



PRIMARY CARE RESEARCH: 2014

DIVISION OF FAMILY MEDICINE AND PRIMARY CARE, FACULTY OF
MEDICINE AND HEALTH SCIENCES, STELLENBOSCH UNIVERSITY.



Residents of Macassar community, Cape Town. Source: Dr Kate Joyner and Nick Curwell.



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TABLE OF CONTENTS

INTRODUCTION	9
“SOUND BITES” FOR POLICY MAKERS	10
CLINICAL RESEARCH: HIV/AIDS AND TB	13
• A Comparative Evaluation of the Successes and Challenges of the Antiretroviral Therapy Adherence Clubs in the Helderberg District of the Western Cape Province, South Africa	
• Erectile function in circumcised men: Lusaka, Zambia	
• Quality improvement cycle in Opuwo District Hospital HIV/AIDS Clinic, Kunene Region, Namibia	
• Tuberculosis contact tracing in primary health care facilities in Francistown, Botswana	
• Compliance of St Joseph’s Hospital Roma, Lesotho with the National Tuberculosis Programme of Lesotho, 2007 and 2008	
• Adherence of HIV/AIDS patients to antiretroviral therapy in a district hospital in Nankudu, Namibia	
CLINICAL RESEARCH: INJURY AND TRAUMA	21
• Community v. non-community assault among adults in Khayelitsha, Western Cape, South Africa: A case count and comparison of injury severity	
• The after-hours case mix of patients attending the George Provincial Hospital Emergency Centre	
• Predictors of pneumothorax in motor vehicle accident survivors who sustain chest trauma, Australia	
• Quality of Care for Intimate Partner Violence in South African Primary Care: A Qualitative Study	
CLINICAL RESEARCH: NON-COMMUNICABLE DISEASES	27
• Effectiveness of a group diabetes education programme in under-served communities in South Africa: A pragmatic cluster randomized controlled trial	
• Lifestyle modifications in hypertension: An assessment of reported adherence knowledge and attitudes at Mankayane Hospital, Swaziland	
• Cost-effectiveness of a diabetes group education programme delivered by health promoters with a guiding style in underserved communities in Cape Town, South Africa	
• Improving diabetic foot screening at a primary care clinic: A quality improvement project aimed at health care workers	
• Socio-economic status and diabetes control in patients presenting to Princess Marina Hospital, Gaborone, Botswana	
• Improving the quality of care for patients with hypertension in Moshupa District, Botswana: Quality improvement cycle	
• An analysis of blood pressure measurement in a primary care hospital in Swaziland	

- Exploring lifestyle advice on healthy living given to obese patients by their obese doctors, Queensland, Australia
- Dexamethasone as Adjuvant Treatment in Patients with Acute Severe Pharyngitis: A Descriptive Study at Welcare Hospital Emergency Unit, Dubai, United Arab Emirates
- The performance of a methamphetamine rehabilitation programme at De Novo Rehabilitation Centre: A descriptive study

CLINICAL RESEARCH: MATERNAL AND CHILD HEALTH 39

- Is Continuous Positive Airway Pressure a Feasible Treatment Modality for Neonates with Respiratory Distress Syndrome in a Rural District Hospital?
- An evaluation of the perceptions of high school teenagers regarding sexual health promotion programmes in Whittlesea, Eastern Cape, South Africa: A Qualitative Study

HEALTH SERVICES AND SYSTEMS RESEARCH 43

- The KM Seedat Memorial Lecture: Behaviour change counselling in the South African context
- The views of key leaders in South Africa on implementation of family medicine: Critical role in the district health system
- Assessment of the impact of family physicians in the district health system of the Western Cape, South Africa
- Assessment of the perceived impact of Family Physicians in the district health system of the Western Cape Province, South Africa
- Burnout in District Hospital Doctors in a Rural Area in the Western Cape
- Human resources for health in Botswana: The results of in-country database and reports analysis
- Accommodation of Accessibility Survey in Primary Care Clinics of a Rural Alberta Community
- Appropriateness of computed tomography and magnetic resonance imaging scans in the Eden and Central Karoo districts of the Western Cape Province, South Africa
- Health and fracking: Should the medical profession be concerned?

EDUCATIONAL RESEARCH 53

- The development and evaluation of a portfolio of learning in the workplace for postgraduate family medicine education in South Africa
- Article 1: Development of a portfolio of learning for postgraduate family medicine training in South Africa: A Delphi study
- Article 2: The national portfolio of learning for postgraduate family medicine training in South Africa: A descriptive study of acceptability, educational impact, and usefulness for assessment
- Article 3: The national portfolio of learning for postgraduate family medicine training in South Africa: Experiences of registrars and supervisors in clinical practice
- Article 4: The reliability of a portfolio assessment tool for postgraduate family medicine training in South Africa

- Guiding the Development of Family Medicine Training in Africa Through Collaboration With the Medical Education Partnership Initiative
- Theatre procedures performed at Knysna Hospital in the Eden district of the Western Cape and their application to post graduate training of Family Physicians
- Development of family medicine training in Botswana: Views of key stakeholders in Ngamiland
- 'Going rural': Driving change through a rural medical education innovation
- 'I felt colonised': Emerging clinical teachers on a new rural teaching platform
- PIQUE-ing an interest in curriculum renewal
- Equipping family physician trainees as teachers: a qualitative evaluation of a twelve-week module on teaching and learning
- Series on Primary Care Research Methods in the African Journal of Family Medicine and Primary Care



PRIMARY CARE RESEARCH: 2014

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Participants at the PRIMAFAMED meeting in Accra, Ghana attending a workshop on primary care research.
Source: Prof Bob Mash

INTRODUCTION

This booklet presents the research output from the Division of Family Medicine and Primary Care, Faculty of Medicine and Health Sciences at Stellenbosch University for the year 2014. The research projects that were completed or published during this year are presented in abstract format. An email address for one of the authors is given for each abstract and a link to the full publication where appropriate.

An important part of the research process is the dissemination of the findings to stakeholders and policymakers, particularly the Department of Health in the Western Cape where the majority of the research was performed.

We realise that many people may even be too busy to read the abstracts and therefore I have tried to capture the essential conclusions and key points in a series of “sound bites” below. Please refer to the abstract and underlying study for more details if you are interested.

We have framed this body of work in terms of Primary Care Research and the typology suggested by John Beasley and Barbara Starfield: Basic research, Clinical Research, Health Services Research, Health Systems research and Educational Research.

Clinical Research: Studies that focus on a particular disease or condition within the burden of disease.

Health Services Research: Studies that focus on cross-cutting issues of performance in the health services and relate to issues such as access, continuity, co-ordination, comprehensiveness, efficiency or quality.

Health Systems Research: Studies that speak more to the broader health system and development of policy.

Educational Research: Studies that focus on issues of education or training of health workers for primary care.

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“SOUND BITES” FOR POLICY MAKERS

Clinical Research

The body of work on behaviour change counselling was strengthened in 2014 by publication of the results of a randomised controlled trial on group diabetes education and the cost-effectiveness of the intervention. This research demonstrated that the educational programme was cost-effective in the South African context with a particular effect on lowering blood pressure. Group diabetes education is now being rolled out in community health centres in the Metropolitan District Health Services. We hope to see such a programme extended even further in the South African context.

An accompanying article (page 43) outlined a broader vision for the future of behaviour change counselling in primary care. This vision is based on the above work as well as research on brief behaviour change counselling (only published in 2015). The article proposed that health policy should support a combination of group education for a systematic, structured and comprehensive approach combined with brief behaviour change counselling from primary care providers during the consultation. Such an approach should embrace a guiding style and be supported by education resource materials to at least tackle the common chronic conditions and associated risk factors.

Other work in the field of HIV and TB showed the value of anti-retroviral adherence clubs in the Helderberg area, the importance of contact tracing for tuberculosis, and the power of quality improvement cycles to improve the quality of care with relatively simple interventions. A study from

Zambia demonstrated that male circumcision to prevent HIV transmission had no negative effect on erectile function.

Work continued to be published showing that intimate partner violence is poorly recognised and poorly managed in primary care. A number of pilot studies have since been conducted to explore better models of primary care for survivors.

Work from George Hospital emergency centre confirmed that almost two thirds of patients attending after-hour services were needing primary care and were not strictly speaking emergencies. This represents a challenge to service provision for primary care outside of normal office hours. Another study from Khayelitsha demonstrated the high rate of community assault and vigilantism and the higher severity of these injuries.

Finally an important study demonstrated the safety, feasibility and cost-effectiveness of providing CPAP (Continuous Positive Airways Pressure) in neonates with respiratory problems at district hospital, and not just having this at the referral centres.

Health services and systems

Work continued on investigating the impact of family physicians on the district health services of the Western Cape. Initial interviews with district managers across the Province were largely positive about their contribution to improving clinical care for HIV/AIDS, TB, trauma, non-communicable

diseases, mental health and child health. They also strengthened health systems in aspects of access, co-ordination, comprehensiveness and efficiency. There were concerns with managing the roles of the family physician with regard to managerial and educational activities. Their impact was still evolving and was not the same in every sub-district. A Family Physician Impact Assessment tool was also developed and the initial pilot demonstrated a strong perceived impact in terms of clinical care and being a consultant to the clinical team as well as clinical governance. Research to evaluate their impact continues in the province as well as nationally.

A situational analysis of the primary care workforce in Botswana revealed that the human resource plans may result in a vacancy rate of 53% by 2016. Attention needs to be given to increasing the number of Botswana doctors employed and increasing the training of other categories of workers as well as correcting the inequities in workforce distribution between rural and urban areas.

Another study echoed previous work in the Cape Town metropole on burnout amongst doctors and showed a rate of 81% burnout amongst rural district hospital based doctors.

