KWAZULU - NATAL
DEPARTMENT OF HEALTH
ABSTRACTS
BATHO PELE PRINCIPLES

Consultation
Asking what clients want and finding out how we can meet their needs

Service Standards
If we already know what our clients want, we can set the standard to which we will render the service

Access
This applies to ensuring that people who previously did not enjoy our service get the service. It will also mean ensuring that disabled people, people living in rural areas are able to utilise the service

Courtesy
Being polite, friendly, helpful

Information
It is about reaching all people to make sure that they are informed about the services we render

Openness & Transparency
What we do should not be a secret nor something we are ashamed of and want to hide. We publish annual reports, have open days etc

Redress
People should feel free to tell us if they are unhappy with our service. We should deal with complaints in a professional manner

Value for money
Giving the best service we can using all the resources. Eliminating waste, fraud and corruption

Encouraging innovation and rewarding excellence
Doing things better, going the extra mile

Customer impact
Looking at what benefits we have provided and how have we improved service delivery

Leadership & strategic direction
Leaders set the example. They guide the organization to success
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EVALUATING THE ACCESSIBILITY AND UTILITY OF HIV-RELATED POINT-OF-CARE DIAGNOSTICS FOR MATERNAL HEALTH IN RURAL SOUTH AFRICA

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Background: Identify potential challenges related to the implementation of point-of-care (POC) diagnostic services for rural and resource-limited settings can help enable us to inform planned improvements to existing POC diagnostics and the implementation of new diagnostics.

Methodology: We have conducted a scoping review, a cross-sectional survey, in-depth interviews with key stakeholders, an evaluation accuracy, reliability and performance of POC diagnostic services. We have also conducted a systematic review and meta-analysis as well as an interrupted time-series study with segmented regression analysis.

Results: Survey results confirmed the urgent need for POC scale-up. Stakeholders recommend the following measures: research on the cost-effectiveness of POC diagnostics in these settings; improved quality management systems and development of affordable state-of-the-art POC diagnostics; and monitoring and evaluation of their use. The evaluation results has shown that HIV rapid testing services were comparable to the laboratory services for both single test and two test HIV-testing algorithms. The interrupted time-series analysis demonstrated the potential impact of rollout of syphilis POC testing on reducing maternal mortality. The systematic review and meta-analysis showed some evidence that POC is significantly associated with maternal decreased mother-to-child transmission of HIV and increased linkage to ART and HIV care.

Conclusion: Poor compliance with quality standards were identified as major challenges to the implementation of rural PHC clinic-based POC diagnostic services for the improvement of maternal outcomes.
Recommendation: We recommend evidence-based frameworks to guide the improvement of quality and sustainability of POC diagnostic services in rural and resource-limited PHC clinics.

PREP INTEGRATION INTO SRH SERVICES: LESSONS LEARNT FOR THE ACHIEVEMENT OF PUBLIC HEALTH LEVEL IMPACT OF PREP PROGRAMMES

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Background: Prevention of HIV in young women is a major global health challenge. Oral pre-exposure prophylaxis (PrEP) offers the first women initiated, covert prevention option.

Objectives: This project provides evidence for informing effective scale-up of PrEP, as part of an integrated sexual and reproductive health (SRH) programme.

Methods: PrEP provision was integrated into SRH services, which included HIV testing, family planning services, testing and treatment for sexually transmitted infections (STIs), i.e. Chlamydia trachomatis (CT), Neisseria gonorrhoeae (NG) and Bacterial Vaginosis (BV). Following screening procedures, eligible participants were enrolled, had monthly visits (first three months), and thereafter quarterly visits. The project duration was 24 months.

Results: 480 clients were initiated on PrEP, 58% (278/478) were young women (median age 27 (22-39)) and 42% (200/478) were men (median age 27 (23-33)). Adherence was high by self-report and pill counts (94%), Non-adherence was mostly due to logistics. The majority of users (63.8%) preferred receiving PrEP from the mobile clinic. The high baseline BV and STI prevalence (BV, (57%), CT (13%) and NG, (2%)) highlights the importance of integrated SRH services during PrEP roll out.

Conclusion: PrEP is acceptable to women who are at risk. Men should be included to break the cycles of heterosexual HIV transmission. Early adopters can be used to create PrEP demand as social and sexual networks overlap.
Recommendations to DoH:

1. PrEP should be integrated into existing SRH services, which include STI diagnosis and treatment.

2. Mobile clinics serve as an ideal additional platform for PrEP delivery.

3. PrEP is not for everybody, but diversity in prevention options will increase impact on reducing new HIV infections.

EVALUATION OF THE ANTENATAL ARV TRACKING FORM IN UMGUNGUNDLOVU DISTRICT

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Background:
The researcher is a family physician in the DCST of Umgungundlovu District and whose main responsibility is to improve maternal and child health in the District.

Aims and Objectives:
The research question was: Has the use of the ARV Tracking Form improved the ordering of relevant blood tests leading to appropriate ARV management of HIV+ pregnant women?

Objectives:

A. Audit the MCRs from HIV+ women who delivered at Northdale Hospital during December 2017 - determine the current number of MCRs with Tracking Forms.

B. Secondly audit the last 100 + 100 MCRs: Viz. those MCRs with a Tracking Form and those without a Tracking Form. Compare if the Tracking Forms prompted the correct ARV-related bloods to be taken and retrieved at the correct time.

Methods:
The study design was a Retrospective Chart Review. The study setting was Northdale District Hospital. Most women in the study attended Antenatal care at PHC Clinics and delivered at Northdale Hospital. The data was the captured and descriptive statistics were calculated.

Results and Discussion:

A. Current Proportion of Maternity Case Records using an ARV Tracking Form
The percentage of MCRs with a Tracking Form in December 2017 = 95%

**B. Analysis of 200 MCRS: General information: Indicator**

MCR with a Tracking Form | MCR without a Tracking Form

It seems clear that the use of the Tracking Form significantly improved the quality of care of ARV Management in HIV+ pregnant women.

