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ABSTRACT BOOK

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Contents

A1 Updating the medicines benefits package in Sudan: An evidence-based approach

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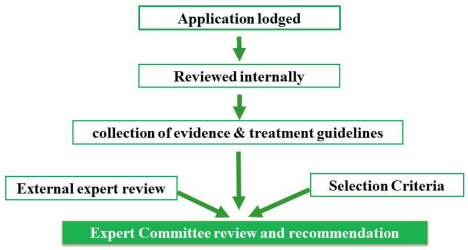
BACKGROUND

Medicines are an important component of the health benefits packages in the National Health Insurance Fund (NHIF) in Sudan. NHIF adopts a restrictive medicines benefit package as a tool to set priorities and rationalise pharmaceutical expenditures. The challenge, given limited resources, is deciding what medicines to include in the benefit package to achieve maximum health status equitably. Objective: to describe the process of updating the medicines benefit package currently used by the national publicly funded insurance plans.

METHODS

NHIF started the process of reviewing and updating the previous medicines benefit package (2014 - 2016) in March 2017. A call for applications for inclusion, change or deletion of medicines was open for three months. The applications were reviewed and assessed by an internal committee. An evidence-based approach was used to aid the decision regarding the inclusion or exclusion of medicines. Best-available evidence (National treatment guidelines and protocols, systematic reviews, research articles, grey literature and expert knowledge) was collected and summarised for each medicine. The final decisions were taken using the synthesised evidence in the meeting of the expert committee who represented a wide range of geographical and professional backgrounds (picture 1). Figure 1 summarises the updating process.

Figure 1: Process for updating NHIF Medicines List



RESULTS

Out of 113 medicines, 75(66.4%) were suggested to be included in the medicines benefit package. Table 1 shows the pharmacological classes of the additional medicines. Only five medicines were deleted from the previous list. As a result of the updating process, a new medicine benefit package of 690 items was launched in February 2018.

Table 1. Classification of the additional medicines by pharmacological class.

No.	Pharmacological Class	Number of added medicines
1	Anti-bacterials	10
2	Antivirals	3
3	Analgesics, antipyretics, NSAIDs, medicines used to treat gout and disease modifying agents in rheumatoid disorders	7
4	Hormones and endocrine agents	7
5	Cardiovascular medicines	13
6	Immunologicals	1
7	Dermatological medicines	4
8	Gastrointestinal medicines	3
9	Nervous system & psychotropic agents	13
10	Medicines acting on respiratory tract	3
11	Medicines acting on sensory organs	3
12	Miscellaneous	8
	Total	75

CONCLUSION
This multistage process minimised the selection of medicines with weak or lacking evidence concerning their efficacy, safety and/or cost-effectiveness. However, the local evidence was insufficient to be consulted regarding many medicines.

A2 Analysis of alcohol policies in Nigeria

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BACKGROUND
Alcohol is one of the modifiable risk factors linked with non-communicable diseases (NCDs), and primary prevention strategies are key to tackling these factors. A number of health policies have been developed in Nigeria targeting alcohol prevention. This paper describes alcohol-related policies in Nigeria, the extent of the multi-sectoral approach (MSA) in NCD policy formulation and implementation of population interventions and the 'best buys'.

METHODS
This research study adopted a descriptive case-study design and the guiding framework was the Walt and Gilson framework of policy analysis. The study adopted a mixed-methods approach comprising a scoping review of 14 policy documents or articles relevant to the policy formulation process and in-depth interviews of 44 key informants (Bureaucrats and Policy Makers) that either participated or should have participated in the policy process using pre-tested guides. Data generated were integrated and analysed using NVIVO version 10.

RESULTS
There is currently no stand-alone, comprehensive policy or Act to regulate the marketing, advertising and availability of alcohol as well as the activities of the alcohol industry. Furthermore, only one of the four 'best-buy interventions' (restricted access to alcohol) is proposed in existing policies. The extent of the MSA for the formulation of alcohol policies is low as several relevant sectors were excluded. A major barrier to alcohol NCD policy development is the low and non-existent government budgetary allocation to support the process.

CONCLUSION
In light of the weak policy on alcohol, innovative interventions are urgently needed if Nigeria is to avert the consequences of harmful alcohol use.

A3 Can Grade Evidence-to-Decision (EtD) Framework support decision making in quality improvement programmes? Experiences from a collaborative quality improvement project to reduce missed opportunities for vaccination in Kano, Nigeria

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BACKGROUND

In Nigeria, many children who are eligible for vaccination make contact with health services and still fail to receive the vaccines and vaccine doses that they require. This is referred to as missed opportunities for vaccination (MOV). Given the complexity of this quality problem, we seek to address it using quality improvement (QI) methodology. QI has emerged as a useful approach for instituting change within complex health systems as it enables implementation of multifaceted interventions that target multiple stakeholders concurrently. Health workers engaged in quality improvement generate change ideas (interventions) that are implemented in health facilities to achieve desired outcomes. However, QI teams may not always consider some critical factors that are necessary for health decision making, including available empirical evidence. Therefore, in this study, we tested the applicability of the GRADE Evidence to Decision (EtD) framework for health systems and public health in a QI project in primary healthcare facilities to reduce MOV in Nassarawa Local Government Area (LGA).

METHODS

An iterative approach that included brainstorming, nominal group technique, structured discussion and multi voting was used. Existing reviews of interventions that can reduce MOV, were shared with the teams and the pros and cons of each intervention were discussed. Then QI teams brainstormed on change ideas that are 'fit' for their context. Individually, team members identified and recommended change ideas. These change ideas were compiled and grouped into three as follows; ideas targeting caregivers, ideas targeting health workers, and ideas targeting health systems. Ideas were ranked and selected through discussion, and judgement regarding selected change ideas were systematically guided by the assessment criteria of the framework.

RESULTS

Each of the five facilities were represented by five QI team members (total of 25). In addition, four LGA and zonal immunisation stakeholders were also in attendance. QI teams and stakeholders served as a panel. Change ideas (interventions), some of which are *de novo*, that target caregivers, health workers and the health systems were generated. The QI teams made a conditional recommendation for a group of tailored change ideas (interventions) that are context-specific. It was agreed that ideas will be tested using two Plan-Do-Study-Act (PDSA) cycles with ongoing monitoring and evaluation.

CONCLUSION

The GRADE Evidence to Decision (EtD) framework for health systems and public health facilitated evidence-informed decisions in a systematic manner among health practitioners involved in a QI project to reduce MOV. It also enabled the identification of research priorities.

A4 The burden of vaccine-preventable diseases among HIV-infected and HIV-exposed children: A systematic review and meta-analysis

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BACKGROUND
There are knowledge gaps regarding evidence-based research on the burden of vaccine-preventable diseases among human immunodeficiency virus (HIV)-infected and HIV-exposed children aged <18years in sub-Saharan Africa. It is therefore essential to determine the trend and current burden of vaccine-preventable disease epidemiology.

METHODS
We completed a systematic review of the literature and a meta-analysis to identify the incidence, prevalence and case-fatality rates (CFR) attributed to various vaccine-preventable diseases among HIV-infected and HIV-exposed children in sub-Saharan Africa. The trends in the prevalence of vaccine-preventable diseases among HIV-infected and HIV-exposed children were also determined.

RESULTS
Nine studies on tuberculosis (TB) were pooled to give an overall incidence rate estimate of 60 (95% confidence interval [CI] 30 – 70) per 1,000 child years. The incidence of pneumococcal infections varied between 109-1509 per 100,000 while pertussis was between 2.9 and 3.7 per 1000 child-year. Twenty-two TB prevalence studies reported an estimated prevalence of 16%. Fifteen prevalence studies on hepatitis B infection were pooled together with an estimated prevalence of 5%. The pooled prevalence for pneumococcal infections was 2% while rotavirus diarrhoea reported a prevalence of 13%. Twenty-nine studies on TB were pooled to give an overall case-fatality rate estimate of 17% while pneumococcal infections in HIV-infected and exposed children were pooled together with a resultant rate of 15%.

CONCLUSION
Some of the vaccine-preventable diseases still have high incidences, prevalence and CFR among HIV-infected and HIV-exposed children in sub-Saharan Africa. There is also a dearth of research data on the burden of several vaccine-preventable diseases among HIV-infected and exposed children and a need for more studies in this area.

A5 Health systems constraints and facilitators of human papillomavirus immunisation programmes in sub-Saharan Africa: A systematic review

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BACKGROUND
Given the vast investments made in national immunisation programmes (NIPs) and the significance of NIPs to public health, it is important to understand what influences the optimal performance of NIPs. It has been established that well-performing NIPs require enabling health systems. However, systematic evidence on how the performance of health systems impacts on NIPs is lacking, especially from sub-Saharan Africa.

METHODS
We conducted a qualitative systematic review to synthesise the available evidence on health systems constraints and facilitators of NIPs in sub-Saharan Africa, using human papillomavirus (HPV) immunisation programmes as a proxy. A qualitative systematic review study was adopted because of its value to the comprehensive assessment of complex real-world phenomena rooted in experiences and perceptions which cannot be measured through standard quantitative approaches. Fifty-four articles published between 2008 and 2018 were found to be eligible. Data extraction was guided by a logic model on the interface between NIPs and health systems. A cross-cutting thematic analysis of the extracted data was performed.

