministry of Health (MDH) introduced the Malamulo Scholarship initiative to train mid-level health workers in Thyolo District, a rural district in southern Malawi. The scholarship covers tuition fees and accommodation.

OBJECTIVE
To describe the Malamulo Scholarship programme.

METHODS
A needs assessment was conducted to identify the types of health worker needed most, and the geographical areas with greatest health worker shortages. Scholarships were awarded to students from rural areas, with enforceable bonding agreements to work in rural areas after graduation. Scholarship recipients completed a brief questionnaire on entering the programme.

FINDINGS
In Thyolo District, 30 students will graduate between 2013 and 2015, comprising 13 nurse-midwives, 10 medical assistants, 5 clinical officers, and 2 laboratory technicians. Their mean age on entering the programme was 22 years, and 20/30 (67%) were male. Of the 30, 24 (80%) stated that they would prefer to work in a rural area after satisfying scholarship work requirements.

CONCLUSIONS
The scholarship initiative will address health worker shortages in Thyolo District. However, it remains to be seen whether scholarship recipients will continue to work in rural areas long-term.
P068 - The Big Six derailing adherence in ART in Rural KZN South Africa

J Michel
Africa Centre For Research and Population Studies

PURPOSE OF STUDY
The aim of the study was to describe the challenges experienced by NGOs in rolling out ART in KwaZulu-Natal (KZN) with an aim to develop guidelines and recommendations to the Department of Health to facilitate strategy development to overcome the challenges.

METHODS
A qualitative, exploratory study was conducted. Data was collected using in-depth semi-structured interviews. Three groups of respondents participated; programme coordinators who directed and supervised ART programmes; doctors responsible for prescribing, monitoring and dealing with ART complications; and registered nurses responsible for monitoring, referring and providing nursing care to ART patients.

RESULTS
Factor affecting adherence emerged as multifaceted. The socio-economic situation of patients topped the list and manifested in different forms namely; skipping of medication doses when food is unavailable and inability to collect medication due to lack of transport fees.

Food insecurity presented as a huge challenge confirming research which has shown that taking ART on an empty stomach can exacerbate the side effects of the drugs including headaches, dizziness and tremors. The majority of respondents reported use of traditional medicine and SASSA guidelines as major challenges. Self ordained religious prophets and loss to follow up of migrants, pregnant women post delivery and teenage girls upon return to school were also cited as fuelling non adherence.

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P069 - The challenges experienced by non governmental organisations with regards to the roll-out of anti retroviral drugs in KwaZulu-Natal

J Michel
Africa Centre For Research and Population Studies

BACKGROUND
In the absence of an effective government response to HIV in South Africa (SA), many Non-Governmental organizations (NGOs) were established to address HIV and AIDS by campaigning for improved access to treatment, lower drug prices, improved care and more effective policy on HIV/AIDS led by Treatment Action Campaign and AIDS Law project. The SA government responded to the call by adopting the Anti-Retroviral Treatment Guidelines 2010.

PURPOSE OF STUDY
The aim of the study was to describe the challenges experienced by NGOs in rolling out ART in KwaZulu-Natal (KZN). We aim to develop guidelines and recommendations to the Department of Health to facilitate strategy development to overcome the challenges.

METHODS
A qualitative, exploratory study was conducted. Data was collected using in-depth semi-structured interviews. Three groups of respondents participated; programme coordinators who directed and supervised ART programmes; doctors responsible for prescribing, monitoring and dealing with ART complications; and registered nurses responsible for monitoring, referring and providing nursing care to ART patients.

RESULTS
Findings revealed five broad areas of challenges related to: sustainability (e.g. funder withdrawal), adherence (missed doses due to food shortage and drug misuse – ‘whoonga’), health systems (low capacity and resources), stigma (non-disclosure) and patient behavior (unacceptability of condom use).
P070 - Do repeat-testers bias HIV prevalence data? Evaluating South African mobile HIV counselling and testing (HCT) units as a data source for HIV disease surveillance

J Mitchell
Foundation for Professional Development, Pretoria, South Africa

BACKGROUND
There has been substantial debate regarding the use of HCT data as part of routine surveillance data of the HIV epidemic. The literature suggests that HCT data is biased as a result of the high proportion of repeat testers, where repeat testing is indicative of high risk sexual behaviour. The aim of this study was to determine if repeat HCT testers were a potential cause of bias in HIV prevalence data.

METHODS
Using existing data from mobile HCT units operated by the Foundation for Professional Development (FPD) in Tshwane, Gauteng Province, a systematic random sample of 400 first-time- and 400 repeat-testers was drawn and analysed. Variables were sex, age, population group, HIV status and whether this was their first HIV test, or they have had repeated HIV tests.

RESULTS
Repeat testers have a larger HIV positive prevalence in the 50+ age category. Those aged under 20 are 5.0 times (p=0.000) more likely to be first-time testers, when compared to the age group of 50+. Those who report themselves as a first-time tester are 2.4 times more likely to be HIV positive compared to those who are repeat testers.

CONCLUSION
In regards to disease surveillance, this study did not prove that the population using mobile HCT sites have comparative qualities with the Tshwane population. The conclusion is that first-time- and repeat testers are not correlated with increased or decreased high-risk sexual behaviour. Therefore, there is inconclusive evidence that repeat testers lead to bias in HCT data as a disease surveillance data source.

P071 - Locating public health services: The application of GIS mapping to build government capacity through public-private partnerships in South Africa

J Mitchell
Foundation for Professional Development, Pretoria, South Africa

BACKGROUND
The goal of the study was to identify all fixed public health sites in South Africa. Currently the National Department of Health (NDOH) utilizes the District Health Information System (DHIS) to collect data on health service delivery, including location of health services for 4162 fixed sites. At the time only 66% (n=2733) of services had a geo-code that enabled the NDOH to map existing public health services. In cooperation with the Clinton Health Access Initiative (CHAI), the Foundation for Professional Development (FPD) assisted to identify, geo-code and map all public health services.

METHODS
Public health service sites were collected from the DHIS. Only those that were fixed sites were included, such as clinics, community health centres (CHCs) and all hospitals (n=4162). Using physical addresses and landmarks, geo-codes were then identified for all fixed health sites through the use of geocoding software (Marketscope, MapIT). Geo-codes were assigned to all health sites and maps were produced using ArcView.

RESULTS
Of the total health sites, only 66% (n=2733) were geo-coded within the DHIS. This study allowed a further 33% (n=1376) of all fixed health sites to be geo-coded, with only 1% (53) unable to be geo-coded due to a lack of physical address, or unavailable landmarks.

CONCLUSION
This study demonstrates the importance of public-private partnerships to build the capacity of the government. This study also created the ability to compare public health services spatially, which will continue to identify gaps in service provision; and assess utilization patterns of available services.
**P072 - Factors influencing health seeking behaviour for children under five years old in rural and peri-urban communities in KwaZulu-Natal, South Africa**

N Mntambo, M Grant, S Phakathi, R Mokoatle, L Butler, H Horwood
Centre for Rural Health, UKZN

**BACKGROUND**

Many children in South African communities die before the age of five years, despite effective and affordable treatments being available at a primary health care (PHC) level. Severe illness resulting from delayed care-seeking contributes to the mortality burden in South Africa.

**OBJECTIVE**

This study aimed to generate knowledge about the role of, and influences on caregivers of children under the age of 5, with regard to decision making about when and where to seek care for their child.

**METHODS**

This study used a qualitative research design and was based in a rural and a peri-urban setting in KwaZulu-Natal. Focus group discussions (FGDs) were conducted with male and female caregivers’ and participatory techniques were used access rich accounts of caregivers’ experiences. The FGDs were analysed using a thematic approach.

**RESULTS**

A total of 84 participants were included in the study. The findings of the FGD data were organized into three dominant thematic areas which included the role of the caregiver, care seeking practices and the role of community health workers in the care of children. The findings show that family structures are not traditional and decisions are not made in an individual capacity. The role of men in care seeking for children under 5 was also limited.

**CONCLUSION**

It is important that family-centred approaches to care are explored, where key family members are educated about child health. A potential vehicle of family centred care is community health workers.

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**P073 - Conducting Integrated TB and HIV Community-Based Intensive Case Finding in Rural KwaZulu Natal**

S Shenoi, R Brooks, M Mntambo, A Moll, N Mntumba, N Khanyile, N Malembe, G Friedland
Philanjalo NGO

**BACKGROUND**

Intensive case finding (ICF) is promoted by the WHO as a TB control strategy, but implementation and evaluation has been limited. We conducted integrated TB/HIV community-based ICF in an impoverished rural region of South Africa.

**METHODS**

In congregate community settings, a team of nurses and VCT counselors provide health education and conduct TB screening using symptom screen, sputum collection among symptomatic patients for microscopy, culture and drug susceptibility testing (DST), and HIV testing by rapid fingerstick with phlebotomy for CD4 analysis.

**RESULTS**

From March 2010 - October 2011, 4327 people were screened for TB at 230 events occurring at 7 types of community congregate sites. Sputum was collected from 837 (19.3%) TB suspects. A similar proportion of TB suspects was found at HBC-organized events (33%), municipality events (30%), followed by pension pay points (29%) and health fairs (29%). Although TB culture and DST results were delayed, 95% of patients were alive on tracing and referred for treatment through the local TB DOTS office. HIV testing was accepted by 3964 (92%) people; 313 (8%) were found HIV+ and CD4 count was collected from 250 (80%). Patients were notified of their CD4 count results by phone or by tracing, counseled and referred for ART according to national guidelines.

**CONCLUSIONS**

Community-based ICF for TB is feasible and detects a large number of TB suspects in rural South Africa. Community-based HIV testing, integrated into TB case finding, is acceptable to rural community members. Rapid diagnostic assays will enhance the utility of community-based ICF services.
P074 - Challenges of Parenting Aids-Orphaned Grandchildren in Limpopo. A phenomenological study

T. Mohale, S. Mashegoane

University of Limpopo, University of Limpopo

This study explored the experiences of grandparents resuming the role of parenting their HIV/AIDS orphaned grandchildren in Lephalale, South Africa. The pandemic kills working adults in the prime of their life, thus leaving the responsibility of care giving the orphans to their grandmothers. Phenomenological interviews were conducted with ten elderly, Black African women from Lephalale, South Africa who were giving care to AIDS-orphaned grandchildren. Challenges the participant grandmothers were facing in caring for their grandchildren were identified as the following: recurrent experiences of loss and grief, lack of social support, fear of stigmatization, financial constraints, physical strain and ill-health, change of household size, difficulty in acquiring state social grants, emotional distress, caregiver role being divinely ordained and rejection of orphans by their fathers.

AIDS-orphans, care giving, grandparents, phenomenological study

P075 - The Role of Community Health Workers in Primary Health Care Re-engineering: An experience from Eastern Cape Province

S. Moko

Department of Health - Eastern Cape

OBJECTIVES
To integrate Community Health Workers (CHWs) into PHC Outreach Teams to strengthening district health system.