Educational research

A body of work was published that documented the design, development, implementation and evaluation of a national learning portfolio for the training of family physicians. A reliable assessment

tool was developed and can be used to determine if registrar's meet the required standard for entry to the national exit examination. The portfolio has been implemented at all 9 training programmes in the country.

Concerns have been raised in rural areas about the training of family physicians in surgery and anaesthetics. A study demonstrated that the district hospital is a suitable setting to learn all the necessary skills required in the training.

Other work demonstrated the experience of medical students completing their training in the new Rural Clinical School and the experience of their supervisors in the local regional hospital. Another study showed the value of the Preparedness for Internship Questionnaire (PIQUE) in assessing whether medical school had adequately prepared new doctors for internship. At the postgraduate level an evaluation of a module on teaching and learning showed how students had applied their new educational competencies in the workplace.

Finally a series of 10 articles were published on primary care research methods with the goal of supporting research capacity building at a Masters level in the African region.



Clinic for multidrug resistant tuberculosis, Maun, Botswana. Source: Dr Radiance Ogundipe

CLINICAL RESEARCH: HIV/AIDS AND TB

A Comparative Evaluation of the Successes and Challenges of the Antiretroviral Therapy Adherence Clubs in the Helderberg District of the Western Cape Province, South Africa

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Aims and objectives: To perform a comparative evaluation of the successes and challenges of the anti-retroviral therapy (ART) adherence clubs in the Helderberg District of the Western Cape Province.

Methods: Phase 1: A retrospective review of 281 patient records, comparing a group of patients enrolled in the ART adherence clubs with a pre-enrollment group. Outcome measures were CD4, viral load (VL), opportunistic infections and HIV-related hospital admissions. Statistical analysis with Statistica Version 11. Phase 2: A qualitative exploration of the views and experiences of 93 patients and 6 health care providers on the efficiency and patient-friendliness of the adherence club system.

Results: Phase 1: Despite the median baseline CD4 being higher and the median time on treatment being lower in the pre-enrollment group, opportunistic infections were more common, and there were more detectable VLs ($p < 0.05$). Phase 2: ART clubs were generally felt to be efficient, accessible, convenient,

patient-friendly, supportive, accommodating of the needs of working people, as well as decreasing the workload of the ART clinic and hospital pharmacy. Participants identified several problems, namely inadequate medical- and counseling support, poor documentation, logistical issues with the chronic dispensing unit (CDU), fragmentation of clinical services, and the high administrative load on clinicians. Recommendations made by participants on how problems in the system can be addressed included the appointment of more non-clinical staff, providing opportunities for staff training, scheduling regular doctor visits, providing ongoing adherence support, performing regular audits, digitalizing scripts, addressing logistical- and flow management issues, and the integration of ART with other clinical services.

Conclusion: ART adherence clubs benefit both the patients enrolled and the greater health system. Their ability to improve HIV treatment outcomes in the study setting supports the expansion of the club programme, as well as its exploration as a model for the management of other chronic diseases.

Erectile function in circumcised men: Lusaka, Zambia

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Introduction: Male circumcision can reduce heterosexual transmission of HIV and this has led to a dramatic increase in demand for circumcision in Africa. This has also created anxieties around the effect on erectile dysfunction (ED). Studies have yielded conflicting results. This study aimed to compare erectile function in circumcised and uncircumcised men in Lusaka, Zambia.

Methods: A cross sectional survey with 478 participants men more than 18 years old (242 circumcised and 236 uncircumcised) from four primary care facilities. Erectile function scores were calculated for the 2 groups and normal function was defined as an IIEF-5 score ≥ 22 (out of a possible maximum score of 25) points. Information about participants' age, relationship status, education level, smoking, alcohol use and medication use was also collected.

Results: Circumcised men had higher average erectile function scores compared to their uncircumcised counterparts ($p < 0.001$). The prevalence of ED was lower in circumcised men (56%) compared to that in uncircumcised ones (68%) ($p < 0.05$). Erectile function scores were similar in those circumcised in childhood compared to those circumcised in adulthood ($p = 0.59$). The groups did not differ significantly in age, relationship status, smoking, alcohol use and medication use. However, a statistically significant difference was observed in education levels with the circumcision group showing higher levels ($p < 0.005$).

Conclusion: Circumcision does not confer adverse effects on erectile function in men. Circumcision can thus be considered without concern about worsening erectile function. However, a prospective study in a similar cultural context is needed to confirm these findings.

Quality improvement cycle in Opuwo District Hospital HIV/AIDS Clinic, Kunene Region, Namibia

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Introduction: The study aimed to assess and improve the quality of care for people with HIV in Opuwo District Hospital, Namibia. Currently, there is little evidence available on the quality of care for HIV at primary care level in Namibia.

Method: The study design was a quality improvement cycle. The quality improvement team included the trained nurses in HIV, data clerk, counsellors, trained pharmacist in ARV therapy and a doctor. They completed a full cycle by auditing care in 50 randomly selected folders from the HIV clinic and inspecting the facility, analysing results, planning and implementing changes to clinical practice, and then re-auditing.

Results: Changes to clinical practice included in-service training, proper documentation, re-emphasis on patient education by all staff, prompts on use of investigations and follow up, weighing all patients regularly, prescribing of isoniazid prevention therapy, co-trimoxazole and multivitamins. Adherence to treatment improved from 46% to 82% of patients and opportunistic infection rates declined below 15%.

Conclusion: The quality improvement cycle enabled simple changes to clinical practice that led to appreciable quality improvement over a short period.

Tuberculosis contact tracing in primary health care facilities in Francistown, Botswana

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Background: Tuberculosis (TB) is a big health concern in Botswana. High numbers of new and retreatment tuberculosis cases are still being recorded every year. This calls for implementation of more effective ways of investigating and managing tuberculosis to control its spread. Adequate assessment of contacts may identify active TB cases which could otherwise go unnoticed. The aim of the study were to determine the frequency and adequacy of tuberculosis contact tracing conduction in Francistown primary health care facilities and to describe factors contributing to the failure to implement TB contact tracing.

Methods: This descriptive study was conducted over 5 months in four clinics in Francistown. In one part of the study, sputum positive patients on anti-tuberculosis treatment (ATT) completed a questionnaire, while in the second part health care workers conducting contact tracing were interviewed. The findings were compared to the recommendations of the national guidelines on tuberculosis contact tracing.

Results: A total of 61 sputum positive subjects were identified. A total of 51 (84%) patients had some contact tracing done. Of the 51 patients, 44 (86%) had inadequate contact tracing and only 7 (14%) had adequate contact tracing done. Of the 51 that had contact tracing done, 6 (12%) were identified to have contacts with signs and symptoms of TB. Of the 61 subjects who were AFB positive and currently treated for TB, 12 (20%) of them were previously treated for TB. A number of challenges to contact tracing were identified: highly mobile contacts, transport issues, confidentiality and privacy, limited health care workers communication and counselling skills, homelessness and patients' refusal to produce sputum.

Conclusion: This study highlights the large number of sputum positive TB patients whose contacts are not effectively investigated and the challenges to successful contact tracing.

Compliance of St Joseph's Hospital Roma, Lesotho with the National Tuberculosis Programme of Lesotho, 2007 and 2008

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Background: In 2009 Lesotho had an estimated TB prevalence of 696 cases/100 000 population – the 4th highest in the world. This epidemic was characterised by high rates of death, treatment failure and unknown treatment outcomes. These adverse outcomes were attributable to a high rate of TB and/or HIV co-infection and weaknesses in the implementation of Lesotho's National Tuberculosis Programme (NTP). This study was conducted in St Joseph's Hospital, Roma (SJHR) to assess the implementation of the NTP.

Method: Records of 993 patients entered into the SJHR TB register between 2007 and 2008 were reviewed. Patients' treatment details were extracted from the register, validated and analysed by STATA 10.0.

Results: Of 993 patients registered: 88% were new patients, 37% were diagnosed on sputum smear microscopy alone, 35% were diagnosed on sputum smear microscopy with chest X-ray, whilst 25% were

diagnosed on chest X-ray alone. In addition: 33% were sputum smear positive, 45% were sputum smear negative, and 22% had extra-pulmonary TB. As to treatment outcome: 26% were cured, 51% completed treatment, and 51% converted from sputum smear positive to sputum smear negative over six months, whilst 16% died. Regarding HIV, 77% of patients were tested for HIV and 59% had TB and/or HIV co-infection. Of ten NTP targets only the defaulter and treatment failure rate targets were met.

Conclusion: Whilst only two out of ten NTP targets were met at SJHR in 2007–2008, improvements in TB case management were noted in 2008 which were probably due to the positive effects of audit on staff performance.

Publication: Samuel OO, De Villiers PJT. Compliance of St Joseph's Hospital Roma, Lesotho with the National Tuberculosis Programme of Lesotho, 2007 and 2008. *Afr J Prm Health Care Fam Med.* 2014;6(1), Art. #586, 6 pages. [http:// dx.doi.org/10.4102/phcfm.v6i1.586](http://dx.doi.org/10.4102/phcfm.v6i1.586)

Adherence of HIV/AIDS patients to antiretroviral therapy in a district hospital in Nankudu, Namibia

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Background: Non-adherence to highly active antiretroviral therapy (HAART) is a strong predictor of progression to AIDS and death. It remains the most important potentially alterable factor that determines treatment outcome.

Aim: The main purpose of this study was to determine the current frequency of adherence to HAART in a major HIV/AIDS treatment centre in Nankudu District and to identify the local factors contributing to non-adherence.

Methods: The study was a descriptive survey of the below mentioned three methods used to assess adherence to HAART and the determination of local barriers to adherence. The three methods used to measure HAART adherence were: pill counts, pharmacy refill data and self-report. The participants CD4 counts and viral loads were also evaluated.