RESULTS
The findings of this review suggest that NIPs in sub-Saharan Africa have surmounted significant health systems constraints and have achieved notable public health success. This success can be attributed to strong political endorsement for vaccines, clear governance structures and effective collaboration with global partners. Despite this, significant health systems constraints persist in service delivery, vaccine communication, community engagement, the capacity of the health workforce and sustainable financing. These constraints could derail further progress if not addressed through health systems strengthening efforts.

CONCLUSION
The findings of this review have relevance for ongoing health systems strengthening initiatives in sub-Saharan Africa, especially where NIPs are concerned. By providing a better understanding of what works – and does not work – for NIPs, health systems strengthening initiatives could be better designed to adequately respond to the burden of vaccine-preventable diseases in sub-Saharan Africa.

A6 Primary antifungal prophylaxis for cryptococcal disease in HIV-positive people

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BACKGROUND

Cryptococcal disease remains one of the main causes of death in HIV-positive people who have a low cluster of differentiation 4 (CD4) cell counts. Currently, the World Health Organization (WHO) recommends screening HIV-positive people with low CD4 counts for cryptococcal antigenaemia (CrAg) and treating those who are CrAg-positive. This Cochrane Review examined the effects of an approach where those with low CD4 counts received regular prophylactic antifungals, such as fluconazole. Objective: To assess the efficacy and safety of antifungal drugs for the primary prevention of cryptococcal disease in adults and children who are HIV positive.

METHODS

Search methods: We searched the CENTRAL, MEDLINE PubMed, Embase OVID, CINAHL EBSCOHost, WHO International Clinical Trials Registry Platform (WHO ICTRP), ClinicalTrials.gov, conference proceedings for the International AIDS Society (IAS) and Conference on Retroviruses and Opportunistic Infections (CROI), and reference lists of relevant articles up to 31 August 2017.Selection criteria: Randomised-controlled trials of adults and children, who are HIV positive with low CD4 counts, without a current or prior diagnosis of cryptococcal disease that compared any antifungal drug taken as primary prophylaxis to placebo or standard care. Data collection and analysis: Two review authors independently assessed eligibility and risk of bias, and extracted and analysed data. The primary outcome was all-cause mortality. We summarised all outcomes using risk ratios (RR) with 95% confidence intervals (CI). Where appropriate, we pooled data in meta-analyses. We assessed the certainty of the evidence using the GRADE approach.

RESULTS

Nine trials, enrolling 5426 participants, met the inclusion criteria of this review. Six trials administered fluconazole, while three trials administered itraconazole. Antifungal prophylaxis may make little or no difference to all-cause mortality (RR 1.07, 95% CI 0.80 to 1.43; 6 trials, 3220 participants; low-certainty evidence). For cryptococcal specific outcomes, prophylaxis probably reduces the risk of developing cryptococcal disease (RR 0.29, 95% CI 0.17 to 0.49; 7 trials, 5000 participants; moderate-certainty evidence), and probably reduces deaths due to cryptococcal disease (RR 0.29, 95% CI 0.11 to 0.72; 5 trials, 3813 participants; moderate-certainty evidence). Fluconazole prophylaxis may make no clear difference to the risk of developing clinically resistant Candida disease (RR 0.93, 95% CI 0.56 to 1.56; 3 trials, 1198 participants; low-certainty evidence); however, there may be an increased detection of fluconazole-resistant Candida isolates from surveillance cultures (RR 1.25, 95% CI 1.00 to 1.55; 3 trials, 539 participants; low-certainty evidence). Antifungal prophylaxis was generally well-tolerated with probably no clear difference in the risk of discontinuation of antifungal prophylaxis compared with placebo (RR 1.01, 95% CI 0.91 to 1.13; 4 trials, 2317 participants; moderate-certainty evidence). Antifungal prophylaxis may also make no difference to the risk of having any adverse event (RR 1.07, 95% CI 0.88 to 1.30; 4 trials, 2317 participants; low-certainty evidence), or a serious adverse event (RR 1.08, 95% CI 0.83 to 1.41; 4 trials, 888 participants; low-certainty evidence) when compared to placebo or standard care.

CONCLUSION
Antifungal prophylaxis reduced the risk of developing and dying from cryptococcal disease. Therefore, where CrAG screening is not available, antifungal prophylaxis may be used in patients with low CD4 counts at diagnosis and who are at risk of developing cryptococcal disease.

A7 Towards resilient health systems in sub-Saharan Africa: A systematic review of the English language literature on health workforce, surveillance and health governance issues for health systems strengthening

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BACKGROUND
In the wake of any health threat, the strength of the health system at the national and international levels is often tested. The World Health Organization (WHO) defines health system as all organisations, people and actions whose primary intent is to promote, restore, or maintain health. As put forward by Heymann et al. (2016) in a *Lancet* publication, there is a need to pay attention to addressing health system challenges to address health security capacity at both the national and global level. Many debates and disagreements surround what the precise definition of health security is, despite the universal acceptance of health security as an important public health issue that requires close attention. This systematic review examined existing English language literature on health workforce, surveillance and governance capacity for health system strengthening in the sub-Saharan African region. The review addressed the research question: how can health systems in sub-Saharan Africa be resilient, looking at the role that health workforce, surveillance systems, and governance play in the strengthening of health systems in sub-Saharan Africa.

METHODS
Our search strategy was informed by three out of the six core elements of WHO building blocks of health systems; health workforce, health information systems and leadership and governance. The following keywords were used in the search: health workforce, surveillance system, health governance, health system strengthening, resilient health system, and sub-Saharan Africa. All possible synonyms were generated for the main key words and included in the search. We searched PubMed, Science Direct, Cochrane library, CINAHL, Web of Science, EMBASE, EBSCO, Google scholar, and WHO depository library databases for English-speaking publications between January 2007 and February 2017. The electronic searches for selected articles were supplemented by manual reference screening. Guidelines by *Lancet* and the Preferred Reporting Items for Systematic reviews and Meta-Analyses were followed in undertaking and reporting review findings. Only English-language literature on the review aim was retrieved and reviewed.

RESULTS
In applying our inclusion and exclusion criterion, 31 English language publications in SSA countries qualified for full review. A well-trained monitoring and evaluation workforce is also critical to providing a culture of continuous assessment of key health indicators at points of service delivery. Health information officers' ability to acquire and apply knowledge on cost-effective monitoring and evaluation methodologies can enhance front-line health workers' ability to collect, analyse and interpret data for quality reporting on health indices. This review identified the need for health systems to generate reliable and timely data on health workforce gaps useful in making timely decisions regarding human resource capacity requirements to address unmet health service demands in SSA. A mix of strategies and interventions are required. Task shifting, performance-based payments and results-based financing as strategies for improving skilled health professional numbers have been sparsely piloted in Rwanda, the Democratic Republic of Congo, South Africa and Kenya.

Different models for attracting, recruiting, training and retaining critical health workforce must be tested at country levels. Regarding surveillance needs, this review found the need for investments that will build robust epidemiologic systems to anticipate future threats in the health system. The findings from this review point to the need to initiate or strengthen public-private arrangements that can support building country-level capacities and laboratory infrastructure to improve disease surveillance, diagnosis and treatment.

CONCLUSION

This review re-emphasised the role of an effective cadre of health workforce, good investments in surveillance for decision making and strong governance in health as critical for the success of every health system. A health system that trains a cadre of health professionals on the job, reduced health workforce attrition levels and building local capacity for healthcare workers to apply innovative mHealth technologies in delivering services can improve health worker motivation and support for the health sector. Building novel surveillance systems can improve clinical care and improve health system preparedness for health threats. Strong health leadership can help deliver financial and logistical capacity for health services. Good health governance processes support the identification of cost-effective interventions, builds strong partnerships and creates accountability mechanisms for strengthening health systems in SSA. Health systems in SSA can be made resilient against any future health threats if a skilled and retained workforce, surveillance and governance capacities are improved at country levels in addition to other essential health systems strengthening elements espoused by WHO.

A8 Performance of health systems in sub-Saharan Africa: Review of hospital efficiency measurements

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BACKGROUND

The provision of healthcare services is a major responsibility of various components in the healthcare system. Reports have shown that the sub-Saharan Africa region bears most of the global disease burden. Consequently, interest should be directed towards evaluating the components of the health systems which is largely the health facilities. Thus, this review aims to investigate the performance of health systems in sub-Saharan Africa with a focus on health facilities efficiency measurements.

METHODS

The review was conducted through a comprehensive search approach involving electronic database such as PubMed, Cochrane Library, EBSCOhost, Science Direct, Medline and Google scholar. Searches were also conducted through looking into citations in the reference lists of included articles and manually. Studies were screened based on some stated inclusion and exclusion criteria through examining their titles and abstracts. The reference management database (Endnote version X9) was used in managing the identified articles. The concurrent screening and data extraction were conducted by two reviewers. A standardised tool was used to evaluate the validity and quality evaluation of the selected articles.

RESULTS

We anticipated finding relevant studies investigating the efficiency of health facilities in sub-Saharan Africa. All relevant articles have been identified and abstract screening has been concluded. Concurrent full-article screening and data extraction are currently been conducted for selected studies. The data are being extracted from the selected studies using a google form developed by the reviewers and Nvivo qualitative analytical software version 12. Review outcomes and a full report are expected to be concluded by January 2019.

CONCLUSION
Evidence and information retrieved from the selected studies will be useful in guiding future health system efficiency studies. The protocol for the systematic review has been registered in PROSPERO (CRD42017072961). The study findings will be disseminated electronically and in print.

A9 How visible is rehabilitation in the Cochrane Africa Network?