METHODOLOGY
Community Health Workers were migrated from paymaster system and integrated into departmental abnormal persal system. Community Health Workers are distributed per health facility, seven CHWs per facility. In the seven CHWs, two are lay counselors, two TB DOTS and three are for Home Based Care. Department of Health have more than 700 health facilities. Conducted CHWs audit per category, trained master trainers trained CHWs in CHWs Basic Orientation and foundation ten days training (between Oct 2011 – 31st March 2012). Conducted five days post training practicals in the health facilities and municipal wards.

RESULTS
Eastern Cape has 6227 CHWs as per audit; six hundred and three CHWs trained; hundred and three professional nurses trained, twenty four Health Promoters Trained and twelve Environmental Health Practitioners trained. Conducted three CHWs Basic Orientation and foundations practical guidelines workshops. Community Health Workers conducted home visits to conduct household surveys. The PHC outreach team piloted at King Sabata Dalindyebo and Nelson Mandela Metropolitan district (sub-district A).

CONCLUSION
The integration of Community Health Workers into the mainstream primary health care brings stability and strengthen coordination of community based health services. However, the community health workers programme serves as an extension of health services to poor and hard to reach communities.
P076 - The use of health promotion to increase the uptake of cervical cancer screening program in Nyangabgwe hospital, Botswana

K Mokwena, O Okore
1 Department of Public Health, University of Limpopo (Medunsa Campus), 2 Gynecologist in Nyangabgwe Hospital, Botswana

BACKGROUND
Cervical cancer is a major killer of Batswana women, contributing up to 78% of the gynecology ward admissions in the Nyangabgwe Hospital. Despite the existence of the national cancer screening program, the intake for cervical cancer screening remains low.

OBJECTIVES
The objective of this study was to improve the uptake of cervical cancer screening by integrating a health promotion component to the standard program.

METHODS
This interventional study was quasi experimental and quantitative. The study group was the Nyangabgwe Referral Hospital catchment area, and the comparison group was the Princess Marina Hospital catchment area. The study group was exposed to a health promotion intervention: health education presentations in the female wards, pamphlets given to hospital clients, and posters at strategic positions in the hospital. The comparison group continued with the standard cervical cancer screening program. Pre-intervention measurements were followed by the intervention and then post-intervention measures. Questionnaires were administered to clients who came for screening in the study and comparison sites.

RESULTS
There was a 95% increase in the uptake of screening post-intervention. The positive response was higher among women in the reproductive age (20-40 years) and 67% of the women responded to screening following the health education presentation, compared to 20% that responded because of the routine health professional advice.

CONCLUSION
The standard cervical cancer screening program needs a visible health promotion component to enhance it so that it achieves the desired results of a decline in cervical cancer morbidity and mortality.

P077 - Evaluation of air quality adjacent to smoking areas in popular eateries in the Pretoria area using a mobile monitor

L Moremi, M Mpyatona, M Styn, H Bekker, O Ayo-Yusuf
1 School of Health Systems and Public Health, Faculty of Health Sciences, University of Pretoria
2 Department of Community Dentistry, Faculty of Health Sciences, University of Pretoria

OBJECTIVE
Exposure to second hand smoke is a major health concern. Although smoke-free law was introduced in South Africa in 2001, only little is known of the effectiveness of this law. We therefore sought to study the air quality of areas adjacent to smoking areas in four popular eateries in Pretoria.

METHODS
The TSI SidePak AMS10 Personal Aerosol monitor was used to measure the average PM2.5 levels per m3 in 4 selected eateries. The data was captured and PM2.5 /m3 levels obtained were compared between the eateries and with the WHO established standard for air quality of 25µg/m3.

RESULTS
Among the 4 venues visited, the average PM2.5 concentration recorded for each venue far exceeded the WHO standard irrespective of the ventilation system in place. The average reading varied between 80µg/m3 and 460µg/m3, with the most polluted venue having a maximum concentration of 767µg/m3.

CONCLUSION
Non-smoking areas recorded unsafe levels of indoor air pollution due to the presence of designated smoking areas in all the four eateries visited. To fully protect the public’s health from this source of indoor air pollution, a 100% smoke-free policy, which completely ban all indoor smoking needs to be introduced in South Africa.
P078 - Management of inpatients with TB and TB/HIV co-infection in a central academic hospital in the Western Cape, South Africa

F Mukinda, R Dyers, F Marais, D Sissolak, L Dudley

Health Systems and Service Research, Division of Community Health, Faculty of Health Sciences, Stellenbosch University, South Africa, Health Impact Assessment, Western Cape Department of Health, Academic Unit for Infection Prevention and Control, Division of Community Health, Stellenbosch University, South Africa.

BACKGROUND
High levels of HIV/TB co-infection and the growing threat of drug resistance are anticipated to increase hospitalization rates of TB patients in South Africa. No studies assessed the hospital management of TB patients in the Western Cape.

AIM
To describe the diagnostic, therapeutic management and discharge process of patients with TB and TB/HIV co-infection.

METHODS
A retrospective cross-sectional review of medical records of a random sample of TB confirmed patients admitted to Tygerberg Academic Hospital between November 2008 and April 2009.

RESULTS
Medical records of 136 patients were reviewed, of whom 31 (22.8%) were children under 15 years of age. 115 (84.6%) were confirmed as TB by microbiological tests. 111 (81.6%) were placed on TB treatment. 97 (78.2%) of discharged patients were given a discharge letter where 81 (90.0%) specified the diagnosis of TB, 42 (42.3%) reported patients’ contact details; 77 (79.4%) reported TB diagnostic information, 58 (69.9%) specified HIV status information. 60 (44.1%) were known HIV positive, 59 (43.4%) were tested for HIV in TAH. 24 (40%) had previously commenced anti-retroviral therapy (ART) but only 13 (21.7%) were discharged with ARVs. A total of 12 (8.8%) patients died. 76 (55.9%) were discharged directly to PHC services. 37 (27.2%) patients were notified.

CONCLUSION
Clinical management of inpatients with TB and TB/HIV co-infection focuses on obtaining an accurate diagnosis. Testing for co-infection, commencement of treatment for TB and HIV/AIDS, and discharge process are poorly managed. An intervention is being developed with the hospital to improve clinical management and discharge process.

P079 - Comparing intention to leave their primary jobs among moonlighting and non-moonlighting nurses in South Africa

L Rispel, L Chimwa, D Blaauw, P Munyewende, K de Wet

School of Public Health, University of the Witwatersrand, Johannesburg, Division of Biostatistics, School of Public Health, University of the Witwatersrand, Johannesburg, Centre for Health Policy, School of Public Health, University of the Witwatersrand, Johannesburg, Department of Sociology, University of the Free State, Bloemfontein

BACKGROUND
Moonlighting, also known as multiple or dual job-holding, is understood as having a second part-time job in addition to a primary full-time job. Although moonlighting is common in low and middle-income countries, there is a dearth of research on moonlighting among nurses in South Africa or its influence on turnover at their primary jobs.

METHODS
During 2010, a stratified random sample of 80 hospitals was selected from the public and private health sectors in four South African provinces. All nurses working in intensive care, theatre, casualty, maternity and general medical and surgical wards on the survey day completed a self-administered questionnaire after obtaining informed consent. In addition to demographic information, the questionnaire focused on the prevalence of moonlighting and participants’ intention to leave their primary jobs in the 12 months following the survey. STATA version 10 was used for analysis.

RESULTS
Survey participants (n=3,784) were middle-aged (median 42 years). The prevalence of moonlighting in the previous year was 34.1% [95%CI: 32.6–35.6]. Overall, 1,133 participants (31.5%) indicated that they planned to leave their primary jobs, ranging from a low of 23.4% among nursing auxiliaries to 39% of all nurses working in Gauteng, the wealthiest and most urbanised province in South Africa. 15.5% of survey participants indicated that they planned to go overseas in the 12 months following the survey. Among this group, 18.1% of moonlighters, compared to 14.3% of non-moonlighters planned to go overseas, but this difference was not statistically significant. The odds ratio of moonlighters planning to go overseas compared to non-moonlighters was 1.32 [95% CI: 0.81- 2.16], but this was not statistically significant (p=0.266).

CONCLUSION
This study adds to the empirical literature on whether moonlighting changes nurses’ decisions on turnover at their primary jobs.
P080 - Perceptions of the impact of an advanced training programme on the management skills of health professionals in Gauteng

J Mutyabule
University of Pretoria

OBJECTIVE
To compare competency in management before and after training, assess the health managers’ experience of the training programme and evaluate attitudes of supervisors, colleagues and subordinates of the health managers after training.

METHODS
A cross sectional descriptive analytical study and 360 degree interviewing. Health Managers were evaluated approximately 18 months after completion of the training programme in management. The 360 degrees assessment was done with their supervisors, colleagues and subordinates.

RESULTS
All health managers self rated as improved in 12 managerial and leadership competencies, and the 360 degrees evaluation affirmed 5 of these competencies as improved, except for the ability to create and implement a marketing plan by the health managers which scored poorly.

CONCLUSION
Training in management leads to improvement of both leadership and managerial skills in health professionals.

P081 - Development of a facility-based physical activity intervention for pregnant women residing in underprivileged communities in Cape Town: A reflection on the process

1,2M Muzigaba, 3, 4F Wong, 1E Ketterer, 1L Gericke, 1P de Villiers, 5S Abrahams
1The Heart and Stroke Foundation South Africa, Cape Town, South Africa,
2The University of the Western Cape, School of Public Health, Bellville, South Africa
3Matrix Public Health Consultants, Inc. Toronto Ontario, Canada
4The World Heart Federation, Geneva Switzerland,
5The Western Cape Department of Health: Health Promotion & Maternal Health Provincial Programmes, South Africa
6The University of the Western Cape, Department of Biokinetics

BACKGROUND
In South Africa, facility-based, context-specific and client-sensitive interventions aimed at promoting physical activity (PA) among women from underprivileged communities who are in their antenatal and postpartum periods remain sparse and poorly documented. This is in spite of the many benefits PA can provide for both the baby and the mother.

OBJECTIVE
To develop and pilot an intervention aimed at promoting practical antenatal and postpartum PAs for pregnant women utilising antenatal services at a primary health care facility in Cape Town.

METHODS
A needs-assessment was first conducted using four focus group discussions, each with a random sample of 10 pregnant women from six underprivileged communities surrounding Vanguard Community Health Centre. The sample was a mixture of primi- and multi-gravida black and coloured women at different stages of pregnancy. Discussion points were guided by the theory of planned behaviour which was applied to PA during and after pregnancy. Content analysis was used to analyse data from focus groups and findings were compared to the existing literature to formulate the intervention theory and evaluation design (non-equivalent two-group pre-post quasi-experimental design). Core components of the intervention included a PA training manual (for project implementers to facilitate PA during routine antenatal classes and encourage autonomous PA among women once they have left the facility), a tailor-made structured PA DVD, information brochures and clinic posters.

RESULTS
For most women, PA was considered important for them and their babies. However, a number of bottlenecks for translating intentions into action were identified including: lack of support structures (exercise groups, local sports centres, unsafe neighbourhood etc), fear of hurting oneself and the growing baby, lack of time due to work and family responsibilities, and not knowing what and how much PA is safe to do. The intervention was developed to address these challenges. The initial implementation process was however not without some operational and organizational hurdles and continues till now.