It included a randomly selected sample of 225 adult patients receiving HAART treatment in the Communication for Disease Control (CDC)-HIV clinic of Nankudu district hospital of Namibia.

Results: A total of 90% of the patients had an adherence >95% comparable to those reported in most sub-Saharan Africa. The major local barriers to adherence included: stigma, distance from clinic, lack of food, lack of money and poverty, migration for work, travel, ran out of medicine, too busy, medication side effects, felt better and too sick.

Conclusion: The level of HAART adherence in the Communication Diseases Control (CDC)- HIV Clinic, of Nankudu District Hospital in Namibia was comparable to those reported in most sub-Saharan Africa, which is the recommended 95%. Factors influencing treatment defaulting and interruption were identified.



Graffiti in Macassar community on abuse of women. Source: Dr Kate Joyner and Nick Curwell.

CLINICAL RESEARCH: INJURY AND TRAUMA

Community v. non-community assault among adults in Khayelitsha, Western Cape, South Africa: A case count and comparison of injury severity

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Background: Community assault (CA) or vigilantism is widespread in the township of Khayelitsha, Cape Town, South Africa (SA). Anecdotal evidence suggests that victims of CA are worse off than other assault cases. However, scientific data on the rate and severity of CA cases are lacking for SA.

Objectives: To contribute to CA prevention and management strategies by estimating the rate of CA among adults in Khayelitsha and comparing the injury severity and survival probability between cases of CA and other assault (non-CA) cases.

Methods: We studied four healthcare centres in Khayelitsha during July - December 2012. A consecutive case series was conducted to capture all CA cases during this period. A retrospective folder review was performed on all cases of CA and on a control group of non-CA cases to compare injury severity and estimate survival probability.

Results: A total of 148 adult cases of CA occurred (case rate 1.1/1 000 person-years) over the study period. The Injury Severity Scores (ISSs) in the CA group were significantly higher than in the non-CA group ($p < 0.001$), with a median (interquartile range) ISS of 3 (2 - 6) in CA cases v. 1 (1 - 2) in non-CA cases. Comparison between the CA v. non-CA groups showed that a Glasgow Coma Scale < 15 (20.1% v. 5.4%, respectively), referral to the tertiary hospital (33.8% v. 22.6%, respectively), and crush syndrome (25.7% v. 0.0%, respectively) were all more common in CA cases. Survival probabilities were similar in both groups (CA v. non-CA 99.2% v. 99.3%, respectively).

Conclusion: The rate of CA among adults in Khayelitsha is high, and the severity of injuries sustained by CA victims is substantially higher than in other assault cases.

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DOI:10.7196/SAMJ.7615

The after-hours case mix of patients attending the George Provincial Hospital Emergency Centre

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Background: The emergency care of patients in South Africa has improved with the establishment of Emergency and Family Medicine as specialities, the introduction of the Cape Triage Scoring (CTS), and the upgrading of emergency care services. The Western Cape Comprehensive Service Plan stipulates that 90% of care should be delivered through primary and district (level 1) services, 8% through general specialist (level 2) services and 2% through super-specialist (level 3) services. Many patients needing level 1 care present after hours at level 2 facilities. This study was undertaken to determine the after-hours emergency centre case mix and workload at George Provincial Hospital Emergency Centre.

Method: This was a descriptive retrospective study. Using the CTS, emergency centre staff triaged 2 560 patients who presented for care after hours in May 2010. The data were entered and analysed in MS Excel®. The case mix and workload were then determined.

Results: Adults comprised 75% of the case mix. Sixty-five per cent of patients had routine (CTS “green”) complaints, 27% had urgent (CTS “yellow”) complaints, 5% had very urgent complaints (CTS “orange”) and 2% needed immediate care (CTS “red”). Trauma, respiratory and gastrointestinal problems were the most common presentations. The workload during the study period from 1–31 May 2010 included 54 patients after hours on weekdays, 138 patients per 24-hour (08h00-08h00) weekend days and 147 on public holidays.

Conclusion: This study showed that 47% of patients who presented after hours at the George Provincial Hospital Emergency Centre required primary or level 1 care. These patients could be more appropriately managed at a level 1 facility.

Publication: South African Family Practice 2014; 56(4):1–6 <http://dx.doi.org/10.1080/20786190.2014.953889>

Predictors of pneumothorax in motor vehicle accident survivors who sustain chest trauma, Australia

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Background: Pneumothorax is a relatively common and potentially fatal complication of motor vehicle accidents (MVA). Pneumothorax may be missed during clinical assessment. There has been no Australian study to establish the incidence of pneumothorax or its specific clinical predictors in MVA survivors.

Aim: A review of 63 medical records of MVA with chest injury over a 5 year period was done with the aim of identifying common predictors of pneumothorax as well as defining the common forms of chest injuries associated with it in MVA survivors. An analysis of data was carried out on these patients after categorising them based on age, sex, position of the victim at the time of the MVA, nature of the injury (blunt/penetrating), association with subcutaneous emphysema, rib fractures and intrathoracic organs

Results: Out of the 63 cases reviewed, there was a total of 18 (28.6%) cases of pneumothorax: 14 males and 4 females with an age range between 7 to 70 years, a median age of 38.5 years. 7 of these patients were motorcyclists, 6 car drivers, 2 bicycle riders, 2 pedestrians, 1 motorcycle passenger and all patients survived. 16 resulted from blunt chest injuries while 2 resulted from penetrating chest injuries. All the penetrating chest injuries were associated with pneumothorax. 9 had an associated fracture of multiple ribs, 5 had an associated fracture of a single rib and 6 were associated with subcutaneous emphysema. 12 were managed with a tube thoracostomy while 6 were conservatively managed by hospital admission and observation.

Conclusion: Pneumothorax was common, associated particularly with penetrating chest injuries and rib fractures, and had a good clinical outcome.

Quality of Care for Intimate Partner Violence in South African Primary Care: A Qualitative Study

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Abstract: Intimate partner violence (IPV) makes a substantial contribution to the burden of disease in South Africa. This article explores the current quality of care for IPV in public sector primary care facilities within the Western Cape. Only 10% of women attending primary care, while suffering from IPV, were recognized. Case studies, based on in-depth interviews and medical records, were used to reflect on the quality of care received among the women who were recognized. Care tended to be

superficial, fragmented, poorly coordinated, and lacking in continuity. The recognition, management, and appropriate documentation of IPV should be prioritized within the training of primary care providers. It may be necessary to appoint IPV champions within primary care to ensure comprehensive care for survivors of IPV.

Publication: Violence and Victims, Volume 29, Number 4, 2014, pp. 652-669(18)



Students examine the feet of a person with diabetes. Source: Dr Louis Jenkins.

CLINICAL RESEARCH: NON-COMMUNICABLE DISEASES

Effectiveness of a group diabetes education programme in under-served communities in South Africa: a pragmatic cluster randomized controlled trial

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Aim: To evaluate the effectiveness of group education, led by health promoters using a guiding style, for people with Type 2 diabetes in public sector community health centres in Cape Town.

Methods: This was a pragmatic clustered randomized controlled trial with 17 randomly selected intervention and 17 control sites. A total of 860 patients with Type 2 diabetes, regardless of therapy used, were recruited from the control sites and 710 were recruited from the intervention sites. The control sites offered usual care, while the intervention sites offered a total of four monthly sessions of group diabetes education led by a health promoter. Participants were measured at baseline and 12 months later. Primary outcomes were diabetes self-care activities, 5% weight loss and a 1% reduction in HbA1c levels. Secondary outcomes were self-efficacy, locus of control, mean blood pressure, mean weight loss, mean waist circumference, mean HbA1c and mean total cholesterol levels and quality of life.

Results: A total of 422 (59.4%) participants in the intervention group did not attend any education sessions. No significant improvement was found in any of the primary or secondary outcomes, apart from a significant reduction in mean systolic (-4.65 mmHg, 95% CI 9.18 to -0.12; $P = 0.04$) and diastolic blood pressure (-3.30 mmHg, 95% CI -5.35 to -1.26; $P = 0.002$). Process evaluation suggested that there were problems with finding suitable space for group education in these under-resourced settings, with patient attendance and with full adoption of a guiding style by the health promoters.

Conclusion: The reported effectiveness of group diabetes education offered by more highly trained professionals, in well-resourced settings, was not replicated in the present study, although the reduction in participants' mean blood pressure is likely to be of clinical significance.

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Lifestyle modifications in hypertension: An assessment of reported adherence knowledge and attitudes at Mankayane Hospital, Swaziland

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Background: Lifestyle modifications have been shown to lower blood pressure. Many guidelines recommend lifestyle modifications in the management of hypertension. Comprehensive adoption of the relevant lifestyle modifications has the greatest benefit.

Methods: This was a cross-sectional descriptive study with a qualitative component. Information on adherence was collected from 227 participants, using a structured questionnaire utilising Likert scales. In-depth interviews to assess knowledge and attitudes were conducted. Interviews were recorded, transcribed verbatim and analysed.

Results: Reported adherence to salt intake reduction and increased consumption of fruits and vegetables were 81.1% and 90.7% respectively. Reported adherence to exercise and weight reduction were 4.0% and 6.2% respectively. Reported adherence to alcohol intake reduction and smoking cessation were 50.6% and 56.5% respectively. The lifestyle modifications known by most participants were consumption of local vegetables, salt reduction, weight reduction and reduction of fats in the diet.

The attitudes towards the recommended lifestyle modifications were mostly positive. Exercise in any form was reported as beneficial, but time to exercise was a major limiting factor. Weight reduction was reported as difficult, but possible. Salt reduction emerged as the most important lifestyle modification. Alcohol and smoking were reported to be addictive and difficult to stop. Increasing consumption of fruits and vegetables emerged as the easiest to adhere to.