VL suppression was fair (86%) in patients with a Tracking Form, but below 90%. VL suppression was not nearly as good in those patients without a Tracking Form.

A big advantage of the Tracking Form is the much lower rate of Unknown VLs (5 vs. 21).

It is worrying that 25 of the mothers altogether had an unsuppressed VL (12.5%) in spite of booking and attending antenatal care.

Many of the significant errors were related to the taking of, checking and interpreting the creatinine results.

The Tracking Form has bridged the gap between antenatal care in the PHC clinic and delivery in the hospital. However there is still the issue of blood results getting back to clinic postnatally once the patient has delivered.

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MAKING VIRAL LOAD MONITORING ROUTINE WITHIN ART PROGRAMMES

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Background: Low viral load (VL) testing coverage undermines clinical monitoring and management of patients on ART, threatening the ability of ART programmes to achieve the third pillar of the UNAIDS 90-90-90 strategy for ending HIV.

Objectives: We designed and evaluated a 5-step plan to improve VL monitoring and management of ART patients in eThekwini facilities.

Methods: We prospectively piloted a 5-step viral load monitoring and management project in 3 hospital ART clinics from November 2016 to August 2017, and subsequently cascaded quick wins to high volume ART sites. The 5-step plan is geared toward strengthening systems for increasing viral load coverage and failure management. This collaborative project included District HAST unit and implementing partners. A two-step analysis was conducted comparing pre and post intervention VLC and suppression (VLS) rates at (i) pilot facilities, (ii) using programme data following scale up to other facilities within the district.

Results: A total of 10 370 patients access ART at the 3 facilities. Pre-intervention VLC rates at facility one, two and three were 68% (140/205), 54% (84/155) and 64% (323/504), respectively. Post-intervention VLC rates were 83% (995/1194), 90% (793/878) and 99% (3101/3124), (p<0.0001 per site). Pre and post-intervention VLS rates remained unchanged. Pre and post-intervention VLC rates in eThekwini were 42% and 76% respectively.

Conclusion: Simple, easily implementable strategies enabling scalability of high VL testing coverage are achievable. VLS rates are not compromised despite increases in VLC rates.
Recommendations:

1. Scale up of 5-point plan to other districts and health facilities
2. Collective team approach for improving VLC rates

THE ‘MISSING MIDDLE’ IN HIV TREATMENT CASCADE: ENSURING MEN’S AND YOUNG PEOPLE’S ACCESS TO HIV CARE IN KWAZULU-NATAL, SOUTH AFRICA

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Background:

Despite the efforts of different organisations to reduce the burden of HIV/AIDS in South Africa, most young people and men are missing within the HIV treatment cascade. Recent evidence from Uthungulu district in KwaZulu-Natal (KZN) shows that most men and young people under 30 years have never tested for HIV. This is also the case in our setting with high HIV related death in men and <50% annual HIV testing uptake amongst men under 29 despite the availability of free HIV testing and antiretroviral therapy (ART). It is therefore imperative to understand the barriers and facilitators of getting men and young people into the HIV treatment cascade.

Aims/objectives:

To assess the barriers and facilitators to implementing a new smartphone–connected diagnostics and online clinical care pathways into the current health system for HIV prevention, diagnosis and clinical management in rural and semi-urban areas of uMkhanyakude district in KwaZulu-Natal, South Africa.

Methods:

Fifty semi-structured in-depth interviews (IDIs) and eight group discussions were conducted with people (both sexes aged 18 – 79 years with 27 aged <35 years) from a rural and an urban community in uMkhanyakude district in KZN between November 2017 and February 2018, to understand young people’s and men’s barriers and facilitators to HIV care. Four IDIs and one group discussion were conducted with healthcare providers. Themes were identified from the interview transcripts, manually coded and thematically analysed following an interpretivist approach.
Results: Due to alcohol abuse and risky sexual behaviours, young people in both communities are afraid to test for HIV. Some believe it is better not to test (until they are sick) than to test positive. Men and young people do not like to test at their local clinics because of stigmatisation and confidentiality concerns. Participants (including providers) believe that HIV self-screening would encourage more men and young people to test given its privacy and time-saving. However, concerns were raised about how to ensure that those who test positive are initiated on ART. Most participants encouraged messaging about the benefits of healthy behaviour, early HIV testing and treatment.

Conclusions/Recommendations: To achieve the 90-90-90 objectives in our setting, men and young people’s access to comprehensive HIV care must be prioritised. Given its potential, HIV self-screening could remove barriers to HIV testing, while the decentralisation of HIV care services from local clinics to key places in the community for men and youth could encourage full utilisation.

FACTORS ASSOCIATED WITH DELAYED HEALTHCARE SEEKING IN TUBERCULOSIS PATIENTS ATTENDING CLINICS IN THE HIBISCUS COAST SUB-DISTRICT OF UGU DISTRICT, KWAZULU-NATAL

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Background: Tuberculosis is the leading cause of death in South Africa; early healthcare seeking leads to early diagnosis and appropriate treatment which are essential determinants of good health outcomes in people with TB disease. Health-seeking behaviour influences health outcomes and is acknowledged by health experts as an essential topic for research at a local level. This study was conducted in order to investigate the factors associated with delayed health-seeking in patients with tuberculosis at primary health care facilities in the former Hibiscus Coast Local Municipality in Ugu District, KwaZulu-Natal.
Aim: To determine the factors associated with delayed health-seeking in patients identified for drug-susceptible TB treatment at primary health care facilities in the former Hibiscus Coast Local Municipality in Ugu District, KwaZulu-Natal.