CONCLUSION
Successful integration of a PA programme into routine antenatal birth-preparedness education and support at the project site requires active client involvement, a reliable human resource base, operational and organizational flexibility at facility level, as well as process monitoring and evaluation.
P082 - Lead exposure in grade 1 children and its impact on health and behaviour

N Naicker
Medical Research Council

BACKGROUND
Lead exposure remains high in South Africa. Environmental lead exposure has been associated with health and neurological effects in childhood.

OBJECTIVES
The objective of this study was to determine the relationship between blood lead levels and health and behavioural problems among grade 1 children in South Africa.

METHODS
A cross sectional survey was conducted in schools in Johannesburg, Cape Town, Kimberley, Aggeneys, Pella and Onseepkans in 2007. Blood lead levels were assessed in a total of 1581 first grade children using the Lead Care finger prick test. BMI was calculated and haemoglobin measurements were taken. A structured questionnaire on risk factors and behavioural reports were completed by parents.

RESULTS
Blood lead levels ranged from 0.8-32.3 µg/dl. 75% of the sample had blood lead levels >5 µg/dl. The lowest blood lead levels were found in the remote rural town of Pella. The highest blood lead levels were found in children attending schools in the inner city of Johannesburg. Although 86% of the children had at least one type of behavioural problem, defying authority or breaking rules often was significantly related to blood lead levels (P value <0.001). Further regression analysis on associations between blood lead levels and health and behaviour will be presented at the conference.

CONCLUSION
Thus lead exposure is still high with over 75% of the sample having lead levels >5 µg/dl- the WHO action level. Many international studies have shown the detrimental effects on health and cognitive function and these associations are highlighted in this study.

P083 - A Study on the Barriers to Anti-Retroviral Therapy Adherence among Human Immunodeficiency Virus Infected Adolescents in Gaborone, Botswana

M Ndiaye
School of Public Health, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa

Barriers to adherence to antiretroviral therapy (ART) among human immunodeficiency virus (HIV) infected adolescents are multiple and complex. The objectives of this study were to examine the level of adherence to ART medications and identify barriers associated with non-adherence in the adolescent population in Gaborone Botswana. The adherence level was estimated using the pharmacy pill count technique. Gender was associated with non adherence with male adolescents 70% less likely to adhere to their medication than their female counterparts [p = 0.020, OR=0.30, 95% CI (0.10 – 0.85)]. In addition adolescents who missed a dose because their pills were not collected from the pharmacy either by themselves or their care givers were 77 % less likely to adhere to their medication as compared to those that did not miss a dose because their medication was collected from the pharmacy [p = 0.019, OR= 0.23, 95%CI (0.064 – 0.837)]. Interventions to improve adherence to ART should be designed specifically to target HIV infected male adolescents. Further the consequences of poor adherence to ART medication should be emphasized during the counselling of the care givers of HIV infected male adolescents. The relationship between gender and non adherence in HIV infected adolescents requires further investigation.
P084 - First year medical students’ view and knowledge of public health in South Africa

G Nel, J Bassett, L Boshoff, A Truter, E Theron, D Ungerer, L Majake
School of Health Systems and Public Health, Faculty of Health Sciences, University of Pretoria

The aim of this study was to determine the knowledge and views of first year medical students at the University of Pretoria about public health and its different aspects involved in the South African health system. This study needed to be conducted due to the evidence that there is poor knowledge of this medical curriculum topic among medical students. It is a HPCSA requirement that a medical student is taught about public health and lack of interest among students may contribute to the level of inadequate knowledge.

Researchers conducted a study of the first year medical students through a voluntary self-answering questionnaire. This questionnaire involved determining the amount of knowledge the first year medical students have obtained about public health so far in their studies. It was only made applicable to students of 18 years or older due to consent being required from parents of those younger than 18 years of age.

The results yielded a response rate of 75.7%. This was due to researchers encountering a variety of challenges such as medical students being younger than 18 years, refusals, dentistry students filling in questionnaires and students not returning questionnaires. The trend most often observed (32.9%) among the 140 students who responded, as to their understanding of public health, was “The General well-being of the Public”. With a high number of different trends being observed, it became evident that first year students were uncertain about public health and there was little uniform understanding of the term. Respondents performed poorly when tested on their knowledge of public health issues, with the majority of respondents (60.4%) scoring in the 40% or below range. Facebook and the UP website were shown to be most effective to display public health information.

Based on results, researchers concluded that first year medical students have not obtained enough information about public health and this could be due to numerous factors such as little academic exposure to, or promotion of, public health. This is evidence that the current medical education system which focuses mainly on the individual doctor-patient relationship, hasn’t delivered (public health) results on the bigger stage.

P085 - Alcohol consumption in a semi-urban area of North West Province: Key Informant Interviews and focus group discussions with bar patrons and servers

J Ngako, N Morojele
Alcohol and Drug Abuse Research Unit (ADARU), Medical Research Council, Pretoria, South Africa

BACKGROUND
Alcohol misuse is a risk factor for health, social and psychological problems. The negative effects of individuals’ alcohol use on other people are of increasing concern. There is a need for in-depth exploration of the nature of alcohol use and its impact on physical and mental health of individuals, their families and communities in South Africa.

OBJECTIVE
To explore and describe alcohol consumption in a semi-urban area of North West Province.

METHODS
A qualitative research design was used. Data were collected between February and April 2012 via six Key Informants Interviews (KIs) and six Focus Group Discussions (FGDs) among bar patrons and servers. One FGD comprised male bar servers. Five FGDs were conducted among bar patrons, with two groups comprising males, two groups comprising females, and one comprising both males and females. A total of 43 people participated in FGDs. Participants were purposefully selected to participate in the study. All participants were older than 18 years. Data were analysed in accordance with Tesch’s method of open coding.

RESULTS
Participants described high levels of alcohol consumption in the community, especially among the youth, as reflected in alcohol consumers’ quantity and duration of consumption, and high levels of expenditure on alcohol. High levels of alcohol consumption, including daily drinking, were attributed to taverns that operate for 24 hours, unemployment, a lack of resources and a need to relieve stress and relax. Participants indicated that heavy drinking does not just harm the individual but also others, in terms of physical and sexual violence, crime, and child abuse and neglect.

CONCLUSION
Given the patterns of alcohol use identified in the semi-urban area, there is a need to strengthen policies to control the availability of alcohol. Raising awareness of harm to others and protection of vulnerable groups like children, should form an integral part of health promotional strategies.
P086 - Influence of waist and hip circumferences on serum adiponectin levels and blood pressure in adolescents living in Mthatha

'B Nkeh-Chungag, 'A Sekokotla, 'J Iputo

1 Community Medicine, 2Department of Physiology, Faculty of Health Sciences, Walter Sisulu

BACKGROUND
The prevalence of cardiovascular diseases (CVDs) in developing countries is rising as they tend to adopt more urban lifestyles. Increased BMI has been associated with a greater risk for CVDs in all populations. Recent reports however indicate that waist and hip circumferences (WC and HC) are better predictors of CVDs and should therefore be taken into consideration when determining an individual’s profile for CVD risk. The aim of the current study was to evaluate the relationship between waist and hip circumferences on blood pressure and serum adiponectin levels in male and female adolescents living in Mthatha.

METHOD
One hundred and eleven school learners aged 13 – 17 years old (74 females and 37 males) were recruited in to this study. Of the female participants 32 were lean (BMI≤75%) while 42 were classified as either overweight/obese (BMI≥85%). Anthropometric and blood pressure measurements were performed for all participants, after which blood samples were collected to determine serum adiponectin levels.

RESULTS
Body mass index (BMI) was significantly (p<0.001) higher in females (25.7±5.3) than in males (22.3±5.6); HC was also found to be significantly (p<0.001) higher in females (99.3±11.9) than in males (91.2±11.5). Mean systolic blood pressure (MSBP) was significantly (p<0.05) higher in males (118.2±10.9 and 4.24±0.73), than in females (112.9±12.5 and 3.85±1.0) respectively. Serum adiponectin levels were significantly (p<0.05) higher in females (11.49±1.65) compared to males (10.65±1.9) though MSBP was significantly (p<0.028) higher in obese (119.67±8.46) compared to lean (113.59±12.99) females. Adiponectin levels correlated negatively with WC though both anthropometric measurements correlated positively with MSBP.

CONCLUSION
Increased waist and hip circumferences and not just BMI are associated with higher blood pressures in female adolescents in Mthatha. Waist and hip circumferences play a role in determining serum adiponectin and mean systolic blood pressure in adolescents living in Mthatha.

P087 - Access to hot running water in urban communities in Johannesburg, South Africa

'P Nkomo, 'A Mathee, 'N Naicker

1 South African Medical Research Council, South Africa, 2School of Public Health, University of the Witwatersrand, Johannesburg, South Africa

BACKGROUND
Access to running hot water is one of the basic commodities that most people take for granted; yet majority of South Africans from lower-income communities still do not have access to it. The high cost of electricity has posed the greatest barrier for most poor families.

OBJECTIVE
This study first seeks to identify access to running water over a six year period; and examine the association between access to hot water and socio-economic status in five urban communities in Johannesburg.

METHODS
The Health, Environment and Development (HEAD) study aims to monitor change in housing conditions and health status in five urban communities in Johannesburg. The study commenced in 2006 and cross-sectional surveys are conducted each year in relatively impoverished urban settlements - Braamfischerveld, Riverlea, Hospital Hill, Bertrams, and Hillbrow using pre-structured questionnaires.

RESULTS
Less than 3% households have access to tap water inside the settlement in Hospital Hill. Not one of the settlements reported a 100% access to hot running water; with Hospital reporting lowest (1%) access and Braamfischerveld second lowest (>10%) access over the period of six years.

Households earning average monthly income greater than R10,000 were 16 times more likely to have access to hot running water compared to those with no income.

CONCLUSION
South African lower-income households still have very little to no access to hot running water. To help alleviate this problem and the growing energy problems in the country programmes such as the low cost solar water heater programme may need to be explored.
P088 - Coping strategies of custodian grandmothers within the Prospective Urban and Rural Epidemiological Study cohort (PURE) in the Eastern Cape and Western Cape Provinces, South Africa

B Nkosi
University of Western Cape

BACKGROUND
Studies in developing countries including South Africa confirm that the elderly have become de facto primary caregivers. However, literature has often focused on elderly abuse and their financial contributions in sustaining the households in times of poverty and HIV/AIDS. This study explored coping strategies among custodian grandmothers and challenges they face as they care for children and how they cope with their own health problems. This ongoing study and reports on four in-depth interviews of a larger sample.

METHODS
A secondary data analysis of the PURE baseline data was used to determine demographic characteristics. Subsequently, a purposeful sampling technique was used to identify cases – custodian grandmothers diagnosed with chronic illnesses. In-depth interviews were conducted in Xhosa in an urban setting in Cape Town.

Data was analysed using content thematic analysis. Recorded interviews were transcribed verbatim, and translated into English. Open and axial techniques were used to locate and organize themes and labels. To retain the richness of the data, a narrative approach was used to convey the focus group discussions.

RESULTS
The study revealed the drudgery facing custodian grandmothers as they struggle to construct their livelihoods. Participants were females, caring for both adult and grandchildren, and they relied on social grants to sustain their families. They drew on social networks including family, church and health clubs to cope with custodian responsibilities and own health problems.