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BACKGROUND
Rehabilitation plays a key role in achieving Sustainable Development Goal (SDG) 3, "ensure healthy lives and promote well-being for all at all ages". The World Health Organization's Rehabilitation 2030 meeting highlighted the increasing demand and lack of capacity to provide rehabilitation services particularly in low- and middle-income countries (LMIC). Considering that this includes almost all countries in Africa, rehabilitation should be a priority within the Cochrane Africa Network. The aims of this presentation are to:1) raise awareness about the key concerns documented at the Rehabilitation 2030 meeting that fall within the remit of Cochrane Africa;2) outline the involvement of Cochrane Africa in rehabilitation-related research activities; and,3) identify how Cochrane Africa could support rehabilitation-related research.

METHODS
Documents related to the Rehabilitation 2030 meeting were scanned and items aligning with the work of Cochrane Africa were identified. To gauge the current involvement of Cochrane Africa in rehabilitation, poster presentations at previous African Cochrane meetings, and relevant websites will be scanned.

RESULTS
Rehabilitation 2030 areas for action that align with the goals of Cochrane Africa include developing research capacity, broadening the availability of evidence for rehabilitation, and building and strengthening networks in rehabilitation. Projects in the field of rehabilitation undertaken within Cochrane Africa will be reported.

CONCLUSION
A stronger focus on rehabilitation-related topics within Cochrane Africa will facilitate the production of robust evidence to support rehabilitation. Existing networks of rehabilitation professionals could be targeted to increase their involvement in the Cochrane Africa Network.

A10 Maternal and newborn healthcare programme implementation and integration by maternal community health workers, Africa: An integrative review

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BACKGROUND

Saving the lives of neonates should be a significant health outcome in any maternal and newborn health programme implemented. Furthermore, about half a million mothers die from pregnancy-related causes. Maternal and newborn deaths related to the period of postnatal care are neglected. Some authors emphasise that in developing countries newborn mortality rates have been reduced much more slowly because of the lack of many necessary facility-based and outreach services. The aim of this review was to critically analyse the implementation and integration process of the maternal and newborn health care programme by maternal community health workers into healthcare systems in Africa.

METHODS

An integrative review method was used. These reviews can shift to the positivist ideas and be complementary to interpretive methods paradigm. Further, the interventions to reduce maternal and newborn mortality. The database searched was from Health source: Nursing/Academic Edition through Academic search complete via EBSCO Host. Data extracted from the reviewed articles included quantitative, qualitative and mixed-methods approaches.

Synthesis methods in an integrative review followed elements of noting patterns and themes, seeing plausibility, clustering, counting, making contrasts and comparisons, discerning commons and unusual patterns, subsuming particulars into general, noting relations between variability, finding intervening factors and building a logical chain of evidence, using database convergent synthesis design.

RESULTS

From the 17 studies included, results focused on three dimensions inspired by literature on antenatal, delivery and postnatal interventions. The review revealed that the implementation and integration of a maternal and newborn health-care programme requires planning.

CONCLUSION

Integrative review provides information for policy makers, programme managers, funders, evaluators, educators, and health providers to be involved in implementation and integration of maternal and newborn health care programmes in updated policy and community-based interventions.

A11 All-cause and cause-specific mortality in psoriasis: A systematic review and meta-analysis

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BACKGROUND
Psoriasis patients have higher rates of comorbidities compared with the general population. However, an overview of mortality risk associated with psoriasis is lacking. We performed a systematic review and meta-analysis of mortality risk in psoriasis.

METHODS
On 17 July 2018, we searched PubMed, EMBASE, the Cochrane Library, and references of articles. We included studies reporting all-cause or cause-specific mortality risk estimates in psoriasis patients compared with general population or subjects free of psoriasis. We calculated pooled relative risks (RRs) and 95% confidence intervals (CIs) using a random-effects model.

RESULTS
We included 12 studies. The pooled RRs for all-cause mortality were 1.21 (95% CI 1.14-1.28) in psoriasis, 1.13 (95% CI 1.09-1.16) in mild psoriasis, and 1.52 (95% CI 1.35-1.72) in severe psoriasis (Figure 1). The pooled RRs for cardiovascular mortality were 1.15 (95% CI 1.09-1.21) in psoriasis, 1.05 (95% CI 0.92-1.20) in mild psoriasis, and 1.38 (95% CI 1.09-1.74) in severe psoriasis (Table 1). For non-cardiovascular causes, mortality risk from liver disease, kidney disease, and infection was significantly increased in psoriasis, regardless of disease severity. The mortality risk from liver and kidney disease was the highest. There was also significantly increased mortality risk from neoplasms in severe psoriasis patients and from chronic lower respiratory disease in all and mild psoriasis patients. In sensitivity analyses, the pooled estimates remained significant. Egger's test showed no evidence of publication bias (p>0.05). For study quality, we judged seven studies to be at low risk of bias, four studies to be at medium risk of bias, and one study to be at high risk of bias.

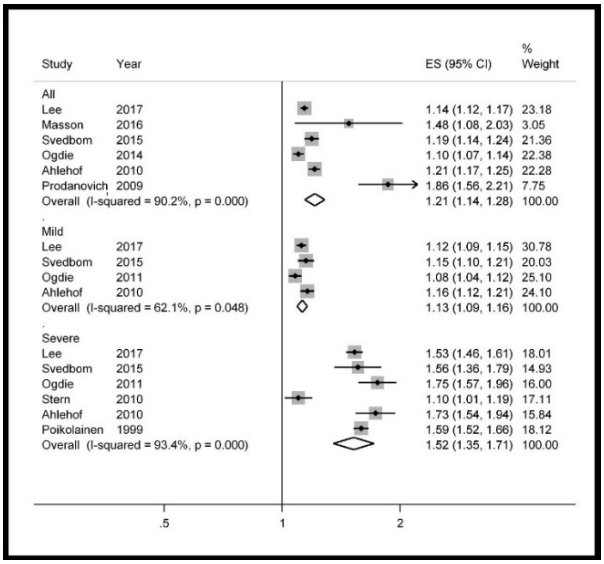

Figure 1. Forest plot for all-cause mortality in all, mild, and severe psoriasis patients

Table 1. Meta-analysis for cause-specific mortality for all, mild, and severe psoriasis

Cause	No. of studies	RR (95% CI)	I^2 (%)	$P_{heterogeneity}$
Cardiovascular				
All	5	1.15 (1.09-1.21)	65.9	0.02
Mild	3	1.05 (0.92-1.20)	90.3	<0.001
Severe	4	1.38 (1.09-1.74)	91.0	<0.001
Kidney				
All	1	2.16 (1.37-3.40)	-	-
Mild	1	2.20 (1.36-3.56)	-	-
Severe	2	3.54 (1.73-7.26)	17.1	0.27
Renal failure				
Severe	1	1.25 (0.50-2.58)	-	-
Liver				
All	1	2.00 (1.34-2.99)	-	-
Mild	1	4.26 (1.87-9.73)	-	-
Severe	3	3.97 (2.87-5.50)	0.0	0.73
Respiratory				
All	1	1.09 (0.98-1.19)	-	-
Severe	1	0.79 (0.50-1.19)	-	-
Chronic lower respiratory disease				
All	1	1.29 (1.02-1.63)	-	-
Mild	1	1.36 (1.07-1.74)	-	-
Severe	2	1.24 (0.40-3.79)	80.0	0.03
Infection				
All	2	1.24 (1.14-1.31)	12.1	0.29
Mild	1	1.41 (1.11-1.79)	-	-
Severe	2	1.58 (1.22-2.05)	0.0	0.39
Sepsis				
Severe	1	1.56 (0.63-3.21)	-	-
Malignancy				
All	1	1.03 (0.98-1.08)	-	-
Severe	2	1.18 (0.86-1.61)	74.1	0.05
Neoplasms				
All	1	1.05 (0.97-1.15)	-	-
Mild	1	1.02 (0.93–1.12)	-	-
Severe	1	1.32 (1.03–1.69)	-	-

RR=relative risk, CI=confidence interval.

CONCLUSION

Psoriasis is associated with increased mortality from all-causes in a dose-response manner with disease severity and from several specific causes. Psoriasis patients, particularly those with risk factors and severe disease, should receive appropriate screening and preventative interventions.

A12 Surgical portosystemic shunts versus devascularisation procedures for prevention of variceal rebleeding in people with hepatosplenic schistosomiasis

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BACKGROUND
Africa harbours over 90% of people infected with schistosomiasis worldwide. This disease entity could be complicated by variceal bleeding that is fatal. Surgical decompression (either shunts or devascularisation) is a treatment option to prevent recurrence following an acute bleed. However, it is not clear which intervention has an overall benefit.

METHODS
Systematic review of randomised clinical trials (RCT) of surgical shunts versus devascularisation for prevention of variceal rebleeding in people with hepatosplenic schistosomiasis. The review was conducted in accordance with the Cochrane Collaboration guidelines.