Objectives:

- To determine the sociodemographic characteristics of TB patients seen at primary health care facilities in the former Hibiscus Coast Local Municipality in Ugu District, KwaZulu-Natal.
- To determine the knowledge, awareness and perceptions of TB among TB patients attending primary health care facilities in the former Hibiscus Coast Local Municipality in Ugu District, KwaZulu-Natal.
- To determine the factors associated with delayed healthcare seeking in these patients.

Method: All eligible clinic attendees were approached at 5 randomly selected clinics based in the former Hibiscus Coast Local Municipality. The study sample was 200. Data was collected using a standardized pre-tested questionnaire specifically designed for this study. Data collection took place from 15 May to 15 September 2017. The data was subjected to quality assurance checks, captured in Microsoft Excel 2010 and analysed using Epi Info.

Results: It was found that the majority of patients, 56%, did not delay seeking health care when they experienced TB symptoms. Delay in seeking care for TB was found in 37% of study participants who stated that they sought treatment after 4 weeks from the time they experienced TB symptoms; 7% could not remember. Of those who delayed seeking healthcare; 80% were single; 57% were male; 62% had a high school level education; 58% were unemployed; 77% resided in rural areas; 50%, travelled in taxis; 42% walked; and 80% had the cough symptom. The main reasons given for delay were not feeling bad (46%); the long distance to the health facility (27%); and long waiting time at heath facility (22%). Although, overall, the majority of participants scored above 80% with regard to their TB related knowledge; among patients who delayed, 51% of them scored less than 80%. Health care workers and social contacts were their main sources of TB information. Patients who resided in informal areas were likely to delay.
Factors significantly associated with patient delay included having high school education and seeing a nurse as first action when health care was sought. About 60% of study participants were HIV positive but this was not associated with TB stigma and patient delay. Social contacts were associated with early health seeking.

**Conclusion:**

The majority of patients did not delay seeking care for TB. The study results revealed social contacts as important sources of TB knowledge and influence in health seeking for TB care. Informal sector dwelling was found to be a likely risk for delayed healthcare seeking in Ugu; interventions focussed on this group may reduce TB incidence in the District. Reasons for delayed health seeking included: distance from health facility; subjective perceptions of the severity of symptoms; and health systems challenges. Interventions that target TB health education and health system management are recommended to address the factors associated with delayed healthcare seeking in TB patients.

### SOCIO-ECONOMIC FACTORS AFFECTING SCHISTOSOMIASIS RESEARCH DISSEMINATION IN NDUMO AREA, UMKHANYAKUDE DISTRICT, KWAZULU-NATAL, SOUTH AFRICA

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#### Background:

Convectional health instruction approach, makes knowledge uptake a push activity requiring communities to passively receive mandatory health behaviour guidelines without comprehension of how they relate or intertwine with their lives.

#### Aims and objectives:

Socio-economic challenges affecting knowledge uptake and dissemination channels

#### Methods:

MABISA case study exploring socio economic factors influencing schistosomiasis knowledge dissemination and research uptake in rural areas. 20 villagers and students invited haphazardly and systematically, respectively, in 4 villages. Ten male and 10 female participants per village as well as 20 school children per school. 150 people of various age groups from villages and schools which recorded high bilharzia. FGD discussions, using FGD questions guide. Analysis done thematically.
Results and Discussion: Few health workers and peer educators, forums, poor living conditions and lack of access to clean water. More so, the emergence of digital technology is changing the way rural communities access information.

Recommendations: Use sustainable technological and indigenous methods which are community-based and take into account the socio-economic factors which affect the community.

SEXUAL & REPRODUCTIVE HEALTH

INTRODUCING MENSTRUAL CUPS TO ADOLESCENT GIRLS AND YOUNG WOMEN IN FURTHER EDUCATION INSTITUTIONS AND OUT OF SCHOOL COMMUNITY GROUPS IN KWAZULU-NATAL

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Background: Limited access to safe and affordable methods for dealing with menstruation has implications for the rights and physical, social, and mental well-being of many adolescent girls and young women (AGYW). The menstrual cup is a cost-effective, reusable and environmentally friendly method of menstrual management which if used over its five-year life span costs approximately R40-50 per year.

Aims and Objectives: The project aimed to evaluate the acceptability of menstrual cups in AGYW (18-24 years) attending 11 further education (FE) institutions in three districts in KwaZulu-Natal.

Methods: Following education on the menstrual cup, reproductive anatomy, menstrual cycle and sexual and reproductive health, AGYW are offered cups at no cost. A sample who receive menstrual cups are recruited to participate in a one-year follow-up. Healthcare providers from facilities proximal to the FE institutions are orientated on the menstrual cup.

Results and discussion: In total, 5696 AGYW have received training, 3687 have received menstrual cups and 509 were enrolled in the follow up component. At baseline, 20.2% had ever used toilet paper and 12% cloths/rags for menstrual management. Almost half (49%) said sanitary
products are unaffordable, citing R400 as average yearly cost. By Month 6, 84% reported they preferred using the menstrual cup and 97% said they would recommend it to female friends/family members. A total of 293 health providers received menstrual cup training to date.

**Conclusion and recommendations:**
The menstrual cup was seen as acceptable and easy to learn to use among this population of AGYW. The menstrual cup should be made more available in pharmacies and in menstrual management programmes.

**Completeness of the Infant Road to Health Booklet Within the First 6 Weeks of Life: Results from Three National Facility-Based Surveys, South Africa**

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**Background:**
Continuity of care is critical in high HIV prevalence settings such as South Africa where postnatal retention of mother-infant pairs in care remains a challenge. Optimally-utilised Road-to-Health booklets (RtHB) can be useful for monitoring retention in care.