P089 - Patient-related adverse events in the maternity units at Tokollo/Mafube district hospital complex

S Noge
Tokollo/ Mafube District Hospital

BACKGROUND
The Tokollo/Mafube District (TMD) Hospital Complex located in the rural area of Fezile Dabi District within the Free State Province has reported a high number of adverse events (AEs) from the maternity units. Although the information linked to AEs occurring in the hospitals is routinely collected and reported to the hospital management in accordance with the Provincial policy, 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, related individual and health system factors, and the functioning of the reporting system used for these 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 was collected in the following categories of variables: 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 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 on the occurrence of AEs at the maternity units of the Complex and that 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.
P090 - Challenges facing young and teenage girls who are victims of HIV/AIDS

G Ntshangase, K motsa
Berea Hillbrow Home of Hope, Johannesburg, South Africa

BACKGROUND
Home of hope is an autonomous, self started and inclusive home for rehabilitation of girls that operates at a grass root level. Exploited girls who are exposed in child trafficking and HIV/AIDS from all backgrounds are made part of a secondary family. Since 2000 home of hope has been engaged in the inner city of Johannesburg removing young and teenage girls from brothels and in drug lord’s premises.

METHOD
A qualitative measure was adopted for this study and all participants were interviewed by completing questionnaire. Each child admitted went through interview process. Support groups were also implemented to conduct discussion challenges faced by young girls.

RESULTS
From year 2000 over 1 500 community members have been recruited by home of hope and interviews were conducted for 1 010 in the period of 11 years and all girls who were interviewed were also assisted and helped through outreach programmes. Findings show that trafficking of children, drug abuse, poor accessibility to health care systems are the main challenges young girls are facing.

CONCLUSION
Trafficking of children is fuelling the epidemic despite the war on new infections, and recent decreases in casual drug use; drug addiction is increasingly and threatens to erode our fragile gains against the transmission of HIV. Children from rural areas need meaningful participation when developing programmes for their protection and recovery.

P091 - Climate change and health: The effect of hot weather on outdoor workers’ health and activity levels in rural South Africa; presentation of a pilot study

J Oba, A Mathee, T Kjellstrom
1South African Medical Research Council, Johannesburg, South Africa,
2National Centre for Epidemiology and Population Health, Australian National University, Canberra, Australia

BACKGROUND
There is now widespread agreement that the earth is warming, due to emissions of greenhouse gases caused by human activity. With the prospect of a warmer world, this pilot study begins to address the paucity of subjective research on the implications for worker well-being and work performance.

OBJECTIVES
To measure the environmental working conditions (temperature and humidity) in the study area; determine the effect of work in hot weather on workers’ physiology (heart rate and blood pressure) and activity levels (energy expenditure).

METHODS
A quantitative research design was used. The study was conducted among road construction workers, directly exposed to sunlight in the workplace. Data was collected using accelerometers, heart rate monitors and weather equipment. Descriptive analyses using excel spreadsheet was carried out.

RESULTS
The results show reduced performances with increasing temperature and physiological health measurements that reveal outdoor workers as a very vulnerable group in the era of climate change.

CONCLUSION
The pilot study provided insight into the consequences of hot weather on the health, activity (and subsequently performance) levels which outdoor workers are currently exposed to. This finding has implications for future worker health and productivity levels in South Africa.
P092 - Food safety and hygiene practices among food handlers in canteens at the university college hospital, Ibadan, Nigeria

J Odunna

University Of Ibadan

Food canteen business is a fast growing industry in and around major health care facilities including teaching hospitals in Nigeria. Lately, the industry is increasingly being associated with the risk of food contamination and poisoning. Food handlers’ knowledge and practices concerning food safety have not been fully investigated. This study was designed to assess the knowledge of, and attitude towards hygiene practices among food handlers, and to determine the bacteriological quality of food in canteens located within the University College Hospital (UCH), Ibadan.

A cross-sectional study was conducted, involving 102 food handlers operating in the seven food canteens in UCH. Canteen with staff strength of 21-30, 11-20 and 1-10 were designated as large, medium and small respectively. A semi-structured questionnaire which included a 20-point of knowledge scale and questions on hygiene related practices was used for data collection. Knowledge scores ≤6, ≤8 and ≥10 were taken as poor, fair and good respectively. The instrument also included a 15 point practice scale in which a poor practice attracted a score of zero and a good practice 1 point. Practice scores ranging from 0-8 and 9-15 were categorised as poor and good practices respectively. Sanitary conditions in the canteens were documented using an observational checklist. Forty food samples (cooked) and fourteen samples of borehole water stored in the canteen were collected and assessed for bacterial load using Pour Plate and Multiple Tube methods. Results were compared with National Guideline Limits (NGL). Data were analysed using descriptive statistics, ANOVA at level of significance at 5%.

Respondents’ mean age was 25.9 ± 6.5 years and 88.2% were females. Most respondents (97.8%) had not received any training on food safety and hygiene. All the canteens had dilapidated toilets, poor waste water passage and improper raw food storage. Respondents mean hygiene knowledge scores in small, medium and large canteens were 11.7 ± 3.2, 8.2 ± 2.3 and 7.6 ± 3.8 respectively. Respondents mean hygiene practices scores in large, medium and small canteens were 6.2 ± 2.9, 8.2 ± 1.9 and 9.4 ± 3.2 respectively. The most common microorganism isolated from all food samples in the three categories of canteens were staphylococcus sp (2.58 × 105-2.5×107cfu/g), Klebsiella sp (2.1 × 105 - 2.6 × 107 cfu/g), were isolated only from both large and medium canteens while E-coli (2.0×105- 5.0 × 107) were isolated only from large canteens. These bacterial wads exceeded the NGL limit for staphylococcus which should not be more than 104.

There were gaps in knowledge and poor food safety and hygiene practices among the food handlers. In addition opportunities exist for microbial food poisoning in all the canteens, upgrade of sanitary facilities, provision of food safety and hygiene training should be enforced by hospital management.

P093 - PHC Re-engineering: The Challenges in implementation of PHC stream in Rural Context.

J Ongole

Piet Retief Hospital/UP

BACKGROUND

In 10 weeks, 407 households were registered in three wards by PHC streams by 10 Home based care workers and one professional nurse at Piet Retief Town Clinic. Children with missed opportunities have been immunized, done HIV screening and received birth certification. Patients have been granted disability grant, referred to clinic star, started ARV, PMTCT and immunised. However supervision is inadequate, access to households are denied and completed records are kept home.

OBJECTIVES

Share the achievements, challenges and gaps of implementing PHC stream in rural context

METHODS

Operation information of PHC re-engineering was obtained by review and interview of PHC team. The descriptive analysis of achievements, challenges and gaps in implementation was conducted.

RESULTS

The PHC stream of PHC reengineering is implemented by one professional nurse full time on mobile clinic service and 10 home base care workers. Of the 407 household registered in three wards in 10 weeks, 140 were in Mangosutu, 150 in Phoshwa and 117 in Nkonjaneni wards. Access to household denied in 45 (11%) households. One TB patient received medical disability grant, one AIDS patient started ART, 12 children received missed immunizations, three mothers returned to PMTCT program and two children received PCR testing. Many children have no birth registration as mothers lack identity documents. No feedback between HBC and nurse. Completed records stored at the community. All HBC workers are volunteers. No Health system support.

CONCLUSION

The implementation of PHC stream could make fast progress if gaps, challenges and Health system strengthening are addressed.
P094 - TB infection control: study of airborne infection control in Piet Retief hospital

1N Methula, 2B Nzimande & 3J Ongole

1, 2 BCMP III students UP, 3Facilitator UP/HCU Piet Retief Hospital

BACKGROUND
TB Infection and spread is a problem in Hospitals. From January – April 2012, a study of airborne infection control at Piet Retief was conducted at the TB/HIV clinic at Piet Retief Hospital to obtain baseline data for quality control. In the past two years, at least one nurse was treated for MDR-TB and few more for acute TB. The TB/HIV clinic is unconverted old X-Ray unit with poor air flow.

OBJECTIVE
To identify the possible ways in which TB infection and spread can be prevented.

METHODS
TB policy guidelines used for checklist. Infrastructure was assessed by measurements of the consultation rooms, sizes of the windows and doors. Air flow to detect the direction of flow of air was assessed using smoke burnt from incense. Interviews of key personnel were conducted.

RESULTS
The windows are small and located at height not conducive for maximum air flow. The air (smoke) flowed to the consulting nurse. N95 use is inconsistent and incorrectly fitted. UV- light functional. No cross ventilation air-flow in the rooms. There was no airflow with door closed or open. The knowledge of TB and control measure was poor among cleaners, potters, nurses and administrative staff.

CONCLUSION
Hospital TB clinic is a high risk area for TB transmission this is due to all the factors

P095 - A Tool for Documenting Good Practices in the Public Health Sector

T Padayachee, R English
Health Systems Trust

BACKGROUND
Documenting and sharing good practice affords the opportunity to disseminate knowledge about lessons learned and encourages openness about how to improve service delivery. Of vital importance is the ability to comprehensively capture elements of a programme that work or do not work, how they work and why they do or do not work using a tool designed with this in mind.

OBJECTIVE
To develop a tool to comprehensively document good practices in the public health sector.

METHODOLOGY
A standardised tool, based on the World Health Organisation’s (WHO) six building blocks was developed to explore structural features of identified Good Practices, whilst critical reflection as an activity was incorporated into the tool to explore less tangible reasons for success. Based on an established set of criteria, provincial Departments of Health (PDoH) were each invited to each submit two good practices. The Good Practices tool was used to collect data on 16 PDoH Good Practices across nine provinces. Qualitative research methods were used to collect data which was analysed thematically and supported by reviewed quantitative data appropriate.

RESULTS
A standardised tool guided by the WHO Building Blocks is useful to identify good practices and explore reasons for successes. The sharing of good practices was favourably received by managers working in the public health sector.

CONCLUSION
Documenting good practices was positively received by the PDoH management staff working in the public health sector.
P096 - Improvement of co-trimoxazole uptake for HIV exposed babies around 6 weeks at Bungeni PHC local area in Vhembe district

M Phamphe, Matamela TA, E Masumbe, M Baloyi, E Ramunisi, T Matamela, A Ludere
Vhembe District-DOH

INTRODUCTION
Co-trimoxazole prophylaxis has long been part of the standard care for people living with advanced HIV disease in industrialised countries, where it is primarily used to prevent illnesses such as Pneumocystis Jiroveci Pneumonia (PCP) and toxoplasmosis. Studies have also shown that co-trimoxazole prophylaxis prevents infections and prolongs life in resource-limited settings. At Vhembe District for the financial year 2010/11, baby co-trimoxazole uptake rate at Thulamela Local Municipality was 48.2% to the target of 80%. This is the principal problem which this project seeks to address. It is anticipated that this project will secondarily address PCR uptake rate as well. Thulamela A is the sub district where this project is proposed. It will take place at three facilities at Bungeni Local area namely: Bungeni CHC, Mashau and De Hoop Clinics. The preliminary evaluation of quarterly program review revealed that the low uptake of co-trimoxazole uptake is due to (i) poor data management and (ii) lack of health care workers skills to link HIV exposed children to PMTCT and paediatric ART programme. (iii) Another crucial cause is the calculation methods used for co-trimoxazole uptake rate where the denominator does not represent statistics of the current month as does the numerator.