Conclusion: Reported adherence to exercise and weight reduction were very low whilst increased consumption of fruits and vegetables and salt reduction had fairly high reported adherences. Participants had more knowledge about increased intake of fruits and vegetables, salt reduction and weight reduction when compared to the other recommended lifestyle modifications. The attitude to the recommended lifestyle modifications was positive with the participants acknowledging that they are important in controlling blood pressure. Greater emphasis may be required on some lifestyle modifications where knowledge is lacking and different approaches to supporting behaviour change may be required.

Cost-effectiveness of a diabetes group education programme delivered by health promoters with a guiding style in underserved communities in Cape Town, South Africa

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Background: Resource constrained primary care environments in Africa need cost-effective models of patient education to combat the emerging epidemic of non-communicable chronic diseases. This study aimed to evaluate the cost-effectiveness of a group diabetes education programme delivered by health promoters with a guiding style in community health centres in the Western Cape, South Africa.

Method: The effectiveness of the education programme was derived from the outcomes of a pragmatic cluster randomised controlled trial (RCT). Incremental operational costs of the intervention, as implemented in the trial, were calculated. All these data were entered into a Markov micro-simulation model to model outcomes and cost-effectiveness expressed as an Incremental Cost Effectiveness Ratio (ICER). Data predicting risk of death from stroke and ischaemic heart disease in this model was derived from South African surveys.

Results: The significant effect from the RCT was a reduction in blood pressure at 1-year (systolic blood pressure -4.65mmHg (-9.18- -0.12) and diastolic blood pressure -3.30mmHg (-5.35 - -1.26)). The ICER for the intervention, based on the assumption that the costs would recur every year and the effect be maintained, was 1862 \$/Quality Adjusted Life Year.

Conclusion: An ICER of less than 10000 for medical intervention in South Africa is considered cost-effective. A structured group education programme performed by mid-level trained healthcare workers with a guiding style at community health clinics, for the management of Type 2 diabetes in the Western Cape, South Africa is therefore cost-effective.

Improving diabetic foot screening at a primary care clinic: A quality improvement project aimed at health care workers

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Background: Foot screening is an important part of diabetic care as it prevents significant morbidity, loss of function and mortality from diabetic foot complications. However, foot screening is often neglected. This project was aimed at educating health care workers (HCWs) in a primary health care clinic to increase diabetic foot screening practices.

Methods: A quality improvement project using a plan, do, study, act (PDSA) cycle was used. HCW needs were assessed using a questionnaire; this was followed by a focus group discussion with HCWs, which was recorded, transcribed and qualitatively analysed. Staff were trained to use the Diabetic Foot Assessment Questionnaire. Patient information pamphlets and screening tools were made available to all clinical staff. Thirty-two consecutive diabetic patient folders were audited to compare screening in 2013 to that in the first half of 2014 after initiation of the PDSA cycle.

Results: HCW confidence in conducting foot screening using the Diabetic Foot Assessment Questionnaire improved markedly after initial training. Diabetic foot screening practices increased from 9% in 2013 to 69% in 2014 after the first PDSA cycle. A strengths, opportunities, aspirations and results (SOAR) analysis showed promise for continuing quality improvement cycles.

Conclusions: The findings showed a significant improvement in the number of diabetic patients who received foot screening. A feedback session was held with the team of HCWs involved in the project to discuss their experience and for future improvement planning. Using strategic planning with appreciative intent based on SOAR, proved to be inspirational and will be used in the planning of the next cycle.

Socio-economic status and diabetes control in patients presenting to Princess Marina Hospital, Gaborone, Botswana

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Background: Literature supports a relationship between low income status and poor diabetes control. However this relationship has not been assessed in Botswana.

Aim: To determine the relationship between socio-economic status, lifestyle modification and diabetes control in patients presenting to Princess Marina Hospital (PMH).

Methods: A cross-sectional survey used a questionnaire to assess self-care activities, monthly household earnings and core social welfare indicators among diabetes patients attending PMH. A total of 240 patients were randomly selected. Routine HbA1c values were studied alongside questionnaire responses.

Results: A total of 58 (24%) participants were well controlled (HbA1c <7.0%) and of these 59% were in the lowest income category (P0-5000 per month), 96 (40%) participants were poorly controlled (HbA1c 7.1%-9.0%) and of these 69% earned P0-5000 per month, 86 (36%) participants were very poorly controlled (HbA1c > 9.0%) and of these 63% earned P0-5000 per month. [Michael to improve]

Conclusion: In this study high HbA1c percentages were associated with low monthly income levels and low scores in lifestyle modification factors. Participants with poor access to core welfare indicators also had poor glycaemic control. This study suggests that poor socio-economic status is directly related to poor glycaemic control in patients attending PMH diabetes clinic.

Improving the quality of care for patients with hypertension in Moshupa District, Botswana: Quality improvement cycle

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Background: Although there are no prevalence studies on hypertension in Botswana, this condition is thought to be common and the quality of care to be poor.

Aim: The aim of this project was to assess and improve the quality of primary care for hypertension.

Setting: Moshupa clinic and catchment area, Botswana.

Methods: Quality improvement cycle.

Results: Two hundred participants were included in the audit. Sixty-eight per cent were women with a mean age of 55 years. In the baseline audit none of the target standards were met. During the re-audit six months later, six out of nine structural target

standards, five out of 11 process target standards and one out of two outcome target standards were achieved. Statistically-significant improvement in performance ($p < 0.05$) was shown in 10 criteria although the target standard was not always met. In the re-audit, the target of achieving blood pressure control ($< 140/90$) in 70% of patients was achieved.

Conclusion: The quality of care for hypertension was suboptimal in our setting. Simple interventions were designed and implemented to improve the quality of care. These interventions led to significant improvement in structural and process criteria. A corresponding significant improvement in the control of blood pressure was also seen.

Publication: Afr J Prm Health Care Fam Med. 2014;6(1), Art. #578, 7 pages. <http://dx.doi.org/10.4102/phcfm.v6i1.578>

An analysis of blood pressure measurement in a primary care hospital in Swaziland

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Background: Measurement of blood pressure (BP) is done poorly because of both human and machine errors.

Aim: To assess the difference between BP recorded in a pragmatic way and that recorded using standard guidelines; to assess differences between wrist- and mercury sphygmomanometer based readings; and to assess the impact on clinical decision-making.

Setting: Royal Swaziland Sugar Corporation Mhlume hospital, Swaziland.

Method: After obtaining consent, BP was measured in a pragmatic way by a nurse practitioner who made treatment decisions. Thereafter, patients had their BP re-assessed using standard guidelines by mercury (gold standard) and wrist sphygmomanometer.

Results: The prevalence of hypertension was 25%. The mean systolic BP was 143 mmHg (pragmatic) and 133 mmHg (standard) using a mercury sphygmomanometer; and 140 mmHg for standard BP assessed using wrist device. The mean diastolic BP was 90 mmHg, 87 mmHg and 91 mmHg for

pragmatic, standard mercury and wrist, respectively. Bland Altman analyses showed that pragmatic and standard BP measurements were different and could not be interchanged clinically. Treatment decisions between those based on pragmatic BP and standard BP agreed in 83.3% of cases, whilst 16.7% of participants had their treatment outcomes misclassified. A total of 19.5% of patients were started erroneously on anti-hypertensive therapy based on pragmatic BP.

Conclusion: Clinicians need to revert to basic good clinical practice and measure BP more accurately in order to avoid unnecessary additional costs and morbidity associated within correct treatment resulting from disease misclassification. Contrary to existing research, wrist devices need to be used with caution.

Publication: Mlawanda G, Pather M, Govender S. An analysis of blood pressure measurement in a primary care hospital in Swaziland. *Afr J Prm Health Care Fam Med.* 2014;6(1), Art. #590, 9 pages. [http:// dx.doi.org/10.4102/phcfm.v6i1.590](http://dx.doi.org/10.4102/phcfm.v6i1.590)

Exploring lifestyle advice on healthy living given to obese patients by their obese doctors, Queensland, Australia

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Background: The lifestyle choices of doctors can impact on their health promotion activities thereby influencing the health outcomes of their patients. Doctors are a relevant source of information for patients about the health implications of lifestyle. This study was designed to explore and describe the lifestyle choices of obese doctors and also relate their lifestyle choices to the advice they give their obese patients.

Methods: A qualitative research study using in depth interview of 10 obese doctors in the Fraser Coast district of Queensland, Australia. Each of them gave information about their lifestyle activities, their patient education and counselling as well as their perception of patients' outcomes.

Results: Doctors engaged in unhealthy lifestyle activities including high intake of alcohol and sugary soft drinks, unhealthy eating habits and lack of exercise which was attributed to their busy schedule. Their lifestyle choices were not healthy although they were all confident in counselling their patients and reported many positive outcomes. The doctors however believed they can better motivate their patients to change their behaviour if they as doctors adopt a healthier lifestyle.

Conclusion: Obese doctors were confident in counselling obese patients about lifestyle modification, but were not congruent in adopting these same healthy behaviours themselves.

Dexamethasone as Adjuvant Treatment in Patients with Acute Severe Pharyngitis: A Descriptive Study at Welcare Hospital Emergency Unit, Dubai, United Arab Emirates

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Background: An increased incidence of acute group A β -hemolytic Streptococcal (GABHS) pharyngitis has been reported anecdotally at the Welcare Hospital in Dubai.

Aim: To describe the outcomes of patients with acute GABHS pharyngitis who received standard therapy at the Welcare hospital emergency unit in Dubai. To determine the time elapsed before patients experience a clinically significant reduction in pain. To describe the side-effect profile of standard treatment received for acute GABHS pharyngitis.