**Aims and objectives:**
This analysis reports on completeness of the RtHB and associated factors.
**Methods:**
Secondary data from national, cross sectional surveys conducted in 2010, 2011-12 and 2012-13 to measure early vertical HIV transmission (MTCT) were analysed. Caregivers were interviewed and data were abstracted from RtHBs. Completeness of the RtHB was defined as the number of the following recorded on the RtHB; infant birth weight, BCG immunisation, maternal HIV status and syphilis results. An ordinal logistic regression analysis was used to identify factors associated with RtHB completeness.

**Results and Discussion:**
Overall, 10078 RtHBs in 2010, 10415 in 2011-12 and 9529 in 2012-13 were included. Recording of maternal HIV status in 2010, 2011-12 and 2012-13, respectively was 25.8%, 49.1% and 67.8%. RtHB completeness for all four indicators was 9.1%, 23.1% and 43.3%, respectively. The recording of all four indicators improved over time. Better completeness of the RtHB was significantly associated with self-reported maternal HIV positivity, knowing all three modes of MTCT, maternal antenatal TB screening, receipt of antenatal infant feeding counselling and delivery by health staff other than a doctor. The RtHB, a potentially critical tool for continuity of care in high HIV prevalence settings was poorly completed.

**Recommendations:**
Interventions aiming at optimal use of the booklet and education about its importance are needed for both health care professionals and mothers.

### SEXUAL RISK BEHAVIOUR CHANGES DURING PREGNANCY

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**Background:**
Data suggests that pregnant women have a high prevalence of HIV and sexually transmitted infections (STI’s). This analysis, examines whether pregnancy has an influence on risky sexual behaviour.
Methods: This secondary analysis from the Vaginal and Oral Interventions to Control the Epidemic (VOICE) trial enrolled 2750 HIV uninfected women, 18 to 45 years, at the 7 South African Medical Research Council sites. Participants underwent monthly pregnancy, HIV testing and risk reduction counselling. Sexual behaviour data were collected at quarterly visits. GEE models with a logit link function and independent correlation structure were used to estimate the adjusted relative risk of condom usage, multiple partners, anal sex and change in primary partners, during pregnancy compared to pre-pregnancy.

Results: Of the total of 204 pregnancies, 193 had a pregnancy outcome. Women were significantly less likely to report condom use at last sex during pregnancy (Adjusted RR 0.70 [0.59-0.84]). The mean number of sex acts per week did not significantly differ before and during pregnancy (p-value 0.478). There was no significant change in reported anal sex during pregnancy (Adjusted RR 0.96 [0.57 – 1.60]). Report of multiple sexual partners was similar in both periods (Adjusted RR 0.89 [0.62-1.28]). Women were less likely to change their primary partner during pregnancy, although this result was not statistically significant (Adjusted RR 0.82 [0.48-1.40]).

Conclusion: Pregnant women remained at risk for HIV and STI’s as they were less likely to use condoms at the last sex act. Ongoing education is needed to improve consistent condom use among pregnant women.

REASONS FOR REQUESTING REMOVAL OF HORMONAL CONTRACEPTIVE IMPLANON IMPLANTS AT AN URBAN PUBLIC SECTOR REPRODUCTIVE HEALTH CLINIC IN KWAZULU-NATAL

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Background: Contraceptive Implanon implants were introduced in South Africa in 2014 and although they offer multiple advantages, users may request to remove the implant prematurely for several reasons.

Aims and objectives: To gain an understanding of patterns of Implanon use and reasons for requesting removal.

Methods: This cross-sectional study comprises 2 components: an interviewer administered questionnaire with 120 women (findings presented...
The study population comprised women ≥ 18 years requesting removal of the Implanon implant at an urban public sector reproductive health clinic in eThekwini District, KwaZulu-Natal.

**Results and discussion:**
Participants ages ranged from 19-44 years. The majority (n=103, 85.8%) had at minimum completed secondary school education. Most were Black (115, 95.8%) and unmarried (102, 85%). Implant insertions were done primarily by nurses (110, 91.7%) at government clinics (91, 75.8%). Three-quarters (91, 75.8%) requested to remove Implanon because it had reached the intended 3-year duration. Reasons for premature removal were mainly due to side effects, commonly: bleeding problems (21, 17.5%), weight gain (7, 5.8%), loss of libido (2, 1.7%), headaches (5, 4.2%), dizziness (4, 3.3%) and pain/numbness in the arm (2, 1.7%). Just over half (57.1%) of women who had been on the Implant for the intended 3-year duration reinserted Implanon.

**Conclusion and Recommendations:**
Most women kept Implanon for the intended 3-year duration and over half of these women reinserted Implanon following removal. This indicates that contraceptive implants are an acceptable method for women wanting long acting reversible contraception (LARC). We should continue to promote Implanon use in health facilities.
CONTRACEPTION UPTAKE AMONG ADOLESCENT GIRLS AND YOUNG WOMEN (AGYW) IN RURAL KWAZULU-NATAL IN THE CONTEXT OF DREAMS HIV PREVENTION INTERVENTIONS

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Background:
South Africa is faced with a dual-epidemic of HIV and teenage pregnancy effecting the health of adolescent girls and young women (AGYW). Combination HIV prevention DREAMS programme aims to reduce both, through comprehensive sexual reproductive health (SRH) providing an opportunity for integrated HIV prevention programmes. We explore contraception uptake among AGYW in a rural KwaZulu-Natal (KZN) district where DREAMS is being rolled-out since April 2016.

Methods:
We conducted a nested study from 2017-8 in a rural district in KZN and recruited randomly from the general population n=2184 AGYW aged 13-22years. Analysis was restricted to n=861 who reported ever-had sex. Logistic regression models were used to determine factors associated with self-reported current use of modern contraception, including condoms.