RESULTS
We found two RCTs including 154 adult participants, diagnosed with hepatosplenic schistosomiasis. The trials were conducted in Brazil and Egypt. We are uncertain as to whether surgical shunts improved all-cause mortality compared with devascularisation (risk ratio (RR) 2.35, 95% confidence interval (CI) 0.55 to 9.92; participants = 154). We are uncertain whether serious adverse events differed between surgical shunts and devascularisation (RR 2.26, 95% CI 0.44 to 11.70; participants = 154). We are uncertain whether variceal rebleeding differed between shunts and devascularisation (RR 0.39, 95% CI 0.13 to 1.23; participants = 154). We found evidence suggesting an increase in encephalopathy in the shunts versus the devascularisation group (RR 7.51, 95% CI 1.45 to 38.89; participants = 154). We are uncertain whether ascites and re-interventions differed between shunts and devascularisation. We computed Trial Sequential Analysis for all outcomes, but the trial sequential monitoring boundaries could not be drawn because of insufficient sample size and events. We downgraded the overall certainty of the body of evidence for all outcomes to very low due to risk of bias and imprecision.

CONCLUSION
Given the very low certainty of the body of evidence, we could not determine an overall benefit or harm of shunts compared with devascularisation. Future trials should be designed with sufficient statistical power and should be performed in countries with high endemicity for schistosomiasis.

A13 Prophylactic risk-reducing salpingo-oophorectomy in women with BRCA1 or BRCA2 mutations: A systematic review and meta-analysis

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BACKGROUND
Prophylactic risk-reducing salpingo-oophorectomy (RRSO) refers to surgical removal of both fallopian-tubes and ovaries in women not thought to have cancer prior to surgical procedure but who have a high lifetime risk. Despite previous studies, the role of RRSO in reducing breast and high-grade serous cancer (HGSC) of ovarian, tubal and peritoneal origin is uncertain. This study assesses benefits and harms of prophylactic RRSO in women with BRCA1 or BRCA2 mutations.

METHODS
We searched the Cochrane Central Register of Controlled Trials, MEDLINE/Embase Ovid and trial registries, and abstracts with no language restrictions up to July 2017. We included non-randomised trials that used statistical adjustment analyses comparing RRSO versus no RRSO in women without a previous/coexisting gynaecological malignancy and women with a risk-reducing mastectomy (RRM). We extracted data and performed meta-analyses of hazard ratios (HR) for time-to-event variables and risk ratios (RR) for dichotomous outcomes, with 95% confidence intervals (CI). We used ROBINS-I 'Risk of bias' assessment tool and quantified inconsistencies using I^2 statistic. We used random-effects models.

RESULTS
Ten cohort studies were included comprising 8087 BRCA1/BRCA2 mutation carriers (2936 surgical and 5151 controls). GRADE assessment certainty of evidence was very low. Overall survival was longer with RRSO compared with no RRSO (HR 0.32, 95% CI 0.19 to 0.54; P<0.001; three studies, 2548 women; very low-certainty evidence). HGSC cancer mortality (HR 0.06, 95% CI 0.02 to 0.17; I^2 =69%; P<0.0001; three studies, 2534 women; very low-certainty evidence) and breast cancer mortality (HR 0.58, 95% CI 0.39 to 0.88; I^2=65%; P=0.009; seven studies, 7198 women; very low-certainty evidence) were lower with RRSO compared with no RRSO. No study reported adverse events.

CONCLUSION
There is very low-certainty evidence that RRSO may increase overall survival and lower HGSC and breast cancer mortality for BRCA1/BRCA2 carriers. Further research is warranted to explore differential effects for BRCA1 or BRCA2 mutations.

A14 Establishing of a health knowledge translation platform in Ghana – a pilot in maternal, newborn and child Health

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BACKGROUND
A USAID-sponsored National Health Research Dissemination Symposium in Ghana concluded in 2017 that there was a disconnect between producers and potential users of research products. The symposium recommended the establishment of a National level Knowledge Translation Platform (KTP) to facilitate dialogue amongst health researchers and users of research products (policy makers, health programme managers, practitioners, development partners, etc.) to enhance the use of evidence.

METHODS
Stakeholders: The Ministry of Health, Ghana Health Service including its three Health Research Institutions, Schools of Public Health, The Joanna Briggs Institute and non-governmental organisations (NGOs) in health, among others. Procedures: A concept paper, describing the roadmap was developed for discussion. Stakeholders consulted, agree to develop a KTP governed by a Steering Committee (SC). The SC will coordinate activities of Communities of Practice (CoP) consisting of producers and users of knowledge in priority technical areas or domains. An initial pilot KTP will be in the area of maternal, newborn and child health (MNCH) over a period of nine months ahead of its rollout to other priority domains. CoPs will benefit from training in synthesising evidence through systematic reviews and policy briefs. Proposed activities of the inception CoP:

- Generate two systematic reviews with policy briefs in MNCH by August 2019
- Hold a policy seminar on the identified MNCH policy issues that were synthesised
- Present a paper at the 2019 annual health summit (on the KTP-SC- CoP and progress)

RESULTS
The initiative will ultimately enhance evidence-based decision making in the health sector and lead to improved access to quality health services.

CONCLUSION
The USAID supported KPT initiative in Ghana adopted a consultative and adaptive learning approach. Lessons learnt will advise the scale-up process and ultimately contribute to improving evidence-based decision making in the health sector in Ghana.

A15 Traumatic sexualisation in women survivors of childhood sexual abuse: A scoping review

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BACKGROUND

The long-term negative outcomes of child sexual abuse are well documented in the literature. In 1985, Finkelhor and Browne conceptualised that the traumatic experience of child sexual abuse can be explained in terms of four traumagenic dynamics, namely betrayal, powerlessness, stigmatisation and traumatic sexualisation. Research points to gender differences in response to child sexual abuse, by which women tend to internalise their experience and men tend to externalise their abuse. Although much has been written on these trauma-causing factors, a summary of empirical studies specifically on how traumatic sexualisation is experienced by women survivors, has not been conducted. A study was thus needed to expand the existing knowledge base concerning traumatic sexualisation in women survivors and to gain a better understanding as to how to inform treatment interventions. Two research questions were driving this study:1) What could be learned from previous studies on traumatic sexualisation in women survivors of sexual abuse; and, 2) What input or additional issues related to traumatic sexualisation could be identified by helping professionals working within the scope of child sexual abuse?

METHODS

The six stages of the methodological framework designed by Arksey and O'Malley (2005) were followed to direct the scoping review. A total of 1471 empirical studies were screened in accordance with inclusive and exclusive criteria on electronic databases as well as scientific journals. In total, 174 full-text articles were screened for eligibility, of which 66 articles were included in the scoping review. Data were extracted from the selected studies on a data-charting form, applying thematic analysis. Only data that explained experiences of traumatic sexualisation in women survivors of CSA were mapped on the data-charting form. The last step, consultations with stakeholders about the findings from the literature search, answered the second research question. Through purposive sampling, six professionals working in the area of child sexual abuse participated in qualitative interviews. They were requested to provide input on the findings of the literature search.

RESULTS

The results of the scoping review found three main themes that described how traumatic sexualisation presented in women survivors of sexual abuse, namely negative sexual association, negative body image and distorted sexual development. These three themes support the findings of Finkelhor and Browne in their categorisation of traumatic sexualisation. However, two additional sub-themes, not reported by Finkelhor and Browne (1985), were identified in the literature on women survivors of CSA, namely hiding the feminine self/body harm (categorised under negative body image) and self-capacity disturbances (categorised under distorted sexual development). During the qualitative interviews with professionals the above findings were also observed with no additional themes reported.

CONCLUSION

Social workers and psychologists in practice need to take the research findings into consideration when treatment outcomes are considered for women survivors of childhood sexual abuse.

A16 Mapping tuberculosis treatment intervention trials in Africa

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BACKGROUND
Mycobacterium Tuberculosis (TB) poses a substantial burden in sub-Saharan Africa and is the leading infectious disease causing death. Randomised-controlled trials (RCTs) are regarded as the gold standard for evaluating the effectiveness of an intervention. We aimed to describe all published TB treatment trials conducted in Africa, to inform patients, researchers, policymakers, and funders about the breadth of interventions that have been evaluated and the quality of reporting regarding their conduct to inform future research and funding agendas.

METHODS
This is a cross-sectional study of published TB trials conducted in at least one African country. We searched PubMed, Embase and the Cochrane Library (March 2018) using the validated Africa search filter. We screened records for eligibility and extracted data using a pre-piloted data-extraction form. Extracted data included: country, publication dates, ethics statement, trial registration number, participants' age range and the methodological quality of the data using Cochrane 'Risk of bias' criteria. Data were analysed descriptively using MS Excel.

RESULTS
We identified 9206 studies, 159 of which were eligible for inclusion. Trials were published from 1952 to 2018. Most trials were conducted in South Africa (n = 75), followed by Tanzania (n = 29) and Uganda (n = 27). Most interventions were drug therapies (n = 117), nutrition supplementation (n = 15), and education/outreach (n = 10). Seventy-three trials reported trial registry numbers. Forty-two did not provide an ethics statement. Eighty-seven trials included adults only, while seven included only children. Overall, we found that methodological quality was poorly reported: 79/159 trials reported adequate sequence generation, 35/159 trials reported adequate allocation concealment and 44/159 trials reported blinding of the provider. The main funders were pharmaceutical industries and international agencies.

CONCLUSION
Patients participating in trials may expect the results to inform policy and practice, however, poorly reported research may not be adequate to meet this need. By mapping TB trials conducted in Africa, we identified gaps in research and methodological flaws in the reporting. Funders and researchers should ensure the conduct of higher-quality trials addressing complex issues of how best to implement the available effective treatment.