Methods: This was a cross-sectional study design. Consecutive sampling of 123 patients was done from December, 2013 to March, 2014. A questionnaire was used to record demographic data and severity of GABHS before patients received standard treatment. The Visual Analogue Scale (VAS) was used to measure pain severity at baseline and during follow-up. Adults diagnosed with GABHS pharyngitis who received dexamethasone as part of standard treatment offered were included.

Results: Clinical pain relief, which was suggested as a VAS score of 4, was achieved by 5.7% of the patients at 12 hours. At 24 hours, 55.3% of the patients reported a VAS score of 4. The mean VAS score of the patients at this time was 4.12. A total of 99.2% of the patients reported a VAS score of 4 or lower at 36 and 48 hours. Paired t-test revealed statistically significant difference between the VAS scores at 12, 24, 36 and 48 hours and baseline ($p=0.000$). This suggests that clinical pain relief was achieved by 55.3% of the patients at 24 hours. At 48 hours, 21.1% of the patients reported a VAS score of 0. None of the patients reported any side effects associated with the one dose use of dexamethasone.

Conclusion: The findings suggest that dexamethasone is safe and effective to use as an adjuvant for management of pain associated with acute GABHS pharyngitis. Almost all patients experienced significant pain relief by 36 and 48 hours and no side-effects related to dexamethasone use were recorded. Further definitive randomised controlled trials are needed to establish these findings as evidence for practice.

The performance of a methamphetamine rehabilitation programme at De Novo Rehabilitation Centre: A descriptive study

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Background: Methamphetamine abuse “TIK” is highly prevalent in South Africa with Cape Town recording the highest incidence. This is associated with significant health, social and economic problems in South Africa. The aim of the continually growing number of rehabilitation centres in South Africa has been to provide treatment and support for substance abusers towards abstention from substance abuse. This study examined the performance of the rehabilitation programme for amphetamine abuse at De Novo treatment centre in Cape Town over a period of one year.

Methods: A quantitative, descriptive cross-sectional survey was done. The setting was De Novo treatment centre situated in Kraaifontein, Cape Town. Data was collected from 91 client folder records out of a total population of 375 who received 7 weeks in-patient treatment and varying periods of aftercare over a period of one year. Patient self-reporting was used in this study to assess abstinence from amphetamine use.

Results: Treatment admissions showed a predominance of male (69.2%) unemployed clients (79.1%). 73.6% of clients reported abstinence on follow up with a short aftercare assessment period (median of 2-months post rehabilitation). The rate of relapse increased with time after discharge from in-patient treatment. The outcome of rehabilitation was not affected by patient age, gender, employment status, educational level, type of referral and co-using any other substances except alcohol. Alcohol and prolonged amphetamine abuse were associated with increased relapse rates. Prolonged amphetamine use i.e. ≥ 7.5 years was associated with increased relapse rates.

Conclusion: This study found that longer aftercare is needed to accurately measure outcomes and support clients from relapsing for at least 6-months. The co-abuse of alcohol and amphetamine as well as prolonged use of amphetamine for ≥ 7.5 years impacted negatively on the successful outcome of rehabilitation. This latter group of patients may require special attention during in-patient treatment and aftercare.



Children from Macassar community play in area. Source: Dr Kate Joyner and Nick Curwell.

CLINICAL RESEARCH: MATERNAL AND CHILD HEALTH

Is Continuous Positive Airway Pressure a Feasible Treatment Modality for Neonates with Respiratory Distress Syndrome in a Rural District Hospital?

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Objectives: To assess the feasibility of using nasal continuous positive airway pressure (nCPAP) in neonates with respiratory distress syndrome at district hospital level by assessing in-hospital survival rates and the impact on transfer rates.

Methods: A prospective database was kept from 2008 to record the outcomes of neonates with mild to moderate respiratory distress treated with nCPAP at a South African rural district hospital. Transfer rates were compared for the two years before and after introduction of neonatal nCPAP using additional retrospective data from the Perinatal Problem Identification Programme (PPIP) for comparison. Outcomes for nCPAP neonates for the first 5 years after programme implementation are presented.

Results: One hundred and twenty-eight babies were treated with nCPAP over the study period. Nine of 13 extremely low birth weight (<1000 g) babies died. Eighty-four (72.4%) of the babies weighing >1000 g were successfully treated, 16 (13.8%) were transferred after trial of nCPAP and 15 (12.9%) died in hospital. Most of the transferred babies and deaths had co-morbidities. There was a significant reduction in transfer rates of low birth weight babies from 21 to 7% in the first 2 years following the introduction of nCPAP.

Conclusions: nCPAP for neonatal respiratory distress at the district hospital is feasible, safe and offers the potential for significant cost savings.

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An evaluation of the perceptions of high school teenagers regarding sexual health promotion programmes in Whittlesea, Eastern Cape, South Africa: A Qualitative Study

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Introduction: Health problems emanating from sexual behaviour include HIV/AIDS, other sexually transmitted infections and unintended pregnancies. These problems occur in spite of a number of different sexual health promotion programmes. The aim of the study was to explore the perceptions of high school teenagers regarding sexual health promotion programmes as well as their response to these programmes.

Method: This was a qualitative study. The study population was high school teenagers from the Whittlesea townships in the Eastern Cape province of South Africa. Fourteen purposefully selected teenagers from the seven high schools were individually interviewed. Analysis was done using the framework method.

Results: The study showed that the content of sexual health promotion programmes focused on sexual health education and the building of life skills. Perception of the messages was influenced by a lack of communication on sexual matters within individual families and the religious beliefs of participants. The programmes were considered to be practical and helpful. Promotion methods that enabled teenagers' participation or interaction and where the communication style was perceived as facilitating behavioural/attitudinal change were generally preferred.

Conclusion: In order for adolescent sexual health promotion programmes to be effective, they should employ methods that involve participation and interaction. The involvement of parents, role models, religious groups and community services in sexual health promotion could be helpful in promoting sexual health education and lifestyle change amongst teenagers.



The district management team from Ngamiland district, Botswana, reflect on how to improve supportive supervision.
Source: Dr Oathokwa Nkomazana

HEALTH SERVICES AND SYSTEMS

The KM Seedat Memorial Lecture: Behaviour change counselling in the South African context

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South Africa carries a huge burden of disease, characterised as having four major components:

- Human immunodeficiency virus (HIV)/acquired immune deficiency syndrome (AIDS) and tuberculosis.
- Maternal and child health.
- Injuries and violence.
- Non-communicable chronic diseases (NCDs).

In the face of such an onslaught of disease, the need for skilful behaviour change counselling may be overlooked. This article intends to outline the relevance of such counselling in the South African context, the current situation and emerging models of counselling which may be particularly suited to our context.

Unhealthy behaviour is a key factor that underlies much of the South African burden of disease and primary care morbidity. This is particularly true of NCDs which are driven by unhealthy eating, physical inactivity, tobacco smoking and harmful alcohol use. An ecological approach to reducing unhealthy

behaviour requires interventions at the levels of society, community, home and individuals. Behaviour change counselling mainly tackles the problem at the level of individuals and sometimes families. Currently, our primary care providers are poorly trained for behaviour change counselling within the health facilities, and there are many barriers to its successful delivery. Nevertheless, a number of successful approaches have been developed and tested in the South African context. Group motivational interviewing, even when delivered by mid-level health workers, can deliver comprehensive education and motivation for change to large groups of patients. Brief behaviour change counselling, based on a guiding style and the 5 "As", can supplement the group approach when offered by trained primary care providers as part of consultations. These approaches need to be integrated into policy and facility management so that patients are offered comprehensive education, in a suitable space and setting, with appropriate educational materials.

Publication: Transactions 2014; 58(1): 58-62

The views of key leaders in South Africa on implementation of family medicine: critical role in the district health system

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Background: Integrated team-based primary care is an international imperative. This is required more so in Africa, where fragmented verticalised care dominates. South Africa is trying to address this with health reforms, including Primary Health Care Re-engineering. Family physicians are already contributing to primary care despite family medicine being only fully registered as a full specialty in South Africa in 2008. However the views of leaders on family medicine and the role of family physicians is not clear, especially with recent health reforms. The aim of this study was to understand the views of key government and academic leaders in South Africa on family medicine, roles of family physicians and human resource issues.

Methods: This was a qualitative study with academic and government leaders across South Africa. In depth interviews were conducted with sixteen purposively selected leaders using an interview guide. Thematic content analysis was based on the framework method.

Results: Whilst family physicians were seen as critical to the district health system there was ambivalence on their leadership role and 'specialist'

status. National health reforms were creating both threats and opportunities for family medicine. Three key roles for family physicians emerged: supporting referrals; clinical governance/quality improvement; and providing support to community-oriented care. Respondents' urged family physicians to consolidate the development and training of family physicians, and shape human resource policy to include family physicians.

Conclusions: Family physicians were seen as critical to the district health system in South Africa despite difficulties around their precise role. Whilst their role was dominated by filling gaps at district hospitals to reduce referrals it extended to clinical governance and developing community-oriented primary care. Innovative team based service delivery is possible despite human resource challenges, but requires family physicians to proactively develop team-based models of care, reform education and advocate for clearer policy, based on the views of these respondents.

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Assessment of the impact of family physicians in the district health system of the Western Cape, South Africa

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Background: In 2007, South Africa made family medicine a new speciality. Family physicians that have trained for this new speciality have been employed in the district health system since 2011. The aim of the present study was to explore the perceptions of district managers on the impact of family physicians on clinical processes, health system performance and health outcomes in the district health system (DHS) of the Western Cape.

Methods: Nine in-depth interviews were performed: seven with district managers and two with the chief directors of the metropolitan and rural DHS. Interviews were recorded, transcribed and analysed using the ATLAS-ti and the framework method.