Results:
More than half of those who have ever-had sex (58% 498/861) were ever-pregnant, with (33% 45/137) 13-17year-olds reporting ever-pregnant. Of those who were never-pregnant, 6% reported intentions to have a baby in <2years. Overall current contraception uptake was 63%, being highest (70%) among those who were ever-pregnant. AGYW who were ever-pregnant (aOR=3.3, 95%CI 2.2-4.8), and had intentions to have a baby after 2years (aOR=3.8, 95%CI 1.3-11.2) or not sure if they wanted a baby (aOR=3.2, 95%CI 1.1-9.0) were more likely to use contraception. Exposure to DREAMS interventions was not associated with contraception uptake.

Conclusions:
There remains a significant low contraception uptake among AGYW with the majority using contraception after pregnancy. Therefore there is a need to explore innovations in delivery to increase uptake, e.g. community-based and integrated with anteretroviral-based HIV prevention.
Introduction: Globally, schools have been identified as the ideal setting for health promotion among children, adolescents and the wider school community. School health services aim to optimise the health of school-going children by addressing health barriers to learning through developing supportive environments conducive to promoting health (WHO, 1996). The integrated school health policy has greater potential to address multiple factors related to learners’ overall health (Integrated School Health Policy, 2012; WHO, 1996). This study explores the barriers and facilitators faced by policy makers and stakeholders during the implementation of the integrated school health programme (ISHP).

Methods: A qualitative, explorative and descriptive study was conducted to identify the barriers and facilitators faced by stakeholders during the implementation of ISHP. Data was collected through in-depth interviews with 30 participants involved in the implementation of ISHP. To ensure broad representation of various stakeholders, at least 2 to 3 participants were selected from each department involved in the implementation. A purposive sampling method was used to select participants for inclusion in this study. Data was collected through in-depth interviews which were guided by an topic guide and review of documents related to ISHP which were compiled from 2015 till 2016. All the recorded data was transcribed verbatim in English. Data was analyzed using the five steps of framework analysis.

Results: The study findings reveal that the participants faced numerous barriers during the implementation of ISHP. These included limited resources (human resources, funds, materials, and transport), insufficient time allocated to ISHP activities, lack of support from other stakeholders, cultural beliefs, poor communication between stakeholders, poor attendance of follow-up consultations by referred learners, poor follow-ups after referrals and too many
school health programmes implemented by department of health. This study revealed that the participants also faced facilitators that helped in the successful implementation of ISHP. These included effective collaboration, coordination and partnerships between stakeholders, good leadership and maintaining good working relationships among stakeholders among different levels, provision of different resources from different stakeholders, support from different stakeholders and establishment of good referral points with different service providers.

**Conclusion:**

This study makes an important contribution to the implementation of the ISHP and documenting the barriers and facilitators faced during the implementation. Results of the study underscores the need for policy makers and relevant stakeholders to source more resources needed by ISHP including funds, increasing staff, vehicles for ISHP, increasing school health services offered by community based organizations, increasing mobile clinics in the communities, reviewing education curriculum to accommodate ISHP and integrating all school health programs into ISHP.

**IMPLEMENTATION OF A TEAM-BASED, ON-SITE INTERVENTION TO IMPROVE HEALTH WORKER KNOWLEDGE, ATTITUDES AND SELF-EFFICACY**

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3 Health Systems Research Unit, Francie van Zijl Drive, Parow Valley, Cape Town, Western Cape

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**Introduction/background:**

Frequent guideline changes have led to sub-optimal implementation of HIV and infant feeding guidelines.

**Objective:**

We describe an intervention to disseminate revised 2016 WHO HIV and infant feeding guidelines to primary healthcare teams.

**Methods:**

Reference groups to explore infant feeding practices and challenges was undertaken. Using knowledge gained from
reference groups, and the theory of planned behaviour, with Dee Finks significant-learning taxonomy, a participatory team-based mentoring programme to change attitudes, and improve knowledge and self-efficacy of HWs providing breastfeeding counselling was developed, consisting of 3 workshops, lasting 1-2 hours, over three consecutive weeks. Activities comprised participants identifying own knowledge gaps around breastfeeding, discussion of breastfeeding controversies, key breastfeeding/HIV messages, advantages of breastfeeding, progressive breastfeeding case studies highlighting breastfeeding/HIV challenges, and individual clinical mentoring.

**Results:** Three-hundred-and-three HW were identified from 24 clinics to participate. Attendance was high (87.5%, 84.8% and 84.5%). The most common knowledge gap prioritised by HW was HIV-viral load and ART adherence monitoring in breastfeeding/HIV mothers (173 participants), followed by management of breast conditions (79), and timing of breastfeeding cessation (68). Participants reported key learnings as, managing breast conditions (101); importance of ART adherence during breastfeeding (25); promoting expressing/storing of breastmilk (18 participants); and risks of mixed feeding (10). Participants indicated that learnings would change their practice.

**Conclusion:** A team-based approach where participants with different roles and responsibilities learn together on-site, using an intervention guided by participants own identified learning gaps, provides a novel approach to changing HIV attitudes and improving knowledge about counselling HIV-infected breastfeeding mothers.
ASSESSMENT OF THE UTILITY OF PREVENTION-OF-MOTHER-TO-CHILD HIV TRANSMISSION PROGRAM DATA FOR HIV SENTINEL SURVEILLANCE AMONG PREGNANT WOMEN IN SOUTH AFRICA

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2 National Institute of Communicable Diseases/National Health Laboratory Services
3 Centers for Disease Control and Prevention
4 National Department of Health, South Africa
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Background:
Antenatal HIV surveys (ANSUR) have been used to monitor antenatal HIV prevalence; however, these are costly and implement unlinked anonymous HIV testing which fails the test and treat recommendation. The World Health Organization (WHO) recommends using routine PMTCT program data to monitor antenatal HIV prevalence, for countries with near universal PMTCT coverage.

Aims and objectives:
To assess the quality of routine HIV and PMTCT service delivery; review the completeness of PMTCT data recorded in facility registers and review quality assurance (QA) procedures for HIV rapid testing.