A17 Time Series Analysis of Contraceptive Consumption Trends in Kenya 2014-2018

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BACKGROUND

Contraceptive security is crucial in ensuring access to family planning services and improving the contraceptive prevalence rate. To ensure that there is contraceptive security, proper forecasting, quantification and procurement are critical. This ensures that there is continuous availability of contraceptives. It is therefore important to study consumption patterns and apply forecasting techniques so as to adjust for any changes in the choice of contraceptives over a given time period.

METHODS

Data on consumption for the years 2014 to 2018 of family commodities (implants, injectables, pills, and intrauterine contraceptive devices) were extracted from the District Health Information System which is an online reporting database for all health facilities in Kenya. An exploratory analysis (visual inspection of graphs) was done and the data decomposed to evaluate the trends and seasonal components. Service point and consumption data of family planning commodities were compared. Short-term forecasting using the autoregressive integrated moving average and the exponential smoothing models was done. The optimal model for forecasting was determined and the models validated using actual facility consumption data for 2018.

RESULTS

The consumption of pills, injectables and intrauterine contraceptive devices declined while that of implants increased significantly across the four years (Figures 1 & 2). There were differences in the data reported for consumption and service point data for injectables, implants and intrauterine contraceptive devices (Figure 3). The exponential smoothing models (ETS) recorded the least error when forecasting consumption of all the family planning commodities except for one-rod implants in which the Autoregressive Integrated Moving Average (ARIMA) model had the least errors.

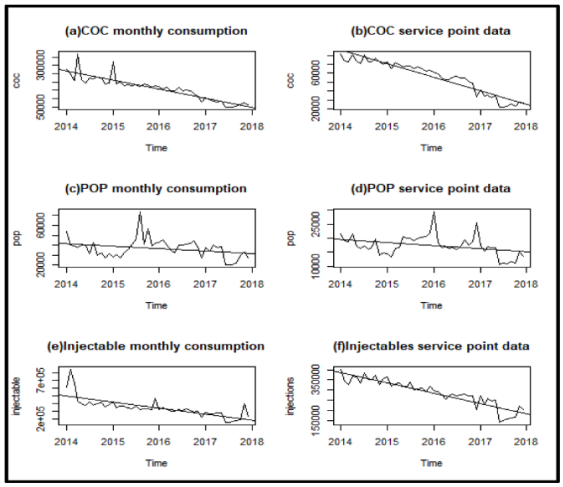


Figure 1: Time Plots for Consumption and Service Point Data for Combined Oral Contraceptives, Progestin-Only Pills, and Injectables

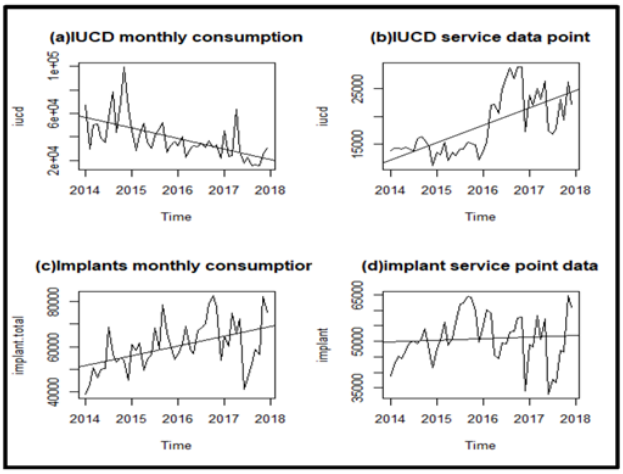
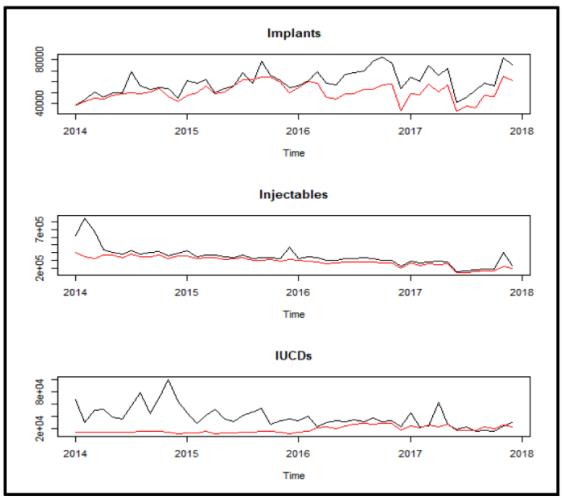


Figure 2: Time Plots for Consumption and Service Point Data for Intrauterine Contraceptives Devices and Implants



Key- Black represents consumption data while red represents the service point data

Figure 3: Comparison of the Consumption and Service Point Data for Implants, Intrauterine Contraceptive Devices, and Injectables.

Table 1: Forecast Errors for the Autoregressive Moving Average and Exponential Smoothing Models for Each Contraceptive

	MODEL	ME	RMSE	MAE	MPE	MAPE	ACF1	Theil's U
Progestin Only Pills	ARIMA(0,1,1)	-0.109	0.115	0.109	-1.073	1.073	0.265	3.073
	ETS (M,N,N)	-0.092	0.099	0.092	-0.902	0.902	0.230	2.739
Combined Oral Contraceptives	ARIMA(1,1,0) with drift	0.305	0.370	0.305	2.696	2.696	0.581	2.617
	ETS (A,N,N)	0.136	0.212	0.157	1.191	1.387	0.536	1.511
Intrauterine Contraceptive Devices	ARIMA(0,1,1)	-0.054	0.288	0.249	-0.621	2.495	0.267	0.911
	ETS(M,N,N	-0.054	0.288	0.249	-0.625	2.495	0.267	0.912
Injectables	ARIMA(5,1,0) with drift	0.238	0.289	0.238	1.928	1.928	0.125	3.662
	ETS(A,N,N)	-0.117	0.128	0.117	-0.949	0.949	-0.300	1.555
One rod Implants	ARIMA(1,1,3)	0.048	0.066	0.059	0.447	0.553	-0.354	0.702
	ETS M,N,N	-0.065	0.090	0.072	-0.611	0.676	-0.375	1.021
Two-rod Implants	ARIMA(0,1,1)	0.093	0.103	0.093	0.910	0.910	-0.061	1.392
	ETS(A,A,N)	0.052	0.068	0.052	0.502	0.502	-0.236	0.802

Key: ME-Mean Error, RMSE-Root Mean Squared Error, MAE-Mean Absolute Error, MPE-Mean Percentage Error, MAPE- Mean Absolute Percentage Error and ACF-Autocorrelation coefficient

ETS-Error, Trend and Seasonality (Exponential Smoothing Model)

ETS (M, N, N)- is a model with multiplicative errors, no trend and no seasonality.

ETS (A, N, N) is a model with additive errors, no trend and no seasonality

ETS (A, A, N) is a model with additive errors, additive trend and no seasonality.

CONCLUSION

There was a general shift towards the use of long-acting reversible methods especially implants in Kenya. The difference in the reporting of consumption and service point data for injectables, implants and intrauterine contraceptive devices showed gaps in the documentation and reporting of contraceptives. The ETS models were generally superior to the ARIMA models for predicting consumption of contraceptives.

A18 Identifying different stakeholders to implement the shortened dental arch as a prosthodontic management option: A stakeholder-mapping approach

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BACKGROUND

The National Oral Health Policy (1994) and the National Oral Health Strategy (2030) of South Africa (SA) are very explicit about the importance of prioritising an evidence-based approach in healthcare and implementation of policies. Reliable research related to the shortened dental arch (SDA) has been completed globally and within the SA context, but translation into clinical practice is very slow, if at all.

METHODS

A stakeholder-analysis approach was employed to identify key persons that can assist with the implementation of this clinical concept. A strategic approach to identify, rate importance of input and influence in ensuring change was completed. Thus a stakeholder map was used as research tool. Stakeholders were classified according to their level of influence in either assisting with change or obstructing progress as well as the impact of their input within the organisation and the broader environment.

RESULTS

Several stakeholders were identified. These were classified two ways: Primary or secondary and according to their affiliation with the organisation where change needs to occur. Including a lecture on the shortened dental arch in the fourth year, after consultation with the head of the department, was initially completed.

This was abandoned as students misunderstood the use of the concept within their clinical requirements. Thus a relook at the location of where teaching this concept would be understood was considered. More importantly, highlighting the role of other key stakeholders that could effect change was made possible with this approach.

CONCLUSION
This strategic analysis assisted in identifying key stakeholders and their roles to assist with implementation of the concept. The role of these stakeholders should be addressed further to ensure alignment to SA health policy.

A19 Adaptive clinical practice guideline development methods in resource-constrained settings – four case studies from South Africa

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BACKGROUND
New clinical practice guideline (CPG) development is expensive and time-consuming and therefore often unrealistic in settings with limited funding or resources. Rather than starting from scratch, adapting from available CPGs or evidence, using a transparent process, is possible. We describe four case studies of rigorous processes for adapting CPGs for use in South Africa.

METHODS
The South African Guidelines Excellence Project (SAGE) held a workshop (April 2017) to provide an opportunity for dialogue regarding different adaptive approaches to CPG development. Four panelists presented case studies to share their experiences, the methodologies used, challenges and lessons learned.

RESULTS
Four CPGs represented the topics: mental health, health promotion, chronic musculoskeletal pain, and pre-hospital emergency care. Each CPG used a different approach, however, using transparent, reportable methods. They included advisory groups with representation from content experts, CPG users and methodologists. They assessed CPGs and systematic reviews for adopting or adapting. Each team considered local context issues through qualitative research or stakeholder engagement. Lessons learned include that South Africa needs fit-for-purpose guidelines and that existing appropriate, high-quality guidelines must be taken into account.