Results: There was a positive impact on clinical processes for HIV/AIDS, TB, trauma, non-communicable chronic diseases, mental health, maternal and child health. Health system performance was positively impacted in terms of access, coordination, comprehensiveness and efficiency. An impact on health outcomes was

anticipated. The impact was not uniform throughout the province due to different numbers of family physicians and different abilities to function optimally. There was also a perception that the positive impact attributed to family physicians was in the early stages of development. Unanticipated effects included concerns with their roles in management and training of students, as well as tensions with career medical officers.

Conclusion: Early feedback from district managers suggests that where family physicians are employed and able to function optimally, they are making a significant impact on health system performance and the quality of clinical processes. In the longer term, this is likely to impact on health outcomes.

Publication: Swanepoel M, Mash B, Naledi T. Assessment of the impact of family physicians in the district health system of the Western Cape, South Africa. *Afr J Prm Health Care Fam Med.* 2014;6(1), Art. #695, 8 pages. <http://dx.doi.org/10.4102/phcfm.v6i1.695>

Assessment of the perceived impact of Family Physicians in the district health system of the Western Cape Province, South Africa

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Background: Policy makers in Africa are ambivalent about the need for family physicians to strengthen district health services. Evidence on the impact of family physicians is therefore needed. The aim was to develop a tool to evaluate the impact of family physicians on district health services according to the six expected roles that have been defined nationally.

Methods: Mixed methods were used to develop, validate, pilot and test the reliability of the tool in the Western Cape Province, South Africa. An expert panel validated the content and construction of the tool. The tool was piloted by 94 respondents who evaluated eight family physicians. Cronbach alpha scores were calculated to test the reliability of the tool. The impact of these family physicians in the pilot study was also analysed.

Results: A draft tool was successfully developed, validated, and proved reliable (Cronbach alpha >0.8). The overall scores (scale of 1-4) were: Care provider = 3.5, Consultant = 3.4, Leader and champion of clinical governance = 3.4, Capacity builder = 3.3, Clinical trainer and supervisor = 3.2 and Champion of community-orientated primary care (COPC) = 3.1. The impact on COPC was significantly less than the impact of other roles ($p < 0.05$).

Conclusion: The Family Physician Impact Evaluation Tool can be used to measure the impact of family physicians in South Africa. The pilot study shows that the family physicians are having most impact in terms of clinical care and clinical governance, and a lesser impact in terms of clinical training, capacity-building and especially COPC.

Publication: Pasio et al. BMC Family Practice 2014, 15:204. <http://www.biomedcentral.com/1471-2296/15/204>

Burnout in District Hospital Doctors in a Rural Area in the Western Cape

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Aim: Burnout amongst doctors negatively effects recruitment and retention, effectiveness and efficiency of health systems, and ultimately, patient-care. The aim of this study was to fill the gap in published data concerning burnout among primary care district hospital doctors practicing in one rural area in South Africa.

Methods: A validated questionnaire (Maslach Burnout Inventory) was sent to 42 doctors in 7 district hospitals in early 2013.

Results: Response rate was 85.7%. Clinically significant burnout was found in 81% of respondents. Family physicians had significantly lower burnout levels than non-specialist colleagues ($p=0.01$).

Conclusion: This study demonstrates high burnout rates, most importantly threatening the quality of patient care. Recommendations are made.

Human resources for health in Botswana: The results of in-country database and reports analysis

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Background: Botswana is a large middle-income country in Southern Africa with a population of just over two million. Shortage of human resources for health is blamed for the inability to provide high quality accessible health services. There is however a lack of integrated, comprehensive and readily-accessible data on the health workforce.

Aim: The aim of this study was to analyse the existing databases on health workforce in Botswana in order to quantify the human resources for health.

Method: The Department of Policy, Planning, Monitoring and Evaluation at the Ministry of Health, Ministry of Education and Skills Development, the Botswana Health Professions Council, the Nursing and Midwifery Council of Botswana and the in-country World Health Organization office provided raw data on human resources for health in Botswana.

Results: The densities of doctors and nurses per 10 000 population were four and 42, respectively; three and 26 for rural districts; and nine and 77 for urban districts. The average vacancy rate in 2007 and 2008 was 5% and 13% in primary and hospital care, respectively, but this is projected to increase to 53% and 43%, respectively, in 2016. Only 21% of the doctors registered with the Botswana Health Professions Council were from Botswana, the rest being mainly from other African countries. Botswana trained 77% of its health workforce locally.

Conclusion: Although the density of health workers is relatively high compared to the region, they are concentrated in urban areas, insufficient to meet the projected requirements and reliant on migrant professionals.

Publication: Nkomazana O, Peersman W, Willcox M, Mash R, Phaladze N. Human resources for health in Botswana: The results of in-country database and reports analysis. *Afr J Prm Health Care Fam Med.* 2014;6(1), Art. #716, 8 pages. <http://dx.doi.org/10.4102/phcfm.v6i1.716>

Accommodation of Accessibility Survey in Primary Care Clinics of a Rural Alberta Community

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Introduction: According to the Society of Rural Physicians of Canada's National Rural Health Strategy, 21% of Canadian residents are rural but only 9.4% of Canadian physicians live in rural areas.

Aim: To evaluate patient experience and the accommodation of accessibility to four primary care clinics in Brooks, Alberta.

Methods: A cross-sectional survey in four primary care clinics in the city of Brooks. The study sample (n=391) included registered patients including emergency walk-in consultations, consultations for office procedures, short visits for prescription refills as well as annual physical examinations.

Results: No major differences existed between perceived and actual waiting times in the physician's offices. Patients who felt that they can get a timely

appointment were 8.4 times more likely to be happy with the quality of care received. Patients who got prompt return of their calls were 10 times more likely to be happy with access to primary care clinics. Patients who felt that the clinic hours of operation were acceptable were 16 times more likely to agree that they received adequate health care. Patients who felt that the waiting time for an appointment at the clinic were acceptable to them were 8 times happier with the quality of care.

Conclusion: The most satisfied patient appears to be someone who waits no longer than 5-15 minutes in the waiting room, then no longer than 5-15 minutes in exam room for a 5 -15 minute consultation. The shorter the waiting times for an appointment and the shorter the different waiting times during a consultation in the clinic the more satisfied the patient.

Appropriateness of computed tomography and magnetic resonance imaging scans in the Eden and Central Karoo districts of the Western Cape Province, South Africa

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Introduction: Computed tomography (CT) and magnetic resonance imaging (MRI) are an essential part of modern healthcare. Marked increases in clinical demand for these imaging modalities are straining healthcare expenditure and threatening health system sustainability. The number of CT and MRI scans requested in the Eden and Central Karoo districts of the Western Cape Province, South Africa (SA), almost doubled from 2011 to 2013.

Objective: To determine the appropriateness of CT and MRI scans and relate this to the requesting department and clinician.

Methods: This was a retrospective analytical cohort study. All scans during October 2012 were analysed as a sample. Appropriateness of scans was determined using the American College of Radiologists (ACR) Appropriateness Criteria and the Royal College of Radiology Guidelines. Appropriateness was also correlated back to the requesting department and clinician.

Results: Of a total of 219 scans, 53.0% were abnormal. Overall 6.4% of scans were considered inappropriate. Interns and registrars requested no inappropriate scans. The orthopaedics department scored the highest rate of appropriate scans (80.0%) and the oncology department the highest rate of inappropriate scans (20.8%).

Conclusion: The limited resources available for healthcare in a developing country like SA should be a motivation to implement control mechanisms aimed at appropriate utilisation of imaging examinations. The Eden and Central Karoo districts have a low rate of inappropriate scans (6.4%). We recommend that the current preauthorisation system by consultants and other senior clinicians continues, but with increased clinician awareness of the ACR Appropriateness Criteria and the Royal College guidelines.

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DOI:10.7196/SAMJ.8158

Health and fracking: Should the medical profession be concerned?

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Abstract: The use of natural gas that is obtained from high-volume hydraulic fracturing (fracking) may reduce carbon emissions relative to the use of coal and have substantial economic benefits for South Africa. However, concerns have been raised regarding the health and environmental impacts. The drilling and fracking processes use hundreds of chemicals as well as silica sand. Additional elements are either released from or formed in the shale during drilling. These substances can enter the environment in various ways: through failures in the well casing; via alternative underground pathways; as wastewater, spills and leaks on the

well-pad; through transportation accidents; and as air pollution. Although many of these chemicals and elements have known adverse health effects, there is little evidence available on the health impacts of fracking. These health concerns have not yet been fully addressed in policy making, and the authors recommend that the voice of health professionals should be part of the public debate on fracking and that a full health impact assessment be required before companies are given the go-ahead to drill.

Publication: S Afr Med J 2014;104(5):332-335.
DOI:10.7196/SAMJ.7860



Prof Bob Mash meets local registrars in training at the WONCA Regional Conference in Accra, Ghana. Source: Prof Bob Mash.

EDUCATIONAL RESEARCH

The development and evaluation of a portfolio of learning in the workplace for postgraduate family medicine education in South Africa

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A portfolio of learning is one way of showing evidence of performance over a period of time. Worldwide, the need for social accountability and health services reforms has led to an increased interest in competency-based medical education with specific outcomes. Postgraduate training increasingly focuses on life-long adult learning, placing emphasis on close supervision with feedback and workplace-based assessment.

South Africa, although better resourced, faces many similar socio-political and health services challenges as the rest of Africa. The democracy is less than 20 years old, with 80% of the previously disadvantaged population now having access to health services. In this new era medical schools have aligned their curricula to focus on patient-centred primary health care. The huge demand for appropriately trained family physicians has become a national priority.

Subsequently, the College of Family Physicians of the Colleges of Medicine of South Africa developed a national exit examination for postgraduate family medicine training. One component of the examination is the submission of a satisfactory portfolio of learning.