PURPOSE OF THE PROJECT
The purpose of the project is to explore the knowledge and understanding of health care workers on the management of an HIV exposed baby around 4 to 6 weeks with the view to determine the rate and associated factors to the low co-trimoxazole uptake rate and improve it for better.

PROJECT OBJECTIVES
1. To increase co-trimoxazole uptake rate of HIV exposed babies at 6 weeks from 34.9% to 80% by 31 June 2012.
2. To increase PCR testing rate of HIV exposed babies at 6 weeks from 60% to 100% by 31 June 2012.

WHAT NEED TO BE DONE TO IMPROVE THE SITUATION?
• Integrate co-trimoxazole prophylaxis for children into existing maternal and child health services.
• Strengthen monitoring and evaluation systems.
• Capacity building of project members on: HIV data management, mapping of HIV exposed babies and tracking of PCR blood specimen results.

PROJECT PERIOD: 01 January 2012 to 31 June 2012

ETHICAL CONSIDERATIONS
Approval was obtained for the action research project from the Acting District Executive Manager of Vhembe District.

RESULTS
The study is in progress and to be completed 31 June 2012 and report will be available 13 July 2012.
P097 - The participation of health participant network on healthcare management in the local fund health security in local government, Kantharawichai district, Maha Sarakham province, Thailand

V Promasatayaprot, Sumattana Glangkarn, Pongdanai Kaewnishsai

Faculty of Public Health, Mahasarakham University, Thailand,
Health Official, Dung Hospital, Dung District, Udonthani Province, Thailand

BACKGROUND
The local government is the nearest organisation for people to generally possess a good understanding of local issues. It should have the capacity to manage a Local Fund Health Security (LFHS) for a small community and, at later stage, expand to cover larger local communities. Requiring a financial contribution from local government will increase awareness of health issues and augment the accountability of the local government.

OBJECTIVE
The objective was to study the participation of health participant network on healthcare management in the LFHS in local government.

METHODS
This study of the policy process employed a mixed-methods approach. A cross-sectional survey conducted in 109 samples in Kutsaijor Sub-district, Kantharawichai District, Maha Sarakham Province, Thailand. The qualitative data were focused on health participant network.

RESULTS
The participating management of LFHSs on healthcare networking consists of 4 processes which are decision, operation, receiving benefits, and assessment. The over all participation of the network was good. The main operations of the LFHS were good level overview. There were supplied services including health service core package purchasers, support health centre, community health promotion and prevention, and the LFHS management and development. The participation correlated to LFHS performance significantly. The LFHS could manage healthcare services in communities, providing supports on the existing public health services, and purchasing of the existing public health services to be fully run at local government.

CONCLUSION
The results suggest the effective local health management. The health participant network must have the good understanding and participating in every operational step.

P098 - Improving PMTCT services through health systems strengthening: Evaluating PMTCT ‘Nurse Quality Mentors' in three South African Provinces

B Pududu
Kheth’Impilo

BACKGROUND
Many pregnant women do not receive the complete package of prevention-of-mother-to-child transmission (PMTCT) of HIV interventions in South Africa.

OBJECTIVES
To evaluate if clinical mentorship provided by nurse Quality Mentors (QMs) is effective to improve PMTCT outcomes.

METHODS
QMs strengthen staff capacity through mentoring and supervision of PMTCT nurses, and ensure the proper application of national PMTCT guidelines. An observational before-after study was conducted at 31 facilities in high HIV-prevalence South African districts. PMTCT indicators were compared for the periods before and after QMs were introduced, using routinely collected data between April 2010 and September 2011.

RESULTS
4951 (pre) and 22,507 (post) women were included. Repeat HIV testing at 32 weeks gestation increased from 38% to 45% (RR=1.17; 95% CI: 1.12-1.23) following introduction of QMs. Uptake of CD4 cell testing at booking increased from 82% to 85% (RR=1.03; 95% CI: 1.01-1.05), and uptake of AZT for eligible women improved from 80% to 89% (RR=1.10; CI: 1.08-1.13). HIV-exposed infants who received cotrimoxazole increased from 93% to 99% (RR=1.07; CI: 1.05-1.09). The proportion of infants HIV tested at 6 weeks and 18 months after birth increased from 69% to 77% (RR=1.12; CI: 1.08-1.16) and from 12% to 23% (RR=1.84; CI: 1.63-2.08), respectively. HIV transmission at 6 weeks and 18 months decreased from 3.3% to 2.7% (RR=0.80; CI: 0.58-1.10) and from 8.3% to 3.9% (RR=0.47; CI: 0.30-0.74), respectively.

CONCLUSION
QMs improved PMTCT processes contributing to decreased HIV transmission. This is an effective strategy for health system strengthening in settings with limited human resources.
**P099 - Making safer reproductive choices: field testing who's counselling tool on reproductive choices and contraception in kwazulu-Natal**

L Rambally, M Beksinska, C Milford, F Sarges, R Greener, K Sithole, J Pienaar, M Kubeka, Z Mabude, M Drace, J Smit
MatCH (Maternal, Adolescent and Child Health), University of the Witwatersrand, Durban, South Africa

**BACKGROUND**
Despite links between HIV and Family planning (FP), the integration of these services has been overlooked within the healthcare system. KwaZulu-Natal has one of the highest HIV prevalence rates in the world, and similarly high rates of teenage and unintended pregnancies. Moreover few HIV positive couples report using dual protection and serodiscordant couples often have little or no knowledge of how to safely conceive.

**OBJECTIVES**
To address this shortfall, in 2011 we piloted the World Health Organization’s (WHO) flipchart (developed to facilitate counseling and inform people living with HIV (PLHIV) about the range of FP and reproductive choices) among providers and counselors.

**METHODS**
To evaluate the pilot, structured interviews were conducted with 5 HIV positive female clients, 1 FP provider and 1 HIV counselor. A content analysis was conducted on the data collected.

**RESULTS**
Preliminary results indicate the counselor and provider had no difficulty using the tool and felt it improved the quality of sessions. Of the 5 participants, 3 were currently pregnant and reported they were counseled on conception, breastfeeding and FP use after pregnancy; the remaining 2 clients were currently using a FP method and were counseled on other FP methods available and using FP when on medication. Clients stated that they enjoyed learning about different FP methods, thought the tool easily conveyed a great deal of information and should be used at subsequent FP sessions.

**CONCLUSIONS**
These results suggest this tool can be used to facilitate counseling sessions with PLHIV and to improve the quality of FP services received more generally.

**P100 - Termination of Pregnancies in Limpopo Province, 2007 to 2010**

1, 2, 3L Ranoto, 2, 3L Kuonza, 1E Maimela
1Department of Health and Social Development (Limpopo Province)
2South African Field Epidemiology and Laboratory Training Programme
3University of Pretoria (School of Health Systems and Public Health)

**BACKGROUND**
Termination of pregnancy (TOP) is the process of ending a pregnancy before the fetus has grown to live outside the uterus. A TOP is often associated with morbidity to the mother. In South Africa, the Choice on Termination of Pregnancy Act (CTOPA) (1996) allows a woman to have an abortion upon request.

**OBJECTIVE**
To understand the patterns of pregnancy terminations in Limpopo Province, in order to guide public health policies aimed at enhancing the health and well-being of women.

**METHODS**
Retrospective analysis of TOP data routinely collected in Limpopo between 2007 and 2010. Data analysis was performed using Microsoft Excel and the EpiInfo statistical software.

**RESULTS**
Cumulatively, 15999 TOPs were conducted between 2007 and 2010. The median age was 25 years (range=13-54years). Of the 15999 women, 3113 (22.5%) were below 20years (teenage), 14527 (91%) were single, 1900 (12%) had previously sought TOP and 15743 (98%) presented for the TOP within the first 12weeks of pregnancy. Compared to women who presented for TOP within 12 weeks of gestation, women who presented late were more likely to be teenage (OR=1.74, 95%CI: 1.32-2.29, p<0.001) and to be single (OR=1.98, 95%CI: 1.05-3.83, p<0.001). Among the 9113 women who provided reasons for seeking TOP 9066 (99%) cited socio-economic problems.

**CONCLUSION**
The majority of TOPs were conducted within the gestational age recommended by the CTOPA (i.e. before 12 weeks). Nearly a quarter of the TOPs were conducted in teenage women. Reasons for the high proportion of TOPs in teenage women require further exploration.
P101 - Adolescent’s perceived vulnerability to HIV infection and the incidence of multiple sexual partnerships: A longitudinal study

M Rantao, Ayo-Yusuf
University of Pretoria

PURPOSE
To determine the association between sexually active adolescents’ self-perceived susceptibility to HIV infection and the reported numbers of sexual partners.

METHODS
This four-wave 3-year longitudinal study involved a sample of 8th-graders from 21 randomly selected secondary schools in the Limpopo Province (n=1712). The information collected annually between 2005 and 2008 using a self-administered questionnaire, included the socio-demographic characteristics of the participants, their alcohol use status, sexual behaviour and self-perceived susceptibility to HIV infection. For the purpose of the study, data analysis was restricted to those who reported ever having had sex during the study period (n=478). The risk predictors for reporting the number of sexual partners in the previous 3 months were determined using generalized estimating equation model.

RESULTS
Of the participants, only 17.9% perceived themselves to be at risk of contracting HIV infection, but 70.5% reported condom use at last sexual encounter. There was a significant interaction between condom use and perceived risk for HIV infection in predicting number of sexual partners. Among those who consistently reported condom use at last sex, perceived risk for HIV infection was not associated with the number of sexual partners, whereas it was associated with higher odds (OR=1.87; 95%CI=1.18-2.98). However, binge-drinking was most strongly associated with past multiple sexual partnerships both among those who consistently use condom (OR=1.71; 1.37-2.12) and those that don’t (OR=2.41; 1.62-3.59).

CONCLUSION
This study’s findings suggest that interventions directed at reducing binge-drinking among adolescents should be prioritized in order to reduce adolescents’ HIV risk behaviours.

P102 - Medical cause of death certification: to train or not to train?

1A Rossouw, 1D Bradshaw, 1P Groenewald, 1B Ndjilana, 1L Burger
1Burden of Disease Research Unit, South African Medical Research Council
2Department of Pathology, Division of Forensic Medicine, Faculty of Medicine and Health Sciences, University of Stellenbosch

ISSUES
The accuracy of death certification is essential for the production of high quality cause of death statistics. International reviews have shown that training medical professionals in the accurate completion of death certificates has improved the quality of death certification. A small study conducted in the Western Cape has echoed this.

DESCRIPTION
Statistics South Africa, the Department of Health and the Department of Home Affairs identified the need to train doctors in cause of death certification. A train-the-trainer programme has been developed targeting the clinical heads of public sector hospitals. The “Cause of Death Certification Guidelines” was revised and a flyer and training resources have been developed. The training programme will be piloted in 2 provinces and then rolled-out to the others. A questionnaire has been developed to assess the competencies of the participants and CPD points will be arranged for the training.