Methods:
Study design, Sampling methods and size

A national cross-sectional survey was conducted in 2017. Using the 2015 District Health Information System (DHIS) 26 strata were identified: ANSUR and NON-ANSUR (not participating in ANSUR) and rural-urban facilities within all nine provinces; 360 facilities were randomly chosen.

Data collection method - In each facility:
i) the manager was interviewed, registers were reviewed and
ii) onsite quality assurance for HIV rapid testing was conducted (including personnel, space available for testing, safety, pre-testing, testing and post-testing procedures and external quality assessment (EQA).

Results and Discussion:
Approximately 20% of sites experienced stock-outs of HIV
The majority of PMTCT variables were incompletely recorded in PHC Comprehensive Tick registers; such as the HIV first test (62.1%), CD4 cell count results (25.2%) and HIV test results (28.9%). The median overall score for HIV rapid testing quality assurance was 62%, and was lowest for personnel training and certification, and EQA.

**Recommendations:**
Routine data quality improvement should be prioritized; ANSUR cannot currently be replaced by routine programmatic data.

**TRIANGULATION OF ROUTINE VIRAL LOAD MONITORING DATA IN PEDIATRIC CLIENTS AT A REGIONAL HOSPITAL, KWAZULU-NATAL, SOUTH AFRICA**

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**Background:**
High virologic failure rates have been reported in SA paediatric ART clients. Triangulation of routine viral load (VL) monitoring data from the electronic HIV patient register (TIER.net), National Health Laboratory Service (NHLS) and clinical charts may optimize the 90-90-90 Cascade of Care.

**Methods:**
An audit of paediatric (<15 years) HIV clinical charts was conducted for a 12 month period. We then triangulated monthly VL records from NHLS and TIER.net for the same period. We ascertained: ‘total remaining on ART’ (TROA); proportion of TROA with VL completed as per SA Guidelines in past 12 months (VLD); and proportion of VLD with viral load suppressed (VLS). A correlation analysis and Bland-Altman analysis was conducted. The baseline assessment was presented to clinical teams and quality improvement plans were developed.
Results:
Table 1: VL analysis using 12 month Pediatric cohort as per three data sources

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Clinical Charts October 2016</th>
<th>NHLS October 2016</th>
<th>TIER.net</th>
</tr>
</thead>
<tbody>
<tr>
<td>TROA(N)</td>
<td>951</td>
<td>1002</td>
<td>867</td>
</tr>
<tr>
<td>VLD (%)</td>
<td>84% (798/951)</td>
<td>90%</td>
<td>75%</td>
</tr>
<tr>
<td>VLS (%)</td>
<td>88% (700/798)</td>
<td>85%</td>
<td>82%</td>
</tr>
</tbody>
</table>

Table 2: Monthly triangulation from May-October 2016:

<table>
<thead>
<tr>
<th></th>
<th>NHLS</th>
<th>Tier.net</th>
<th>Clinical Charts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total VLD</td>
<td>472</td>
<td>292</td>
<td>552</td>
</tr>
<tr>
<td>Mean monthly VLD</td>
<td>98</td>
<td>59</td>
<td>102</td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>1</td>
<td>0.93</td>
<td>0.69</td>
</tr>
<tr>
<td>Mean Bias (Bland-Altman)</td>
<td>Gold standard</td>
<td>36</td>
<td>-16</td>
</tr>
</tbody>
</table>

Lessons learnt: Clinician-lead analyses using triangulated routine data improved VL data quality by improving clinician mindfulness, confidence and utilization of routine data for clinical care.
# THE KNOWLEDGE, UNDERSTANDING AND PERCEPTIONS OF PROFESSIONAL NURSES, WORKING IN PRIMARY HEALTH CARE CLINICS, ABOUT AUTISM SPECTRUM DISORDER

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Durban University of Technology (DUT)

## Background:

The Centers for Disease Control and Prevention (CDC) in the United States has found that more children than ever before are being classified as having autism spectrum disorders (ASDs) (Chiri and Warfield 2011: 1081). According to Matenge (2014: 1), ASD is a pervasive developmental disorder characterised by two essential features: a combination of impairments in social interaction and social communication, and restricted, repetitive, and stereotyped patterns of behaviour, interests and activities. Matenge (2014: 19) argues that there is, therefore, a need to assess the level of knowledge, understanding and the experiences of South African nurses regarding autism, as they are usually the first professionals that families of children with autism contact.

## Aims:

The purpose of this research was to determine the knowledge, understanding and perceptions of professional nurses who work in primary health clinics in eThekwini Health District, KwaZulu-Natal, regarding ASD.

## Methodology:

A quantitative, non-experimental, descriptive research survey design was utilised. A self-reporting questionnaire was used to collect data. Simple random sampling was used to determine which clinics in the eThekwini health district would be part of the study. The sample size for the clinics was thirty four, of those thirty were eThekwini municipality clinics and four KwaZulu-Natal Department of Health clinics. These clinics were utilised and provided the 275 professional nurses needed. The sample was calculated with a margin of error and an alpha value of 0.05; the researcher needed a minimum of 275 respondents. The researcher selected the respondents utilising non-probability, convenience sampling. Data was analysed with the assistance of the statistician, using SPSS version 22, both descriptive and inferential statistics were used to analyse data in this study.

## Results and Discussion:

It was found that the average professional nurse working in a primary healthcare clinic has 65.8% knowledge and understanding of ASD. Of particular concern is that the majority of respondents 51% (n=141) did not know or understand that the child with autism...
loves routine which is a key symptom in making a diagnosis of ASD, which may lead to late, or missed diagnosis. Eighty eight percent (n = 242) of respondents felt that they would benefit from further training on the identification and diagnosis of ASD. It was also found that respondents that have completed the Psychiatric Nursing Science course were more knowledgeable about ASD and confident in diagnosing ASD and counselling parents on ASD and available ASD services in the community.