The aim of this thesis was to develop a national portfolio for postgraduate family medicine education in South Africa. It needed to be valid, acceptable, useful for learning, and be assessed in a reliable way. The research process involved a collaboration with registrars, supervisors and programme managers from all eight medical schools in the country over four years and culminated in the first national portfolio for family medicine in the country. The thesis was done by way of publication, which involved four articles being published in international journals, outlining the development, implementation and assessment of our portfolio.

Content and construct validity of the draft portfolio was established through a Delphi process. Subsequently, the portfolio was implemented at all eight medical schools. Workshops over two years at all the universities facilitated implementation and provided feedback on the use of the portfolio across the country. After implementation of this initial portfolio, the acceptability, educational impact, and usefulness for assessment were evaluated through a national survey and in-depth interviews.

A portfolio assessment tool was developed and its reliability was established for the overall score. The assessment tool has also been implemented nationally. The portfolio's requirements have made the expectations and challenges of workplace-based learning and assessment more visible, with supervision, safe learning environments and more user-friendly learning and assessment tools needing further research.

Article 1: Development of a portfolio of learning for postgraduate family medicine training in South Africa: A Delphi study

Background: Within the 52 health districts in South Africa, the family physician is seen as the clinical leader within a multi-professional district health team. Family physicians must be competent to meet 90% of the health needs of the communities in their districts. The eight university departments of Family Medicine have identified five unit standards, broken down into 85 training outcomes, for postgraduate training. The family medicine registrar must prove at the end of training that all the required training outcomes have been attained. District health managers must be assured that the family physician is competent to deliver the expected service. The Colleges of Medicine of South Africa (CMSA) require a portfolio to be submitted as part of the uniform assessment of all registrars applying to write the national fellowship examinations. This study aimed to achieve a consensus on the contents and principles of the first national portfolio for use in family medicine training in South Africa.

Methods: A workshop held at the WONCA Africa Regional Conference in 2009 explored the purpose and broad contents of the portfolio. The 85 training outcomes, ideas from the WONCA workshop, the literature, and existing portfolios in the various universities were used to develop a questionnaire that tested the proposed portfolio's content and construct validity. The content and construct of the portfolio was addressed by a panel of 31 experts in family medicine in South Africa, via the Delphi technique in four rounds. Eighty five content items (national learning outcomes) and 27 principles for constructing the portfolio were tested. Consensus was defined as 70% agreement. For those items that the panel thought should be included, they were also asked how to provide evidence for the specific item in the portfolio, and how to assess that evidence.

Results: Consensus was reached on 61 of the 85 national learning outcomes. The panel recommended that 50 be assessed by the portfolio and 11 should not be. No consensus could be reached on the remaining 24 outcomes and these were also omitted from the portfolio. The panel recommended that various types of evidence be included in the portfolio. The panel supported 26 of the 27 principles, but could not reach consensus on whether the portfolio should reflect on the relationship between the supervisor and registrar.

Conclusion: A portfolio was developed and distributed to the eight departments of Family Medicine in South Africa, and the CMSA, to be further evaluated in implementation.

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Article 2: The national portfolio of learning for postgraduate family medicine training in South Africa: A descriptive study of acceptability, educational impact, and usefulness for assessment

Background: Since 2007 a portfolio of learning has become a requirement for assessment of postgraduate family medicine training by the Colleges of Medicine of South Africa. A uniform portfolio of learning was developed and its content and construct validity established among the eight postgraduate programmes. The aim of this study was to investigate the portfolio's acceptability, educational impact, and perceived usefulness for assessment of competence.

Methods: Two structured questionnaires of 35 closed and open-ended questions were delivered to 53 family physician supervisors and 48 registrars who had used the portfolio. Categorical and nominal/ordinal data were analysed using simple descriptive statistics. The open-ended questions were qualitatively analysed with ATLAS.ti software.

Results: Half of registrars did not find the portfolio clear, practical or feasible. Workshops on portfolio use, learning, and supervision were supported, and brief dedicated time daily for reflection and writing. Most supervisors felt the portfolio reflected an accurate picture of learning, but just over half of registrars agreed. While the portfolio helped

with reflection on learning, participants were less convinced about how it helped them plan further learning. Supervisors graded most rotations, which suggested an understanding of the summative aspects, while only 61% of registrars reflected on rotations, suggesting the formative aspects were not yet optimally utilised. Poor feedback, the need for protected academic time, and pressure of service delivery impacted negatively on learning.

Conclusion: This first introduction of a national portfolio for postgraduate training in family medicine in South Africa faced challenges similar to those in other countries. Acceptability of the portfolio related to a clear purpose and guide, flexible format with tools available in the workplace, and appreciating the changing educational environment from university-based to national assessments. In terms of educational impact and assessment, the role of the supervisor in direct observations of the registrar and dedicated educational meetings, giving feedback and support, cannot be overemphasized.

Publication: Jenkins et al. BMC Medical Education 2013, 13:101 <http://www.biomedcentral.com/1472-6920/13/101>

Article 3: The national portfolio of learning for postgraduate family medicine training in South Africa: Experiences of registrars and supervisors in clinical practice

Background: In South Africa the submission of a portfolio of learning has become a national requirement for assessment of family medicine training. A national portfolio has been developed, validated and implemented. The aim of this study was to explore registrars' and supervisors' experience regarding the portfolio's educational impact, acceptability, and perceived usefulness for assessment of competence.

Methods: Semi-structured interviews were conducted with 17 purposively selected registrars and supervisors from all eight South African training programmes.

Results: The portfolio primarily had an educational impact through making explicit the expectations of registrars and supervisors in the workplace. This impact was tempered by a lack of engagement in the process by registrars and supervisors who also lacked essential skills in reflection, feedback and assessment. The acceptability of the portfolio was

limited by service delivery demands, incongruence between the clinical context and educational requirements, design of the logbook and easy availability of the associated tools. The use of the portfolio for formative assessment was strongly supported and appreciated, but was not always happening and in some cases registrars had even organised peer assessment. Respondents were unclear as to how the portfolio would be used for summative assessment.

Conclusion: The learning portfolio had a significant educational impact in shaping work-place based supervision and training and providing formative assessment. Its acceptability and usefulness as a learning tool should increase over time as supervisors and registrars become more competent in its use. There is a need to clarify how it will be used in summative assessment.

Publication: Jenkins et al. BMC Medical Education 2013, 13:149 <http://www.biomedcentral.com/1472-6920/13/149>

Article 4: The reliability of a portfolio assessment tool for postgraduate family medicine training in South Africa

Background: Competency-based education and the validity and reliability of workplace-based assessment of postgraduate trainees has received increasing attention worldwide. Family medicine was recognised as a speciality in South Africa six years ago and a satisfactory portfolio of learning is a prerequisite to sit the national exit exam. A massive scaling up of the number of family physicians is needed in order to meet the health needs of the country. The aim of this study was to develop a reliable portfolio assessment tool (PAT) for South Africa.

Methods: Six raters each rated nine portfolios from the Stellenbosch University programme, using the PAT, to test for inter-rater reliability. This rating was repeated three months later to determine test–retest reliability. Following initial analysis of the ratings and feedback from the assessors the PAT was modified and the inter-rater reliability again assessed on nine new portfolios. An acceptable intra-class correlation was considered to be >0.80 .

Results: The total PAT score was found to be reliable, with a coefficient of 0.92. For test–retest reliability, the difference in mean total score was 1.7%, which was not statistically significant. Amongst the subsections, only assessment of the educational meetings and the logbook showed reliability coefficients >0.80 .

Conclusion: This was the first attempt to develop a reliable national PAT to assess postgraduate family medicine training in the South African context. The tool was reliable for the total score, but the low reliability of several sections in the PAT helped us to develop 12 further recommendations regarding the use of the portfolio, the design of the PAT and training of raters.

Publication: Jenkins L, Mash B, Derese A. Reliability testing of a portfolio assessment tool for postgraduate family medicine training in South Africa. *Afr J Prm Health Care Fam Med.* 2013;5(1), Art. #577, 9 pages. <http://dx.doi.org/10.4102/phcfm.v5i1.577>

Guiding the Development of Family Medicine Training in Africa Through Collaboration With the Medical Education Partnership Initiative

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Abstract: Africa's health care challenges include a high burden of disease, low life expectancy, health workforce shortages, and varying degrees of commitment to primary health care on the part of policy makers and government officials. One overarching goal of the Medical Education Partnership Initiative (MEPI) is to develop models of medical education in Sub-Saharan Africa. To do this, MEPI has created a network of universities and other institutions that, among other things, recognizes the importance of supporting training programs in family medicine. This article provides a framework for assessing the stage of the development of family

medicine training in Africa, including the challenges that were encountered and how educational organizations can help to address them. A modified "stages of change" model (pre-contemplation, contemplation, action, maintenance, and relapse) was used as a conceptual framework to understand the various phases that countries go through in developing family medicine in the public sector and to determine the type of assistance that is useful at each phase.

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Theatre procedures performed at Knysna Hospital in the Eden district of the Western Cape and their application to post graduate training of Family Physicians

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Background: Family physicians are trained to enable them to work at community health centres and district hospitals. Part of this training is teaching them procedural skills for anaesthetics and surgery. Knysna district hospital is a typical rural training facility for family medicine registrars and this study aimed to evaluate if sufficient learning opportunities existed in Knysna hospital's theatre to teach family medicine registrars the necessary procedural skills.

Methods: A descriptive study was undertaken of the number and type of procedures performed in Knysna hospital theatre for a one year period, and compared with the required skills, as stipulated in the national training outcomes for the discipline.

Results: A total of 3741 surgical and anaesthetic procedures were done. One hundred and twenty six different procedures were recorded with the frequency varying from 1 to 1202 per year. Anaesthesia was the most common procedure, followed by caesarean section. There were adequate opportunities for teaching the core skills. Forty seven core skills were performed in theatre. Seventeen procedures did not have sufficient learning opportunities.