CONCLUSION
Various approaches to CPG development have been proposed. Approaches for adapting guidelines are not clear globally and there are lessons to be learned from existing descriptions of approaches from South Africa.

A20 Clinical practice guidelines for priority communicable diseases in francophone countries of sub-Saharan Africa

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BACKGROUND
Clinical practice guidelines (CPGs) are tools to translate evidence into practice as well as to improve the effectiveness and consistency of care. Malaria, HIV and lower respiratory infections (LRIs) drive a substantial disease burden in sub-Saharan Africa. In Francophone countries of sub-Saharan Africa in particular, very little is known about the content and quality of CPGs for these conditions and their quality may impact the care that patients receive.

METHODS
A systematic search of published and grey literature was conducted to identify CPGs for the prevention, diagnosis, management and treatment of HIV, malaria and LRIs (bronchitis and pneumonia) in 25 francophone countries of sub-Saharan Africa. Two reviewers independently appraised the CPGs using the AGREE II instrument which consists of 23 criteria and six domains used to assess guideline quality.

RESULTS
We conducted the comprehensive search until December 2017. We identified 22 eligible CPGs for appraisal. Overall scores, were moderate to poor. We found that very few CPGs reported on methods for their development, applicability considerations or funding or editorial independence. Most CPGs were adopted or adapted from those available from the World Health Organization (WHO). In congruence with previous studies, the 'clarity and presentation' and 'scope and purpose' domains scored higher than the other four domains. Meanwhile the 'rigor of development' scored the lowest. Inadequate reporting or simply failure to report on several methodological aspects of the CPG development process were responsible for these scores. We found that the likelihood of identifying a CPG was higher for diseases and countries benefitting from more funding thus, highlighting potential gaps regarding the in-country capacity for CPG development processes and sustainability of CPG activities. The scope of this review was limited to the results of a computerised search. Interactions with relevant stakeholders within the region might have increased our access to CPGs which were not freely available online.

CONCLUSION
CPGs for HIV, malaria and LRIs in this region are mostly adaptations of a reference CPG, usually from the WHO. In the context of limited resources, such an approach might be preferable to *de novo* development of CPGs which is expensive, time-consuming and requires expertise which is currently limited in our region. However, poor reporting renders the methods leading to the formulation of adapted and contextualised recommendations unclear. Improvements are needed in the overall quality of development and reporting of CPGs. More specifically, efforts need to be directed to improving access to CPGs, developing local expertise in methodology, promoting transparent processes through adequate reporting and conflict of interest declarations and involving patients and target users in CPG development.

A21 Simulation for teaching GRADE in guidelines development in sub-Saharan Africa

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BACKGROUND
In sub-Saharan Africa, opportunity for participation in guideline development lags behind more well-resourced settings. We developed a simulation workshop, embedded in a clinical guideline module, to provide experience to novice guideline panellists. We aim to describe the development and operationalisation of a simulated guidelines development meeting using the GRADE evidence-to-decision framework.

METHODS
In 2017, we selected a topic relevant to Africa and assigned roles to participants in advance of a three-hour simulated meeting led by a facilitator experienced in guidelines development. During the session there was active management of conflicts of interest, discussion of challenging concepts such as balance of benefit and harm, equity, and stakeholders' preferences. Participants were encouraged to contribute to the discussions either within their roles or from their own experience and to reach consensus on a recommendation and wording. This informed production of a facilitator's manual outlining a step-by-step approach to delivering the simulated GRADE evidence-to-decision process. In 2018, a trainer delivered the simulation according to the manualised instructions.

RESULTS
Twenty participants, including policy makers and full-time students, attended the 2018 simulation. Feedback included that this approach provided an unexpected, hands-on learning experience and created a playful, safe environment. Two participants expressed discomfort that assigned roles restricted their questions and requested more time to reflect on key learning points.

CONCLUSION
Simulation according to manualised instructions offers scalable, experiential learning for building capacity in GRADE for guidelines in less-resourced settings. Guideline panel role-play can provide a real-world experience in a safe space, but requires skilled facilitation to ensure the comfort of all participants.

A22 Using the Theoretical Domains Framework to explore barriers to and facilitators of South African primary care clinical guideline implementation: perspectives of primary care clinicians

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BACKGROUND
Clinical practice guidelines (CPGs) risk having little impact if ineffectively implemented.
Within the South African Guidelines Excellence (SAGE) Project, we engaged a range of South African primary health care (PHC) guideline developers and users to explore CPG activities.

OBJECTIVES
To explore barriers to and facilitators for CPG implementation and use by South African PHC providers.

METHODS
We used qualitative research methods. Seven focus groups were conducted (48 clinicians) in four South African provinces with different clinical cadres from PHC facilities in rural, urban and peri-urban settings.

RESULTS
Healthcare providers are knowledgeable about CPGs, trust their credibility and are motivated to use them. CPGs were seen by nurses to provide reassurance and professional authority/independence where doctors are scarce. They also perceived CPGs as facilitating patient engagement, standardized care, and protection against medico-legal litigation. Several barriers to CPG usage were highlighted, including inadequate systems for CPG distribution and version control, poor circulation of CPG-related notifications, insufficient and substandard copies of CPGs, linguistic inappropriateness, unsupportive monitoring/auditing, limited involvement of end-users in CPG development, and inadequate training. Future aspirations identified included improving the design of CPGs, translating CPGs into local languages and summaries, making printed and digitally-formatted CPGs (and associated technologies) more available, more CPG supplementary materials, accessible clinical support and public engagement, and training for all professional cadres.

CONCLUSION
PHC healthcare providers are motivated to use CPGs, but face many systemic barriers to using them. Strategies addressing identified barriers may improve CPG implementation and healthcare impact for the country.

A23 From evidence to awareness, from epidemiological studies to government action and activity

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BACKGROUND

Alcohol use during pregnancy can lead to a range of cognitive and physical disabilities collectively referred to as fetal alcohol spectrum disorders (FASD) (Hoyme *et al.*, 2016). Although FASD is a global concern (Popova, Lange, Probst, Gmel, & Rehm, 2017), numerous prevalence studies have shown that South Africa has the highest prevalence rate of FASD worldwide (Olivier, 2017). This poster investigates whether the epidemiological evidence has led to increased awareness at a governmental level in South Africa.

METHODS

We conducted a Google search of the terms 'fetal alcohol' and 'foetal alcohol' restricted to South African government internet domains (.gov.za). We searched in five different time periods: 1999, 2000 – 2004, 2005 – 2009, 2010 – 2014 and 2015 – 2018. We used results referring to FASD as a proxy for awareness in South African governmental institutions. We looked at whether the domains were for individual government departments, provincial government, local/district municipalities or national government.

RESULTS

We found a marked increase in the number of search results relating to FASD from 1999 to 2018. It was also clear that a broader segment of government became involved over time. In 2000 – 2004 there were only results from the Western Cape provincial government website, yet in 2015 – 2018 there were results for more than five provinces, six government departments, national government and various district municipalities.

CONCLUSION

There certainly are limitations to the method used in this study and richer data could be gathered with more sophisticated search strategies. As a preliminary study though, this does show that awareness about and interest in combating FASD in South Africa has shown progress at most governmental levels. This is a heartening result and hopefully indicates an increased commitment to tackling this serious public health issue in the future.

A24 Defining and conceptualising data harmonisation: A scoping review

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BACKGROUND
Data harmonisation has the potential to enhance the production, accessibility and utilisation of routine health information for clinical and service management decision making. It is important to understand the range of definitions and concepts of data harmonisation, as well as how its various social and technical components and processes are thought to lead to better health management decision making. However, there is lack of agreement in the literature, and in practice, on definitions and conceptualisations of data harmonisation, making it difficult for health system decision makers and researchers to design, implement, evaluate and compare data harmonisation interventions. This scoping review aims to synthesise 1) definitions and conceptualisations of data harmonisation as well as 2) explanations in the literature of the causal relationships between data harmonisation and health management decision making.

METHODS
This review followed recommended methodological stages for scoping studies. We identified relevant studies from 2000 onwards, in English only, in PubMed, Web of Science and CINAHL. Two reviewers independently screened records for potential inclusion for the abstract and full-text screening stages. One reviewer did the data extraction, analysis and synthesis, with built-in reliability checks from the rest of the team. We provided a numerical synthesis of characteristics of the included studies and a narrative synthesis of definitions and explanations in the literature of the relationship between data harmonisation and health management decision making.

RESULTS
We included 181 studies in the review and sampled 61 studies that, in addition to a definition of data harmonisation, also provided a rich description, conceptual framework or theory of data harmonisation. We identified six alternative terms for data harmonisation, namely record linkage, data linkage, data warehousing, data sharing, data interoperability and health information exchange. An analysis of definitions resulted in six components of data harmonisation. Any type of data harmonisation intervention (a) involves a process of multiple steps; (b) consists of different types of activities (such as identifying, standardising, matching and linking of data); (c) aims to integrate, harmonise and bring together different electronic databases into a useable format; (d) requires at least two or more databases; (e) pools data using unique patient identifiers; and, (f) has a specific scope (such as a disease or condition, or geographic area). The relationship between data harmonisation and health management decision making is well described in the literature. Only seven studies from our sample made a link between data harmonisation and health (or clinical) management decision making. Those studies briefly mentioned health providers' concerns about data completeness and data quality as well as terminology and coding of data elements as a hindrance to data utilisation for clinical decision making.