**Recommendations:** Autism spectrum disorder to be included in the curriculum for nurses training and that regular in-service training be done to keep the professional nurses up to date with on new information related to ASD. It was also recommended that all children should be screened for ASD at 18 and 24 months at all PHCs in eThekwini district and that posters on the signs and symptoms of ASD should be displayed at primary healthcare clinics in full view of patients, parents and staff.

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**EXPLORING COMMUNICATION BETWEEN FIRST LANGUAGE ENGLISH SPEAKING AUDIOLOGISTS (FLES) AND ISIZULU PATIENTS AT PUBLIC SECTOR HOSPITALS IN KZN**

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**Background:** IsiZulu is the dominant language (77%) in KZN. It was unknown whether FLES audiologists are linguistically/culturally competent in isiZulu to provide appropriate services.

**Aims:** The aim of the study was to explore communication between FLES audiologists and their isiZulu speaking patients.

**Objectives:**

- To describe FLES audiologist’s cultural/linguistic competency in isiZulu.
- To determine influencing factors during cross-cultural communication
- To describe FLES audiologists cross-cultural communication strategies.
- To describe FLES audiologists’ recommendations in addressing isiZulu patients’ needs.
- To describe isiZulu patients’ perspectives regarding communication with FLES audiologists.
<table>
<thead>
<tr>
<th>Methodology:</th>
<th>A concurrent triangulation mixed design was used. The study consisted of three phases: • survey of 31 audiologists • interviews/Photovoice with 2 audiologists • survey of 98 isiZulu patients.</th>
</tr>
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<tbody>
<tr>
<td>Sampling:</td>
<td>Convenient and purposive. Data was collected from: • questionnaires • interview schedules • Photographs/narratives.</td>
</tr>
<tr>
<td>Analysis methods:</td>
<td>Descriptive, inferential and thematic.</td>
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<tr>
<td>Results and Discussion:</td>
<td>Overall FLES audiologists possessed poor cultural (71%) and linguistic (97%) competency in isiZulu. The above competency levels of audiologists coincided with the perspectives of isiZulu patients. Significant associations existed between cultural competency and audiologists years of experience (p value=0.021), gender (p=0.042) and type of institution based (p=0.038).</td>
</tr>
<tr>
<td>Conclusions and Recommendations:</td>
<td>These results have implications for changes in University curricular and policy at public sector hospitals, to improve cross-cultural service delivery. The implementation of isiZulu courses, formally-trained interpreters and isiZulu audiology resources were strongly recommended.</td>
</tr>
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NON-COMMUNICABLE DISEASES (NCD) AND MENTAL HEALTH

SUICIDE ATTEMPTS IN PREGNANCY

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Background: Maternal and child health issues together with injury and violence have been identified as one of the quadruple burdens of disease facing the South African health care system. However, research on self-injury, such as suicide attempts in pregnancy is limited due to beliefs that pregnancy is protective against suicidal behavior. One of the few studies which examined suicide attempts in pregnancy in a developing country found a rate of 5%. Given that the suicide rate for females in South Africa is 4.5 per 100 000, with twice as many women reporting suicide attempts as men (3.8% vs 1.8%) and that pregnancy is a critical time period for most women, this area is under-researched in South Africa.

Aim: A pilot study was undertaken to establish what percentage of suicide attempters admitted to a hospital were pregnant and to identify their clinical and socio-demographic characteristics.

Setting: This study was conducted at a tertiary hospital in Durban, South Africa.

Methods: A retrospective chart review was undertaken of all female patients admitted following suicide attempts over a period of one year. Clinical and sociodemographic data of pregnant suicide attempters were extracted.

Results: Of twenty seven charts reviewed, 33% (n =9) patients were pregnant at the time of the attempt. V Code diagnoses predominated followed by Major Depressive Disorder. Past psychiatric diagnoses and suicide attempts were also present.

Conclusion: Suicide attempts during pregnancy are not rare. Pregnant women should be routinely screened for prior suicide attempts, depression and stressors as part of perinatal assessments. When admitted, pregnant suicide attempters should be co-managed holistically by obstetricians, physicians and mental health professionals. The goal should be the early identification of stressors and the prevention of suicide attempts, thus ensuring viable foetal outcomes and the prevention of negative long-term outcomes, such as child abuse.
PREVALENCE OF PRIMARY HYPERTENSION AND RISK FACTORS IN GRADE XII LEARNERS IN KWAZULU-NATAL, SOUTH AFRICA

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Background: Hypertension in childhood leads to hypertension in adult life, the strongest risk factor being obesity.

Aims and objectives: This study determined the prevalence of primary hypertension and its risk factors in Grade XII learners in KwaZulu-Natal, South Africa, from March 2016 to June 2017.

Methods: Weight, height, body mass index (BMI), random finger prick cholesterol and glucose, and spot urine for an albumin: creatinine ratio were measured. An average of three separate blood pressure readings taken was at least 5 minutes apart. Five hundred and sixty-four learners had weight, height, and BMI; 536 had random blood glucose; and 545 had cholesterol and random spot urine albumin: creatinine ratios measured.

Results and discussion: Prehypertension was detected in 168 (29.7%) and hypertension in 77 (13.7%) of learners. Ninety (15.9%) were overweight and 75 (13.3%) were obese. Hypercholesterolemia was present in 58 (10.8%) and a high spot random urine albumin: creatinine ratio in 5 (1.0%). None had a high blood glucose level. Both prehypertension and hypertension in all learners showed a significant increase with increasing BMI. Six (1.0%) learners had metabolic syndrome. Female learners in other racial groups (defined as Indian, mixed race, and White learners), overweight, and
obese learners showed significantly higher rates of hypercholesterolemia.

**Implications and conclusion:** We showed overweight and obesity as risk factors for prehypertension and hypertension. This presages the need for an appropriate diet and adequate exercise in a child’s school career.