Conclusions

There were sufficient opportunities for a registrar to be taught all the core skills that are relevant to anaesthetics and surgery.

Development of family medicine training in Botswana: Views of key stakeholders in Ngamiland

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Introduction: Family Medicine training as a specialty commenced in Botswana in January 2011 and Maun is one of the two sites chosen as training complexes. The success of the programme depends on the support and engagement of key stake holders in health care delivery in the district. Understanding stakeholder opinions, priorities and attitudes towards Family Medicine training will help to build a more successful programme and a supportive environment.

Aim: To explore the opinion of stake holders in health care delivery on the future of family medicine and their attitude to family medicine training in the Ngami district, Botswana.

Methods: Thirteen in depth interviews were conducted with purposively selected key role players in the district health services. Data was recorded, transcribed and analysed using the framework method.

Results: Participants welcomed the development of family medicine training in Maun and expected that this will result in improved quality of primary care. Participants expected the registrars and family physicians to provide holistic health care, relevant and acceptable research into the health needs of the community, basic specialized care and, that their introduction should result in reduced need for referrals. Inadequate personal welfare facilities, erratic ancillary support services and inadequate complement of mentors and supervisors for the programme were some of the gaps and challenges highlighted by participants.

Conclusion: Family medicine training is welcomed by stakeholders in Ngamiland. With proper planning, introduction of the family physician in the district is expected to result in improvement of primary care.

‘Going rural’: Driving change through a rural medical education innovation

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Introduction: The training of practitioners for practice in rural communities was identified as an educational priority, and led to the establishment of a rural clinical school (RCS) within a Faculty of Medicine and Health Sciences in South Africa in 2011. This article describes the students’ experiences in the first year that this innovative educational model was implemented and explores the extent to which it influenced their thinking and practice.

Methods: A qualitative, formative evaluation study of the first year of implementation was undertaken. Data was generated from in-depth interviews. This article focuses on individual interviews conducted with the eight students at the RCS, which explored their experiences during a year-long clerkship. Transcripts of interviews were thematically analysed.

Results: Four themes emerged from the analysis: a learning experience that differed from what was experienced at the tertiary training hospital, an enabling clinical environment in the district and

regional hospital, the positive role played by the specialists, and the influence of the community immersion. Underlying all of the responses was the building of relationships over time both with supervisors and with patients. Evident from the responses was that students’ confidence in their clinical skills and decision-making abilities was heightened while their approaches to their own learning were enhanced.

Conclusions: To respond to the call for educational reform and a heightened awareness of social realities, innovative approaches to the training of medical students, such as those adopted at the RCS, are indicated. It is argued that the learning facilitated by these rural medical education models has the potential to offer learning experiences that can lead to transformation through a change in practice and attitude among the students, and ultimately also enable curricular renewal at the institutional core.

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'I felt colonised': Emerging clinical teachers on a new rural teaching platform

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Introduction: Studies that investigate the impact of long-term rural exposure for undergraduate medical students often focus largely on students' experiences and perspectives. Research focusing on the physician experience in clinical exposures appears to be limited. When the Ukwanda Rural Clinical School (RCS) at the Faculty of Medicine and Health Sciences, Stellenbosch University, South Africa was implemented in 2011, the clinical specialists working at the rural hospitals were expected to take on the additional task of teaching the students in the year-long rotation. The specialists were prepared for the task through a series of workshops. The objective of this study was to explore what the implementation of the RCS meant for the practice of these physicians and to what extent the shift from full-time practising clinician to clinical teacher required them to adapt and change.

Methods: This was a qualitative study. Semi-structured interviews were conducted with lead clinical specialists who were responsible for teaching medical students in the year-long RCS rotation. Following an interpretive approach, thematic content analysis was performed to obtain

a clearer understanding of how these clinicians had experienced their first year as clinical teachers in the RCS.

Results: Four overarching themes were identified from the interviews with the clinicians: attitudes towards the implementation of the new medical education model, uncertainty and insecurity as a teacher, emergence of the clinician teacher, and a sense of responsibility for training a future colleague. These depict in part, the journey from clinician to clinician teacher travelled during the first year of implementation.

Conclusions: Embracing the role of clinical teacher enabled the development of constructive relationships between clinicians and their students with a mutual sense of responsibility for learning, patient care and improvement in clinical practice. Understanding this journey ought to influence the thinking of those considering faculty development initiatives for novice clinical teachers.

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PIQUE-ing an interest in curriculum renewal

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Background: The primary aim of undergraduate medical training at South African medical schools is to prepare the graduates adequately for internship. If we are to attain this objective, it is crucial to evaluate the ability of our graduates to cope with the demands of internship.

Objective: To determine the extent to which first-year interns from Stellenbosch University (SU) considered that their undergraduate education prepared them for internship.

Methods: The Preparedness for Internship Questionnaire (PIQUE) is based on Hill's Preparation for Hospital Practice Questionnaire, with additional questions covering core competencies and exit outcomes that SU has determined for its medical curriculum. Participants were asked to respond to a series of statements preceded by 'My undergraduate medical training prepared me to ...', and also two

open-ended questions. SU's MB ChB graduates of 2011 (N=153) were invited to participate in the online survey.

Results: Although the response rate was only 37%, graduates generally thought they had been well prepared for most mainstream clinical activities. However, there were areas in which respondents considered they could have been better prepared, specifically pharmacology, medicolegal work, minor surgery and the non-clinical roles that interns encounter.

Conclusion: PIQUE appears to be a useful tool that can assist with curriculum renewal by highlighting areas that graduates feel they could be better prepared for. This challenges us to identify how curricula and teaching can be adjusted accordingly.

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Equipping family physician trainees as teachers: A qualitative evaluation of a twelve-week module on teaching and learning

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Background: Family physicians, as skilled all-rounders at district level, are potentially well placed to contribute to an extended training platform in this context. To play this role, they need to both have an understanding of their specialist role that incorporates teaching and be equipped for their role as trainers of current and future health workers and specialists. A teaching and learning capacity-building module was introduced into a new master's programme in family medicine at Stellenbosch University, South Africa. We report on the influence of this module on graduates after the first six years.

Methods: A qualitative study was undertaken, interviewing thirteen graduates of the programme. Thematic analysis of data was done by a team comprising tutors and graduates of the programme and an independent researcher. Ethical clearance was obtained.

Results: The module influenced knowledge, skills and attitudes of respondents. Perceptions and evidence of changes in behaviour, changes in practice beyond the individual respondent and benefits to students

and patients were apparent. Factors underlying these changes included the role of context and the role of personal factors. Contextual factors included clinical workload and opportunity pressure i.e., the pressure and responsibility to undertake teaching. Personal factors comprised self-confidence, modified attitudes and perceptions towards the roles of a family physician and towards learning and teaching, in addition to the acquisition of knowledge and skills in teaching and learning. The interaction between opportunity pressure and self-confidence influenced the application of what was learned about teaching.

Conclusions: A module on teaching and learning influenced graduates' perceptions of, and self-reported behaviour relating to, teaching as practicing family physicians. This has important implications for educating family physicians in and for Africa and indirectly on expanding capacity to educate health care professionals in Africa.

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Series on Primary Care Research Methods in the African Journal of Family Medicine and Primary Care

Following on from a regional conference on African primary care research:

- Mash R, Essuman A, Ratansi R, et al. African Primary Care Research: Current situation, priorities and capacity building. *Afr J Prm Health Care Fam Med.* 2014; 6(1), Art. #758, 6 pages. <http://dx.doi.org/10.4102/phcfm.v6i1.758>

A series of 10 articles was published on primary care research methods:

1. Mash B. African Primary Care Research: Choosing a topic and developing a proposal. *African Journal of Primary Health Care & Family Medicine* 2014; 6(1): doi:10.4102/phcfm.v6i1.580.
2. Ross A, Mash B. African primary care research: Reviewing the literature. *African Journal of Primary Health Care & Family Medicine* 2014; 6(1) : doi:10.4102/phcfm.v6i1.584.
3. Couper I, Mash B. African Primary Care Research: Writing a research report. *African Journal of Primary Health Care & Family Medicine* 2014; 6(1): doi.10.4102/phcfm.v6i1.639.
4. Govender I, Mabuza H, Ogunbanjo G, Mash B. African primary care research: performing surveys using questionnaires. *African Journal of Primary Health Care & Family Medicine* 2014; 6(1): doi:10.4102/phcfm.v6/1.580.
5. Mash B, Ogunbanjo Ga. African Primary Care Research: Quantitative analysis and presentation of results. *African Journal of Primary Health Care & Family Medicine* 2014; 6(1) : doi:10.4102/phcfm.v6i1.646.
6. Reid S J, Mash B. African Primary Care Research: Qualitative interviewing in primary care. *African Journal of Primary Health Care & Family Medicine* 2014; 6(1) : doi:10.4102/phcfm.v6i1.632.
7. Mabuza H, Govender I, Ogunbanjo G, Mash B. African Primary Care Research: Qualitative data analysis and writing results. *African Journal of Primary Health Care & Family Medicine* 2014; 6(1): doi.10.4102/pccfm.v6i1.640.
8. Mash B. African primary care research: participatory action research. *African Journal of Primary Health Care & Family Medicine* 2014; 6(1): doi.10.4102/phcfm.v6i1.585.
9. Van Deventer C, Mash B. African primary care research: quality improvement cycles. *African Journal of Primary Health Care & Family Medicine* 2014; 6(1) : doi.10.4102/phcfm.v6i1.598.
10. Dudley L. African Primary Care Research: Performing a programme evaluation. *Afr J Prm Health Care Fam Med.* 2014;6(1), Art. #634, 6 pages. <http://dx.doi.org/10.4102/phcfm.v6i1.634>



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