LESSONS LEARNT
The participants appreciated the importance, relevance and need for training. There has been confusion and uncertainty around the legality of specifying HIV on the death certificate, which could be clarified through training. Practical issues have been identified such as dealing with dead on arrival cases, place for examination of the deceased and the identification of the body.

CONCLUSION
The training programme will be evaluated by assessing the competencies of the participants. It is anticipated that the programme will have an impact on the quality of medical cause of death certification in South Africa.
INTRODUCTION & PROBLEM STATEMENT
The NCR is a passive pathology-based register—at the time of this study the NCR had completed analyses of annual cancer incidence up to and including 2002 using standard IARC methods \(^1\)
Many patients have more than one specimen reported on, including follow-up specimens, leading to duplicate records
These duplicates are identified by checking against previous reports submitted: and are removed
Where remaining reports lack information about age, sex, or population group, these reports are allocated the missing information using a pro rata method as advocated by IARC \(^1\)
Age-adjusted cancer rates are then calculated by population group and sex using mid-year population estimates provided to the NCR by the Actuarial Society of Southern Africa (unpublished) and the world age standard as advocated by IARC \(^1\)
There was complete laboratory reporting to 2002: thereafter several private laboratories stopped reporting
Consequently there is now an incomplete database of past cases against which new reports can be checked in order to identify/remove duplications
The Ministry of Health are anxious to bring cancer reporting up-to-date with presentation of results for 2010
It was proposed that the 2010 data set be “trimmed” of possible duplications by a factor derived from the pre-2003 era when reporting was complete: this factor would be the proportion of cases that were found to be duplications in 2000-2002

MATERIALS AND METHODS
Using the full 2000-2002 data sets (duplications retained) those reports with unknown age, sex or population group were allocated the missing information using the pro rata method
The sex and population specific strata were then age-standardised using the world standard population
The resulting rates were then compared to the age-adjusted final rates reported for the years 2000-2002 after removal of duplicates, and the percentages of duplications contained in the raw data were calculated.

RESULTS

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DISCUSSION
The percentages that were duplicates were reasonably homogeneous but appear to be increasing between 2000 and 2002. The results presented here conceal wider variation by site: apparent in the more detailed results (not shown here).

CONCLUSIONS AND RECOMMENDATIONS
We recommend that:
The 2002 correction factors be applied for 2010 on a site-by-site basis
The serious limitations of using 2002 factors in 2010 must be emphasized

This research was written up by N Makofane and submitted in partial fulfillment of the requirements for the degree of Master of Public Health, School of Health Systems and Public Health, Faculty of Health Sciences, University of Pretoria. The help and access to data afforded by the NCR at the NIOH is very gratefully acknowledged.
P104 - Assessment of the association between domestic hygiene, diarrhoea and nutritional status in children under two years in Khayelitsha

M Sambo, L Bourne, M Hendricks
Child and Adolescent Health, University of Cape Town, Environment and Health Unit, Medical Research Council, Cape Town

BACKGROUND
The research aims to investigate the impact of socio-demographic factors and domestic hygiene on diarrhoea and nutritional status of children less than two years in Khayelitsha. Diarrhoeal disease continues to be the most important cause of morbidity and mortality in children under five years globally and in South Africa. Diarrhoea is part of a vicious cycle between malnutrition, poverty, poor hygiene, access to water and sanitation, inappropriate feeding practices and early weaning (De Lange, 2010). The home has been implicated as one important source of the spread of diarrhoeal disease.

METHODOLOGY
This will be a case-control study involving children less than two years who have diarrhoea (cases) and children less than two years who do not have diarrhoea (controls). Interview questionnaires will be used to collect important information about socio-demographic profiles, child health, and access to services and domestic hygiene from mothers or caregivers of both cases and controls. An observation check list will be used to collect information on access to services and domestic hygiene at the homes of all the participants. Weight, height and head circumference of all infants will be measured. Data will be entered into Microsoft Excel and statistical analysis will be done using the STATA package version 10 to examine the association between the outcome and the independent variables.

RESULTS
The results of the study can be used to design and develop interventions to reduce transmission of GI pathogens.

CONCLUSION
Innovative solutions are urgently required to reduce children’s deaths due to GI diseases. This study can facilitate collaboration of different stakeholders to improve practices around domestic hygiene, sanitation and, water quality. The results can be used to inform policies on hygiene standards that need to be developed, and reinforced with hygiene educational programmes for care givers at home and in day care centers.

P105 - Exploring information used by facility managers in decision-making: A case study set in Mitchells’ Plein Sub District, Cape Town

V Scott
Schools of Public Health at the Universities of Cape Town and the Western Cape

BACKGROUND
Improved management of primary care is central to improving health outcomes. Management literature suggests that managers use a wide range of information in decision-making: formal as well as “soft” information such as local context knowledge, experiential information and tacit knowledge but there is little empirical work on this in the health field.

OBJECTIVES
• To map out how different types of information are used by facility managers
• To understand how the health system context influences the use of different types of information

METHODS
This is a multiple case study. The units of analysis are decision-making processes selected according to their potential to elucidate how the health system works and lever health system strengthening. The first four cases are the management of: absenteeism, patient flow/staff allocation, service delivery and the relationship with community structures. Data is being collected through observation of the meetings facility managers participate in at sub-district level and in their facilities, followed by in-depth interviews. Early lessons will be shared with the facility managers individually and as a group through facilitated reflective practice as an opportunity for learning, verification of analyses and further data generation, in an iterative process. The health system context is being explored through a document review and key informant interviews. A rich case description will be developed per case, followed by cross-case comparisons. This paper will discuss the research approach and emerging lessons on how facility managers use information and how management processes and systems can be reshaped to support effective use.
P106 - Evaluation of the quality and management of maternity services in the National District Hospital in the Free State province

A Sesing
Maternal, Child & Women’s 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 (NDH)’s 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 was collected on various variables that are relevant to the performance of maternity services.

RESULTS
The data collected was 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 labor phase.
• Failure to make informed decision 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.

P107 - The knowledge and practice of prevention of mother-to-child transmission of hiv in nurses at an antenatal care clinic in Tshwane

A Dlamini, M Sethodi, W Mahalela, S Nkosi, M Serumula, U Tefo, F Hyera
School of Health Systems and Public Health, Faculty of Health Sciences, University of Pretoria

INTRODUCTION
In order to strengthen our health systems to succeed in HIV interventions we need to improve the utilization of the prevention of mother-to-child transmission of HIV (PMTCT) programme. Therefore, the nurses who oversee the implementation of the PMTCT programme need to be evaluated in order to employ better strategies to the programme so as to effectively prevent mother-to-child transmission and reduce HIV child mortality.

AIM
To understand the knowledge and practice of PMTCT by nurses at the antenatal care clinic.

METHODS
Data was collected from a test-based questionnaire distributed to the nurses at an antenatal care clinic in Pretoria, South Africa, between May and June 2012. The questions were derived from the 2011 PMTCT Clinical Guidelines from the South African Department of Health. The study included staff nurses, assistant nurses and professional nurses.

RESULTS
Fifteen questionnaires were completed by the nursing staff. Among the respondents, 93% scored above 50% for both the antenatal and post-natal care sections of the questionnaire. The total average of the nurses’ knowledge regarding the PMTCT programme in the antenatal and postnatal sections was 88% and 76.7 %, respectively.

CONCLUSION
The knowledge and competence of PMTCT among the nurses is above average but there is still room for improvement. Poor attendance of PMTCT trainings, lack of clarity about nurse roles regarding HIV education to the patient and keeping abreast with current PMTCT guidelines create barriers for nurses in implementing the PMTCT programme.
**P108 - Utilization of reproductive health services by high school adolescents in the Thaba-Tseka district in Lesotho**

**M Shawa, M Hoque, R Burnett**
University of Limpopo

**BACKGROUND**
Youth friendly services were introduced in Lesotho through the adolescent health corners (AHC) to meet healthcare needs of adolescents including reproductive health services. Despite this initiative teenage pregnancy and prevalence of human immunodeficiency virus (HIV) infection is still high among young people.

**OBJECTIVE**
To investigate utilization of reproductive health services (RHS) among high school adolescents.

**METHODS**
Quantitative descriptive cross-sectional design was used on 780 adolescents aged between 13 -19 years in two high schools in the district. A structured, self-administered questionnaire was used. Data was analysed using descriptive statistics, chi-square test and binary logistic regression modelling.

**RESULTS**
The response rate was 97.5% (723/780). Almost half of the respondents 49.5% (358/723) had experienced sexual debut and 71.5% (256/358) were presently sexually active. More than 82% had low overall levels of awareness of RHS. Only 37.9% (136/358) had ever sought services from AHC. Majority of respondents (95.2%) bought condoms from retail shops and only 38.9% obtained them from AHC. Over 56% (203/358) had ever experienced sexually transmitted infections but only 13.3% (27/203) visited AHC for treatment. Statistically significant predictors of RHS utilization were having a friend using RHS (odds ratio [OR] = 8.87; p value< 0.001; confidence interval = 95%) and access to RHS (OR = 7.97; p < 0.001).

**CONCLUSION**
Almost half of the adolescents engage in sexual activity at an early age but RHS were under-utilised. There is a need to embark on increasing accessibility of RHS among adolescents to promote RHS utilization.

**P109 - Eye health promotion in the South African primary health care system**

**1H Sithole, 2O Oduntan**
1University of South Africa, Academic and Research Portfolio, Research Directorate, 2University of KwaZulu-Natal, Faculty of Health Sciences, Discipline of Optometry

**OBJECTIVE**
There is currently very little or no research being done in South Africa on eye health promotion. Also, there is no evidence of any existing eye health promotion policy in the South African primary health care system. The purpose of this paper therefore is to highlight the lack of an integrated eye health promotion policy in the South African primary health care system.

**APPROACH**
A literature review of research databases was conducted to identify research done in the previous years pertinent to eye health promotion in South Africa. Also, documents were requested from the South African National Department of Health to ascertain claims of any existing guidelines on eye care. It was found that these included the national guidelines on prevention of blindness, refractive error screening for persons 60 years and older, cataract surgery in South Africa, management and control of eye conditions at primary level. Although there is currently no integrated eye health promotion policy in South Africa, the fragmented national guidelines represent the existing policies on eye health promotion. The custodians of these policies are the eye care coordinators located in each of the nine provinces.

**CONCLUSION**
Although there are eye care coordinators in each province, there is no evidence of any eye health promotion activities being done in those provinces. Also, only one province out of nine has dedicated health promotion personnel that are not only focusing on eye health matters. This greatly compromises the initiatives of eliminating avoidable blindness to a greater extent. It is therefore recommended that an integrated eye health promotion model be developed so that it may form part of the South African primary health care system.
**P110 - The Use Of Alcohol And Related Health Risks In Patients With HIV Infection In South Africa**

L Skaal  
University of Limpopo

**BACKGROUND**
Alcohol abuse poses risks for increased morbidity and mortality among patients with HIV. This study aimed to determine the prevalence of alcohol use and other risk factors in a sample of primary care patients with HIV in South Africa.