**THE PILOT STUDY OF THE “CERVICAL CANCER SCREENING AND TREATMENT ALGORITHMS STUDY USING HPV TESTING IN AFRICA” (CESTAP)**

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**Background:**

Cervical cancer remains a serious public health problem, with more than 500,000 new cases and 266,000 deaths occurring every year, particularly in developing countries where 87% of cases occur. Although rates of cervical cancer vary considerably, cervical cancer ranks first or second in all individual sub-Saharan African (SSA) countries, while it is the leading cause of cancer deaths at 57,381 cases per year in this subcontinent. Therefore, cervical cancer screening and treatment programs remain a high priority.

**Aims & Objectives:**

The main aim of the CESTAP study is to set up 1 screening clinic and develop and field test standard operating procedures (SOP); study questionnaires; clinical report forms (CRF); data management tools; and specimens management in the preparation of a future main Cervical cancer Screening and Treatment algorithms study using HPV testing in Africa (CESTA).

**The objectives are as follows:**

- Test all the research tools for CESTA (SOP’s, CRFs, collection of samples, lab procedures, etc.).
- To estimate the HIV prevalence in the catchment population.
- To assess proportion of CIN2+ by HIV serostatus.
- Estimate the performance of E6 oncoprotein test as a
Methods (Study design, sampling method, size, data collection method, tools & analysis): This pilot study started in January 2018 and ran for 6 months until June 2018; also it was a 2-stage individually randomised cervical screen-and-treat trial, in which 2 screening approaches were tested in 350 women aged 30-54 at a clinic set up in Wentworth Hospital in Durban, South Africa. The study flow is illustrated below in Figure 1. In summary, women were recruited, informed consent completed, eligibility determined, randomized, HIV status tested, pelvic gynaecological examined, study questionnaires/CRFs completed on demographic, medical history and sexual/reproductive history and specimens collected (i.e. HPV and biopsies) and follow up treatment visits/referrals. A data assistant and manager/statistician were responsible for data capturing and quality control and follow up analysis.

Figure 1. CESTAP study flow chart

Results & Discussion: A total of 375 women were recruited, but only 350 were eligible for study participation. The average age of all women that participated was 42 years of age in both allocated study arms (Arm 1 or 2). Approximately 30% of total study population was either HIV + or HPV +. Among 294 women tested for HIV, 19 (6.5%) were tested newly HIV-positive as well as all the HIV-positive women are on ART. Seventy five (75) women had a confirmed HIV positive result and the average age of HIV diagnosis was 32 years (range 19-53). Amongst 275 women who tested HIV negative, 21% was HPV positive as compared to 75 women whom tested HIV
positive reported 52% infected with HPV (OR4.1, p<0.001). Similar proportions of high grade lesions (from biopsies) (~15%, p = 0.91) were observed among either HIV serostatus women. However, women who tested HIV positive reported a 2-fold increase in LEEP CIN2 or + lesions than those with HIV negative status (100% vs 50%, p =0.33). Majority of all women (> 85%; 95% CI: 0.565-0.816) agreed to clinician-/self-collected HPV specimens (swab/brush) in arm 1. Women who preferred the self-collection said that it was simpler, faster and more comfortable than the clinician-collection. Women who preferred the clinician-collection trusted more the quality of the sample.

**Discussion:** This study demonstrated high rates of HPV positivity in combination with HIV infection. It also showed that whilst it HPV detection is a possible screening method, it may lead to overtreatment if no triaing system (in this case VIA) is employed, since there were fewer women with high grade lesions. It also reassuring that women tolerated the 2 alternative methods of treatment, and that these methods could be safely administered by nurses.

**Implications & Conclusion:** These findings need to be tested in a larger study. A larger study (CESTA) is planned for roll out later this year. DoH needs to support pursuit of alternative methods of screening and treatment that are up scalable to lower levels of care.
PATIENTS’ KNOWLEDGE, ATTITUDE AND PRACTICES TOWARDS ANTIBIOTIC USE AT A REGIONAL HOSPITAL IN KWAZULU-NATAL, SOUTH AFRICA 2017

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2 Prince Mshiyeni Memorial Hospital Pharmacy, KwaZulu-Natal Department of Health
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Background:
Inappropriate antibiotic use is a contributory factor to antibiotic resistance. Communities can contribute to the reduction of antibiotic resistance by using antibiotics appropriately and as prescribed.

Aim:
The aim of the study was to assess the knowledge, attitudes and practices of patients regarding antibiotic use.

Method:
An analytic, cross-sectional study was conducted at the outpatients department at Prince Mshiyeni Memorial Hospital in 2017. Systematic random sampling was used to enroll patients. A validated closed-ended questionnaire was administered to patients. Patients’ responses were scored and categorized as poor or good for knowledge, attitude and practice. Binary and multivariate regression models were conducted to assess the factors associated with knowledge, attitude and practice.

Results:
386 patients were enrolled. Only 205 (53%) patients had good knowledge of antibiotics. 270 (70%) patients knew that antibiotics are used to treat bacterial infections, however 211 (55%) patients thought that antibiotics are used to treat viral infections. 164 (42%) patients believed that antibiotics helped them to recover from the common cold and 178 (46%) patients expected the doctor to prescribe multiple antibiotics for a severe cold. 157 patients (40%) reported to have shared antibiotics with friends or family. Younger patients were more likely to have good...
knowledge compared to older patients. Good knowledge was significantly associated good antibiotic practices (OR 5.8; 95% CI 0.3-10.6; p < 0.001).

<table>
<thead>
<tr>
<th>Conclusion and Recommendations:</th>
</tr>
</thead>
<tbody>
<tr>
<td>We identified areas of misconception and inappropriate antibiotic practices amongst patients. A well-planned educational program should be undertaken to improve the knowledge and uses of antibiotics amongst patients.</td>
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</table>