CONCLUSION
To our knowledge, this scoping review was the first to synthesise definitions and concepts of data harmonisation as well as attempt to explain the causal relationship between data harmonisation and health management decision making from the literature. We identified six components for defining data harmonisation. There is a need for primary studies to assess the effectiveness of data harmonisation on health management decision making.

A25 Using 'formal' and 'informal' evidence in policy implementation: The case of Adolescent and Youth Friendly Health Services in the Western Cape

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BACKGROUND
Policy implementation in South Africa is a complex process. The roll-out of the Adolescent and Youth Friendly Services Programme (AYFSP) is currently underway and aims to improve sexual health services for young people (14-25 years). One requirement of the AYFSP is developing a Adolescent Health Profile (AHP) that describes the life, health, challenges and opportunities of youth. To create a AHP, health workers (HWs) need to collect different forms of evidence, including census data, HIV, STI and pregnancy data plus housing, school drop-out and unemployment data. This information is scattered across different databases and often not readily available.

METHODS
This research was conducted in Klipfontein Sub-district and used qualitative methods, mainly ethnography. During eighteen months, researchers followed HWs from several clinics during their journey of developing a AHP as part of the AYFSP.

RESULTS
Several barriers were experienced by HWs when trying to collect the evidence, including lack of access to data to compile the profile; ambiguity of guidelines; lack of guidance and support and larger organisational difficulties. Despite these barriers, most HWs proved to be creative thinkers and adopted different strategies to negotiate access to data, including developing new data systems, creating new relationships to access data and using both 'formal' and 'informal' evidence to populate the AHP.

CONCLUSION
Findings from this study demonstrate the challenges and opportunities HWs face trying to collect necessary evidence to create a AHP as part of the AYFS programme. The research reveals the importance of feasibility and usability of policy and illustrates the politics of translating policy into practice. It also shows the complexity in health system change and the need to balance planning, with space for resilience and improvisation. Guidance should include new ways of accessing, coordinating and using both 'formal' and 'informal' evidence, plus providing regular training to facilitate implementation.

B1 Improving lung functions for patients with pulmonary tuberculosis (PTB)

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BACKGROUND
Until recently, individuals with pulmonary tuberculosis (PTB) affecting the lungs, who completed their treatment regime were considered cured with no long-term consequences to their health. However, research in the last decade has confirmed that the end of PTB treatment does not equate to a clean bill of health; on the contrary, it is the start of chronic lung function abnormalities. There is a growing body of evidence that PTB causes pulmonary impairment which is evident even six months post successful completion of drug therapy.

METHODS
The primary outcomes were lung function parameters specifically of FEV1 and FVC. Secondary outcomes were functional capacity and quality of life. We searched databases MEDLINE via Pubmed, CENTRAL, CINAHL, PEDro, Web of Science, Scopus, Science Direct and African Index Medicus from 1995 to December 2017 and a search update in November 2018. Eligible studies reported on pulmonary rehabilitation programmes which included exercise and primary outcome.

RESULTS
Our search returned 1419 studies; four met eligibility and were included for data extraction. In total there were 105 participants in the studies, with sample sizes ranging from 10 to 67 participants. Risk of bias of included studies was high as concealment, and allocation bias was not possible. Lung parameters showed no significant changes. However, the secondary outcome of the Six-Minute Walk Test was statistically better in the groups who received rehabilitation. In these studies, the effectiveness of pulmonary rehabilitation in improving lung function was not statistically significant.

CONCLUSION
The studies reviewed had different study designs and biases and this review at best concludes that the effectiveness of pulmonary rehabilitation in PTB population was inconclusive. We recommend that more RCTs, which are the gold standard to assess the effectiveness of interventions, are conducted in this population.

B2 Strategies to strengthen mental illness management in primary healthcare setting: Using an evidence map to engage policymakers

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BACKGROUND
Recent attempts to de-institutionalise people with serious mental illness as enshrined in South African Mental Health Care Act No.17 of 2002 coupled with lack of adequate care at Primary Health Care (PHC) level led to the Life Esidimeni tragedy. The Life Esidimeni tragedy highlights the desperate need to provide appropriate health care at the community level. Thus, there is a need to assess evidence on strategies to strengthen management of mental illness at the PHC level, to inform policy and identify strategies that might be feasible and acceptable for South Africa.

METHODS
We conducted an evidence map of systematic reviews on strategies to strengthen PHC management of mental illness. A systematic search in eight bibliographical databases identified 314 systematic reviews. Quality assessment of all included systematic reviews was undertaken.

RESULTS
The evidence map lists some of following as strategies that might strengthen management of mental illness at PHC level: Interventions run by specialists but located in the community, such as community mental health teams; models of care where different cadres of health workers collaborate or where physical and mental health care is provided in an integrated way; interventions that empower families, carers and patients; systemic strategies that may change provider behaviour and strengthen the quality of care, such as strengthening adherence to clinical guidelines. The map further shows the amount and quality of evidence supporting each of the listed strategies, and this helps to inform policy design and research priorities around mental health.

CONCLUSION
The evidence map has so far being used to engage with research, policy and mental health stakeholders in KwaZulu-Natal province, with other provinces to follow. These engagements are facilitating a broader understanding of how to take forward evidence maps in a way that is useful and meaningful to mental health stakeholders, advocacy groups and the public at large.

B3 Setting priorities in malaria research for Malawi: The process for developing a five-year evidence-informed national malaria research agenda

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BACKGROUND
Research plays a pivotal role in understanding social and economic trends, and disease epidemiology. In addition, it is vital in informing the development of health interventions and health systems innovations and taking them to scale. In resource-limited settings like Malawi, it is vital that public funds are used wisely to maximal effect. It is of great importance, therefore, to ensure that priorities for research are within context, evidence-informed and set *a priori* for health research investments. We describe the process undertaken to develop priorities in malaria research for Malawi.

METHODS
The National Malaria Control Programme engaged stakeholders comprising malaria researchers, experts, academicians, programme implementers and development partners to define malaria themes, and identify and analyse gaps in research. At the start, the stakeholders received an orientation to evidence-based guideline development and systematic reviews. This was followed by a series of follow-up stakeholder meetings to analyse current malaria control interventions; review current and previous research conducted in Malawi; develop broad priority research areas; evidence mapping of the identified priorities to determine the research landscape and, finally, to rank the identified priorities using the Essential National Health Research (ENHR) strategy.

RESULTS
A comprehensive evidence-informed five-year national malaria research agenda for Malawi was formulated. The agenda highlights broad research priorities under the four main malaria themes namely case management, vector control, malaria in pregnancy and cross-cutting (monitoring and evaluation and behaviour change and communication). These research priorities were appropriately ranked using the ENHR strategy to guide appropriate allocation of limited resources.

CONCLUSION
In settings with limited resources, the process of formulating a national research agenda should involve thorough consultations and review of the appropriate evidence to support the need for further research.

B4 Evidence-informed decision making for public health in rural areas

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BACKGROUND
Evidence-informed decision making for health in rural settings can be a very broad topic in terms of statistics and accuracy. There are rural communities in South Africa, which are isolated and excluded from research intended for them. It has been said that the causes of many health problems in rural areas are, lack of education and the arrogance in people. Lack of significant facilities like clinics and hospitals; limit people from preventing and treating different illnesses. People are exposed to different infections not knowingly, because no one educates them about current diseases and ways in which they can stay safe and uninfected. The healthcare organisations play a huge role in ensuring that our people are being educated, tested and treated when needed, but not all rural areas are served by healthcare organisations. It is very difficult to measure progress if several rural areas are not being catered for.

METHODS
Four (4) different communities in rural KwaZulu-Natal province were visited, and interviews were conducted with community leaders and ten (10) community members from each community.

RESULTS
During this study, it was found that, location, lack of education and the unavailability of resources prevent certain communities from being recognised and for their health concerns to be heard and raised to the government. The healthcare organisations and other health leaders have not reached certain rural areas; however, with rapid technology improvements – there is no doubt that full economic transformation can be reached.

CONCLUSION
Evidence-informed decision making can be improved by encouraging full participation from all rural areas around the country. Researchers, policy makers and other community leaders who are working towards shaping our health and education systems, should work together and be inclusive of the community members. If each community could submit a report on their health concerns, needs, interests and solutions to some of their problems – evidence-informed decisions can be made with valuable information that will be of benefit to the majority.