**METHODS**
A cross-sectional survey was conducted in out-patients with HIV in PHC near Pretoria. Alcohol use was assessed with the AUDIT questionnaire. Other data collected was related to health related quality of life, depression, sexual behavior and adherence.

**RESULTS**
The sample included 1879 patients, (66.6% women, 85.7% started antiretroviral therapy, median age of 37 years). The risk related to alcohol use was low in 73.2% , moderate in 24.6% , and high in 2.2% of the patients. The proportion of men was higher among those with moderate (53.0%) and high (76.2%) alcohol use compared with those with low (25.5%) alcohol use (p=0.001). The higher the alcohol risk group, the lower the levels of adherence to ART (VAS 75.6/89.9/95.6, p=0.0000), the more the depressive feelings (CES-D 10.8/8.3/7.1, p=0.0000). The higher the alcohol risk, the lower the quality of life. BMI was significantly lower in the high alcohol risk groups compared to other groups (21.9 (95% CI 20.4;23.4) versus 23.4 (95% CI 22.9;23.9) and 24.8(95% CI 24.5;25.1).

**CONCLUSION**
A high number of patients with HIV infection were found to be risky alcohol users which impacted negatively on ART adherence, sexual risk behaviour and quality of life.

**P111 - An investigation of the risk factors and effects of methamphetamine on oral health**

D Smit  
University of Western Cape

Methamphetamine (TIK) is a highly addictive drug that acts as a stimulant for the central nervous system. The clinical presentation of TIK abuse is termed “meth mouth” and can be explained by contributing factors such as dry mouth, a poor appetite and ability of acidic vapour of the drug to demineralize dental enamel. A cross sectional study was conducted on patients with a history of methamphetamine abuse that presented at the Tygerberg Oral Health Centre and surrounding substance abuse treatment centers in Cape Town. A questionnaire to elicit the patient’s demography, diet, drug use and dental history was administered and an oral examination to measure dental status was performed. The majority of the sample were male, unemployed and between the ages of 21 and 25 years old. The mean duration of drug addiction was approximately 6 years either on a daily or a weekly basis and 88% reported smoking the drug. Nearly all experienced a dry mouth, consumed large amounts of liquids (mainly beer) and had a very poor appetite. Dental extractions were the most common procedure performed during the last dental visit. Recognition of the symptoms of “meth mouth” will enable health care workers to identify drug abuse in various public health settings. Health care professionals may be the front-line individuals to recognize the oral signs and symptoms seen in patients who chronically abuse TIK, and early treatment and prevention can go a long way to improve the oral health quality of life.
P112 - Vulnerability of male commercial sex workers to HIV/AIDS

T Spotsoe
NDoH, Pretoria

BACKGROUND
The study on male CSW was carried out in Arcadia and Sunnyside suburbs of Pretoria. The paper presents a study of male commercial sex workers (CSW) and their vulnerability to Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS).

OBJECTIVES
To determine the HIV/AIDS prevalence made in cities, using Pretoria as a case study.

METHODS
Data were collected using interviews and observation. Face to face interviews were conducted using a structured questionnaire. A snowball technique was applied to reach more respondents.

RESULTS
The male CSW are linked to poor and mobile populations that are normally at risk of becoming infected with HIV. There is a relationship between migration, mobility, poverty and HIV and AIDS. The research indicates that, the male CSW practice is becoming more visible in South African urban areas. Vulnerability to HIV and AIDS is associated with among other things prostitution.

P113 - Knowledge, attitudes and perceptions of staff and patients at a northern Tshwane clinic regarding mental illness

M Springer, J Jansen van Vuuren, S Kirsten, B Siebold, S Moodley
School of Health Systems and Public Health, Faculty of Health Sciences, University of Pretoria

INTRODUCTION
Lack of knowledge and stigma related to mental illness has been documented in the literature. This study aimed to determine the knowledge, attitudes and perceptions of staff and the patients at a northern Tshwane primary health care clinic regarding mental illness.

Methods: This was a cross-sectional study. All staff based at the clinic were invited to participate. Convenience sampling was used to select patients to participate. Staff and patients were asked to complete a self-administered questionnaire consisting mainly of closed-ended questions. The questionnaire consisted of socio-demographic questions, a knowledge quiz, questions related to attitudes and perceptions, and scenarios to assess the reaction of participants to mentally ill patients.

RESULTS
A response rate of 83.3% was obtained, leaving us with thirty patients and twenty clinic staff members (ten health professionals and ten clinic support staff). There were gaps identified in the knowledge of clinic staff and patients with regards to the clinical features of mental illness. With regards to the causes of mental illness, patients chose substance abuse (13%), imbalance of brain chemicals (13%), God’s will (12.2%) and child abuse (12.2%) as the most common causes, while the health practitioners chose imbalance of brain chemicals (23%), substance abuse (20%) and genetics (13.3%). Health professionals had a more positive attitude towards the mentally ill patients, feeling tolerant, sympathetic and willing to care for them. The patients scored higher in feeling fearful towards mentally ill people, though they still felt tolerant and sympathetic. 52% of the respondents had prior exposure to mentally ill people. This influenced their attitude and perception positively. Most health professionals felt that mentally ill patients should be treated at a psychiatric hospital as opposed to a clinic.

CONCLUSION
There is room for improvement with regards to the community’s awareness of mental illness. Initiatives at the clinic and schools in the area could help improve knowledge and reduce stigma.
**P114 - Sexual partner notification challenges in Botswana**

T Tafuma, M Anderson, B Yadav, R Lebelonyane, T Maddimalo  
Department of HIV/AIDS Prevention and Care, Ministry of Health, Botswana

**BACKGROUND**

The time of treating sexual partners offers a good opportunity to provide treatment for sexually transmitted infections in asymptomatic patients, increase awareness of risk reduction strategies and reduce burden of disease in the community. Botswana uses the passive referral system and its notification rate has been very low (8%-13%).

**METHODS**

A situational analysis for active partner tracing was done in three districts with higher prevalence of STIs. A self-administered questionnaire was given to health care workers (HCW). Data was captured using Microsoft Excel (Microsoft Office 2007) and descriptive analysis was done.

**RESULTS**

Out of the 44 clinicians who responded, very few clinicians six (13.6%) felt the active approach was not user friendly. Their reasons were: there are limited resources to follow clients (transport, telephones) (66.7%), no legal protection of HCW with this approach (100%), infringement of peoples' rights (83.3%), increased workload on HCW (66.7%), and that the population is very mobile (100%).

**CONCLUSIONS**

Though few clinicians were against the active approach, their reasons were pertinent to reconsider this approach. The legal team concurred with these clinicians. Furthermore, different studies have noted that Botswana has a very mobile population and practises multiple and concurrent sexual partners who makes it difficult to trace the partners with passive approaches. Though all the approaches aim to prevent reinfection of the index patient (a clinical goal) and reduce the spread of STIs (a public health goal), active approach is more appropriate for Botswana considering its economic status.

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**P115 - Assessing clinical medical record completeness through a peer review approach**

1L Tavoschi, 2N Carrim, 3Lebohye, 4N Moeketsi, 5M Mathebula, 6J Ndimande, 7M Nchabeleng, 8P Monini, 9B Ensoli  
1Istituto Superiore di Sanita’–Italian National Institute of Health (ISS), National AIDS Center, Rome, Italy, 2Medunsa Clinical Research Unit (MeCRU), Limpopo University, Medunsa Campus, South Africa, 3Gauteng Provincial Department of Health, Tshwane District, Pretoria, South Africa, 4National Department of Health (DOH), Pretoria, South Africa

**BACKGROUND**

Within the Program NAID8421 funded by the Italian Ministry of Foreign Affairs and implemented by ISS and DOH, an observational study, ISS OBS T-004 (ClinicalTrial.gov NCT01359800), was conducted at MeCRU. 500 HIV-infected individuals receiving care from selected health facilities (HF) in the catchment’s area were enrolled. By signing the Informed Consent, each participant gave access to his/her medical record (MR) to retrieve source data.

**OBJECTIVE**

Promote clinical research as a platform for health service strengthening through peer review of MR data quality and completeness, and establishment of a virtuous circle of feedback.

**METHOD**

A standardized quantitative assessment tool was generated: 1-4 data elements were considered for each MR section and binomial indicators (Y/N) used to assess completeness. 55 MRs (11% of OBS T-004 total) were randomly selected (http://www.randomizer.org/about.htm) from 7 HFs that contributed with at least 20 participants. According to peer-to-peer approach, study Sub-Investigator (single-rater) performed the assessment. Results were analyzed using descriptive statistic methods.

**RESULTS**

Only 48 (87.5%) MRs were retrieved from HFs. Completeness varied greatly among different sections of MR: the highest (85.4%) for Last Clinical Examination followed by anamnestic and demographic sections (average 50% and 60%). Relevant data as Baseline Laboratory Result and Pill Count were documented in 50.0% and 41.7% of cases with poorest recording for Laboratory Follow-up Results (<40%). Sub-set analyses revealed HF-specific recording patterns: i.e. certain data elements not collected.

**CONCLUSION**

The study showed an overall poor completeness/quality of MRs characterized by site-specific gaps. The findings were discussed with DOH officials and HFs staff to develop evidence-based interventions.
**P116 - Investigating the HR function of two district hospitals in the Cacadu and Tshwane districts: An employee engagement perspective**

A Theron, A Wynbergen  
PEPFAR Fellowship Programme, Pretoria

**BACKGROUND**
A key factor contributing to the success of the health sector is its ability to recruit, develop, and retain human resources, and in turn, becoming an employer of choice. To further this study, a comparative analysis will be done in order to investigate whether there is higher satisfaction with HRM practices and employee engagement between the Tshwane and Cacadu health districts. Furthermore, the researchers aimed to establish the reasons why differences exist between these two districts.

**OBJECTIVE**
The aim of this study was to investigate the current satisfaction with and effectiveness of the HR function at two District Hospitals from an employee engagement perspective.

**METHODS**
The Cacadu sample consisted of all clinical and support staff. A questionnaire was distributed to 194 employees and measured the various constructs. A quantitative research design was used for this study. With regards to the Tshwane district, the same process as described above will be utilized.

**RESULTS**
Data collection for the Tshwane sample is currently in progress and will be documented as soon as the researchers obtain the results. For the Cacadu sample, the majority of employees indicated that their personal performance has not been appraised to their satisfaction, nor were they given any recognition for their efforts. Furthermore, most employees indicated a lack of career pathing and training. Lastly, employees held negative perceptions regarding the delivery of the HR function. These factors have a direct impact on employee engagement.

**CONCLUSION**
District HR officials are to develop a plan of action for delivery of quality services such as recruitment and selection, performance management, training and development and HR administration. Lastly, it is imperative that official HR tools and policies are revised and thoroughly applied.

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**P117 - “HIV and Me”: An HIV, AIDS and sexuality education programme for first year medical students at the University of KwaZulu-Natal, 2012**

*L Ticha, *V Dorsamy, *S Knight  

1School of Laboratory Medicine and Medical Sciences, 2School of Public Health and Nursing

**BACKGROUND**
The province of KwaZulu-Natal has the highest burden of HIV and AIDS in South Africa with an estimated 20% of 25 to 49 year old adults being infected in 2010. A HIV prevalence survey conducted in 2009 estimated that 3.4% of university students were infected. With this in mind, a series of four, two-hourly workshops about HIV, AIDS and sexuality were conducted with 208 first-year medical students at the University of KwaZulu Natal in their first two weeks of study. Facilitated groups of 10 students using innovative and participatory methods covered topics that included myths and realities about HIV and AIDS, attitudes and stigma to aids and sexuality, practical HIV prevention strategies, accepting, coping and living with HIV and AIDS.

**OBJECTIVE**
To assess the level of understanding of newly enrolled medical student on issues surrounding HIV/AIDS

**METHODS**
Qualitative and quantitative data was obtained from these students as part of ongoing education programme evaluation. Evaluations were conducted using "moodle".

**RESULTS**
A pre-workshop evaluation revealed that only 30% of the students had been tested for HIV. Misconceptions abounded; 42% were not sure that HIV could be transmitted through oral sex and a quarter of those sexually active had unprotected sex. After the workshops evaluations showed a substantial increase in knowledge about HIV and aids as well as changes in perceptions. Students valued the opportunity to learn more about sexuality and aids and many indicated their intention to be HIV tested.

**CONCLUSION**
An innovative “HIV and Me” programme resulted in improved knowledge about HIV and AIDS, a decrease in misconceptions and improved attitudes to people living with HIV and AIDS.
P118 - Improving Efficiency through Monitoring and Review of Hospital Performance Indicators According to Standards and Norms as Set out by the National Department of Health

A Tshehla

Hospital indicators are used to measure efficiency in terms of costs utilization i.e. Bed utilization (BUR), Bed Occupancy Rate (BUR), Average Length of Stay (ALOS) and Cost per Patient Day Equivalent (Cost per PDE). The indicators give treasury an indication of the manner in which the resources should be allocated. In the past three years Bernice Samuel Hospital has suffered severely as a result of poor resource allocation, particularly due to poor budget allocation despite explicit plans detailing the required resources. This has been mainly due to poor performance outlook.

This action research study seeks to improve or find new ways of improving efficiency through monitoring and reviewing of indicators against the national targets or norms. Quantitative data analysis has been used to confirm the assumption that the poor efficiency outlook was as a result of poor health information management. The poor data or health information management was found to be attributable to lack of understanding by health care workers of the importance of proper information management.

To improve on the situation (poor efficiency outlook and associated factors) innovative strategies that provide new methods of monitoring and evaluation have been put into place. As intervention the cycle of planning, action, evaluation and re-planning have been introduced to enable adjustment and, or changes that address poor performance with the aim of influencing future resource allocation.

P119 - Back to basics

S Vosloo
Foundation for Professional Development

BACKGROUND
There is an alarming increase in the number of people including healthcare workers that are getting infected with TB every year. Statistics show that in 25% of HIV positive patients TB occurs as an opportunistic infection. With the increasing risk of TB drug resistance among TB patients and the escalating cost of hospital treatment measures to control TB infection have become a daunting challenge.

OBJECTIVE
The purpose of this study is to improve on the measures of infection control against TB in the facilities. A questionnaire/tick list was designed to assess adherence to the basic measures of infection control against the spread of TB infection in health care facilities.

METHODS
Measures for intervention include workshops to educate support staff regarding prevention and control of infection in the facility; training on stock control to preserve the budget; collaboration with professional staff as champions of various aspects of the infection control system; utilization of the existing “roving teams” as mentors and on site advocates of infection prevention and control measures.

RESULTS
Progress improvement is being monitored on a monthly basis to assess effectiveness of intervention measures. Final evaluation will be established from a comparison of the baseline indicators with the outcome indicators at the end of the study. It is being advocated that going back to basics in the facilities will improve infection control in HIV/TB. Study is ongoing.

CONCLUSION
Effectiveness of intervention measures will be determined based on the outcome indicators. If the outcome indicators show an increase in the frequency of compliance, then intervention measures will be regarded having been effective.
P120 - HIV/AIDS knowledge, attitudes and practices amongst persons living with mental illness and epilepsy in Kiambu and Nyeri districts in Kenya

M Waruguru
Basicneeds UK in Kenya

BACKGROUND
National HIV/AIDS prevalence in Kenya is currently at 7.1%, its control remains a major challenge and little attention has been paid to persons living with mental illness and epilepsy as a group with a high risk for HIV/AIDS infection.

METHODS
This was a cross sectional study of all assenting/consenting persons aged 15-64 who are engaged in the BasicNeeds programmed districts in Nyeri and Kiambu. A confidential close ended knowledge, attitude and practice questionnaire was administered amongst a total of 169 persons. The data was analyzed through SPSS version 18 software.

RESULTS
Preliminary results indicated that the overall awareness of the existence of HIV/AIDS stood at 91.7%, with higher average awareness among men at 94.1%, and a direct relationship with secondary education or above. A positive relationship with married/cohabiting status was also identified. However, 58.67% of persons with mental illness and or epilepsy do not have comprehensive knowledge about HIV/AIDS (p<.01). 23.1% of persons with mental illness and or epilepsy and 7.8% show acceptance on all four HIV/AIDS stigma measures (p<.01).

CONCLUSIONS
Some understanding of HIV/AIDS transmission and prevention is present amongst this group, however this knowledge is shallow and does not translate to safer sexual practices/ attitudes. There is need to strengthen the need for this group to receive comprehensive education about HIV/AIDS and an urgent need for research to determine how best to disseminate information on HIV/AIDS for purposes of retention becoming a catalyst for behaviour change amongst this vulnerable group.

P121 - A document review of the undergraduate medical curriculum at Stellenbosch University to assess the current state of teaching and learning in order to inform enhancement of public health (PH), health systems and services research (HSSR) training

B Willems, F Mukinda, N Cameron, L Dudley
Stellenbosch University, Faculty of Health Sciences, Division of Community Health

BACKGROUND
The South African health system is being re-engineered to have a stronger primary health care orientation. Undergraduate medical curricula should adapt to train students to function optimally as doctors in South Africa’s health system. Public Health and Health Systems and Services Research (PH&HSSR) are important aspects of a health system. To adapt a curriculum its current state should be understood.

OBJECTIVE
To assess the content of PH&HSSR teaching in the medical curriculum at Stellenbosch University.

METHODS
Competencies in PH&HSSR required by medical graduates were identified from literature and field expert workshops. Paper-based curriculum outcomes addressing the competencies were extracted from all module guidelines using standardized processes. Teaching was graded according to Bloom’s taxonomy.

RESULTS
The curriculum did not include all PH&HSSR competencies. For the competencies addressed there was insufficient progression in teaching and learning along levels of Bloom’s taxonomy across phases of the curriculum. PH&HSSR competencies were taught in isolated pockets. This study described the curriculum content, but does not describe actual PH&HSSR learning, and its results will be triangulated in interviews with faculty and a survey of recent graduates.

CONCLUSION
All essential PH&HSSR competencies have to be taught in the curriculum. This review suggests that there are insufficient teaching and learning opportunities for PH&HSSR to encourage medical students to adequately engage with PH&HSSR. The Stellenbosch University undergraduate curriculum should be revised to improve the teaching of PH&HSSR in the curriculum to ensure that learning progresses from initial lower levels of Bloom’s taxonomy, to higher levels in later years.
P122 - Exposure to generator noise and hearing impairment via field audiometry among small scale business operators in selected communities in Ibadan, Nigeria

R Godson, L Yesufu, IS Derek

INTRODUCTION
Power supplies in Nigeria is erratic and inadequate, forcing small scale businesses to opt for electric generators as alternative power sources. Studies conducted on the impact of generator noise on public health are scarce. We assessed noise levels from electric generators and auditory effects in two commercial areas of Ibadan, Nigeria.

METHODS
Agbowo and Ajibode were purposively selected for this comparative cross sectional study based on the observed frequency of generator use. Noise levels in A-weighted decibels (dBA) were measured over 12 weeks in 3 months at three times of the day (8am-10am, 11am-1pm and 3pm-6pm) using a calibrated sound level meter approximately 5 meters from sources. Audiometric measurements were carried out using a calibrated MaicoMA27 Audiometer on 40% of the volunteer questionnaire respondents. Results were compared with existing guidelines.

RESULTS
There were significant differences in mean noise levels and were highest at midday: Agbowo 68.9±5.9dBA, 90.6±5.3dBA and 75.9±6.4dBA, respectively and Ajibode 58.5±4.2dBA, 70.9±6.2dBA and 67.6±7.9dBA, respectively. Overall, mean noise levels in Agbowo and Ajibode were 78.5±3.9dBA and 65.7±4.4 dBA (p<0.05), respectively, exceeding WHO guidelines (65 dBA) for outdoor commercial environments. No respondents were observed using ear protection devices. Hearing impairment for both ears was high. Working in Agbowo was significantly associated with hearing impairment (OR:6.8, 95% CI:3.4-13.7).

CONCLUSION
Respondents in Agbowo are relatively more exposed to noise from electric generators and this was associated with increased hearing impairment. Public education on inherent health risks and safer means of noise attenuation for electrical power generators serving smaller businesses are warranted.

P123 - Do we know enough to prevent occupationally acquired tuberculosis in health care workers?

M Zungu

BACKGROUND
Health care workers in South African healthcare facilities work in environments with a high density of tuberculosis patients due to the dual burden of tuberculosis and human immunodeficiency virus in the population, thus predisposing them to contracting tuberculosis. Despite the knowledge of the high tuberculosis incidence and the likelihood of tuberculosis transmission to both health care workers and patients, and the availability of basic infection control measures in our healthcare facilities, there is still inadequate implementation of infection control measures in healthcare facilities.

AIM AND OBJECTIVE
This article seeks to review the knowledge base, instruments for tuberculosis control, the implementation of these tools and the knowledge gaps within the healthcare system in South Africa.

METHODS
Extensive review of literature using Internet searches on peer reviewed articles, electronic databases PubMed and HighWire Stanford University, for primary article studies.

DISCUSSION AND CONCLUSIONS
The review revealed the availability of adequate knowledge and tools for the control of tuberculosis in healthcare facilities, but inadequate implementation of infection control measures at facility level.
P124 - Career paths of Public health Medicine Specialist in South Africa

V Zweigenthal
University of Cape Town

BACKGROUND
Public health skills are seen to be integral to health sector reform both in South Africa and internationally. Public Health trained professionals, in particular, Public Health Medicine (PHM) specialists are trained with the appropriate skills base and are potentially well-placed to provide the technical expertise to drive and manage reform at a central, provincial and district level. Historically there have been few posts these professionals in the Public Sector outside of University/Provincial joint appointments, and anecdotally graduates obtain employment in Public Sector management positions, the Private Sector, research institutions, and non-governmental organisations (NGOs). The career choices, and trajectories are unknown.

AIM
A study was conducted to determine the career choices and trajectories of public health medicine specialists in South Africa, so as to inform the future positioning of the specialty and training priorities internationally, nationally and locally. This was achieved through an electronic self-administered questionnaire.

FINDINGS
Over 70 respondents of a total of 110 responded to the on-line survey. A range of career choices are outlined and a range of opinions surrounding the present and potential role of this cadre of professionals surfaced. These will be outlined in the presentation.
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