B5 Standard-based assessment of the quality of intrapartum and immediate post-partum care in Burkina Faso: A hospital-based cross-sectional study

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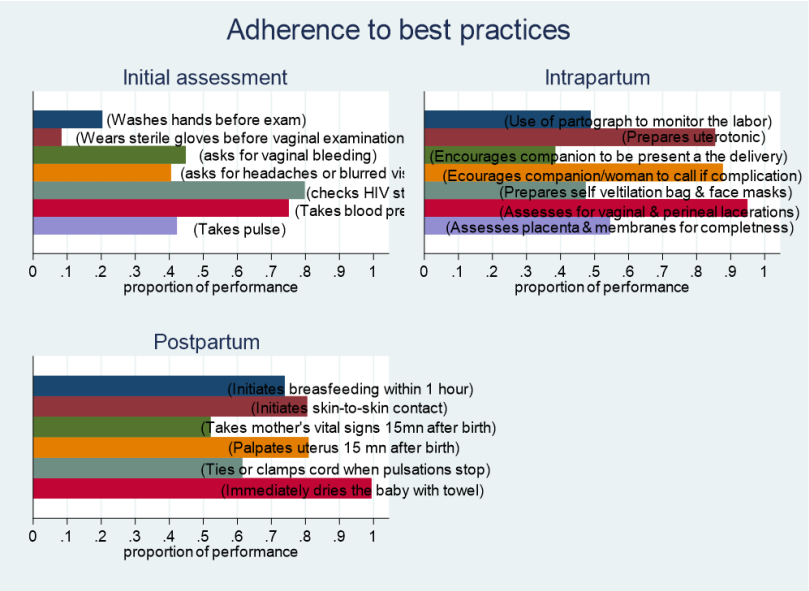
BACKGROUND
Despite recent improvements in maternal and newborn health in sub-Saharan Africa (SSA), many women and babies still die during childbirth. The largest burden of maternal and perinatal mortality is clustered around the time of childbirth and the 24 hours that follow. Much has been done to improve access and uptake of reproductive health services, leading to a sharp increase of health-facility deliveries. The expected improvement in childbirth outcomes is, however, still insufficient and does not always match with health facility utilisation. Poor quality of care is increasingly pointed out as a major contributing factor to poor childbirth outcomes as facility utilisation does not always equate with reception of proven interventions. The quality of care is, however, complex and encompasses various approaches and dimensions. It is very often assessed through the childbirth outcomes. Very few studies have investigated the quality of care using process indicators in SSA. This study assessed the quality of intrapartum and immediate postpartum care and its determinants using validated process indicators for SSA.

METHODS
We carried out a hospital-based, cross-sectional study from 12 November 2018 to 17 December 2018 in government health facilities in the Central-North region of Burkina Faso. Five out of the six health districts of the region were included in the study. All the referral hospitals of selected districts were included in the study with a random sample of 15 primary healthcare facilities (PHC) in each health district. The eligible criterion for PHC was a minimum average caseload of 1.5 childbirths per day. All eligible pregnant women admitted for childbirth labour during the data collection were included in the study. Trained data collectors of medical background (medical students, midwives) were appointed in the delivery room to directly observe and document healthcare providers' adherence to essential best practices at four critical points: admission, before the woman starts pushing, immediate postpartum and before discharge from the health facility. Adherence to each best practice was measured using a binary yes/no variable. We used proportions and means to describe respectively categorical and numerical variables. A score of quality of care was computed for admission, intrapartum care and postpartum care using the best practices pertaining to each period. A negative binomial regression was fitted with the characteristics of healthcare providers, health facilities and women to determine the factors associated with quality of care at each of the three periods.

RESULTS
A total of 532 childbirths were observed. Adherence to best practices during initial assessment ranked from very low (wears sterile gloves for vaginal examination [8.3%], washes hands before exam [20.4%)] to high (checks HIV status [79.8%], takes blood pressure [75.1%]), through below-average adherence (asks about vaginal bleeding [44.9%], asks about headaches or blurred vision [40.5%] and takes pulse [42.3%]). During intrapartum care, adherence was unsatisfactory for four indicators (use of partograph during labour [48.9%], encourages companion to be present at the delivery [38.5%], prepares self-ventilation bag and face mask for neonatal resuscitation [47.3%] and assesses completeness of placenta and membranes [54.6%]) and high for the remaining (informs companion to call in the event of a complication during the labour [87.7%], prepares uterotonic drug to use for AMTSL [85.4%] and assesses for perineal and vaginal lacerations [95%]).

Adherence to postpartum items ranked from average (takes mother's vital signs 15 minutes after birth [52.1%], ties or clamps cord when pulsations stop [61.5%]) to high (initiates breastfeeding within 1 hour [74%], skin-to-skin contact [80.5%] and palpates uterus 15 min after birth [80.9%]) and very high (immediately dries the baby with towel [99.5%]). Initial assessment was poorer in rural health facilities compared to urban ones (IRR=0.88, p=0.04), poorer when carried out by auxiliary staffs as compared to midwives (IRR=0.86, p=0.01), and better as the number of years of experience of the health worker increases (IRR=1.01, p<0.01).



CONCLUSION

The study highlighted that an important fraction of women who deliver in public healthcare facilities in Burkina Faso do not always receive proven essential interventions needed to prevent poor childbirth outcomes. Low cost and easy to implement interventions such as washing hands before exam and wearing sterile gloves for each vaginal examination may be improved using checklist-based interventions. Midwives had a better performance as compared to auxiliary midwives and nurses reinforcing the importance of having a midwife to attend each childbirth.

B6 Challenges of postgraduate research supervision in nursing education: Integrative review

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BACKGROUND

Postgraduate research-based programmes are particularly new in nursing education as compared to other professions. Anecdotal notes from nursing education stakeholders show that postgraduate research supervision is facing many challenges that have a negative impact on the nursing profession and the society.

METHODS
An integrative review that combines empirical and theoretical evidences was used to obtain a comprehensive picture regarding postgraduate research supervision. Data source: EBSCOhost, Science Direct and Google Scholar. Review methods: The quality of included studies was appraised by using the Mixed Method Appraisal Tool for quantitative, qualitative and mixed-method studies. Two reviewers used google form to facilitate the process of data extraction and quality appraiser. Analysis: Inductive content analysis was used to analyse extracted data from nine included studies.

RESULTS
Nine studies were included. Three main categories of challenges with postgraduate research supervision included (a) institutional context, (b) research supervisors, and (c) postgraduate students. Discussion: Institutional context challenges were lack of clear guidelines for nursing schools, limited pool of appropriate research supervisors and recruitment of many postgraduate students leading to mismatch, confusion and limited support. Research supervisors are insufficiently prepared, predominantly use traditional face-to–face methods, and provide inconsistent feedback. Postgraduate students are inadequately prepared, and are mostly employed fulltime

CONCLUSION
Postgraduate research supervision involves many challenges. These challenges affect the quality of graduates and the quality of their research output. Implication for nursing policy: To ensure production of useful knowledge and production of an increased number of motivated nursing scholars, challenges associate with postgraduate research supervision need to be addressed with an emphasis on the formal training of research supervisors, development of clear guidelines for postgraduate research supervision and recruitment of postgraduate students.

B7 Evidence-informed decision making in responding to violence against Emergency Medical Services

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BACKGROUND
As many questions about GBV and its prevention lack definitive evidence-based answers/solutions, there is a need to shift between the discourse of the researcher to the discourse of the practitioner by providing alternative tools to empower practitioners in the field of violence prevention and prevent a ‘response paralysis’.

METHODS
The research and non-research evidence from electronic searches using a non-Cochrane systematic review is appraised within a hierarchy of evidence ‘powered’ to answer a gender-based violence related question. Upon screening evidence/articles for content relevance, they are critically appraised against criteria for relevance, robust nature and presence of bias. Data are analysed thematically and findings are presented in terms of strength and frequency.

RESULTS
Still under analysis.

CONCLUSION
Evidence-informed decision-making approaches are coherent with a post-positivist paradigm and involve integrating the best-available research evidence into the decision-making process in health practice and policy development. It enables the most effective and cost-efficient interventions, considers the use of scarce resources, customer satisfaction and improved health outcomes for individuals and communities. Evidence-Informed Decision Making, as a *bona fide* EBM strategy, seeks to bridge the gap between research and practice as well as between research and policy.

B8 Keeping our heads above water: A systematic review of fatal drowning in South Africa

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BACKGROUND
Drowning is defined as the process of experiencing respiratory impairment from submersion/immersion in liquid, and can have one of three outcomes – no morbidity, morbidity or mortality. The World Health Organization African region accounts for approximately 20% of global drowning, with a drowning mortality rate of 13.1 per 100 000 population. The strategic implementation of intervention programmes driven by evidence-based decisions is of prime importance in resource-limited settings such as South Africa (SA).

METHODS
A systematic review of published literature was conducted to review the available epidemiological data describing fatal drowning in SA. In addition, an internet search for grey literature, including technical reports, describing SA fatal drowning epidemiology was conducted.

RESULTS
A total of 13 published research articles and 27 reports obtained through a grey literature search met the inclusion and exclusion criteria. These 40 articles and reports covered data-collection periods between 1995 and 2016, and were largely focused on urban settings. The fatal drowning burden in SA is stable at approximately 3.0 per 100 000 population but is increasing as a proportion of all non-natural deaths. Drowning mortality rates are high in children aged <15 years, particularly in those aged <5.

CONCLUSION
This review suggests that SA drowning prevention initiatives are currently confined to the early stages of an effective injury prevention strategy. The distribution of mortality across age groups and drowning location differs substantially between urban centres and provinces. There is therefore a need for detailed drowning surveillance to monitor national trends and identify risk factors in all SA communities.

B9 Policy-relevant evidence maps: A method to inform decision making in the public sector

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BACKGROUND
Evidence synthesis can be a powerful tool for decision makers in the public sector to inform policy and programme design. However, often evidence synthesis methodologies such as systematic reviews are not well-aligned with decision makers' needs and can be perceived as an external input in the policy cycle.

METHODS
In an effort to tailor and adapt evidence synthesis methodologies in the public sector, South Africa's Department of Planning, Monitoring and Evaluation (DPME) and the Africa Centre for Evidence (ACE) have co-developed and co-produced policy-relevant evidence maps.

RESULTS
In this presentation, we will outline the development of the methodology for policy-relevant evidence maps as well as the research and decision-making steps embedded in it.

CONCLUSION
We will further elaborate on how the four produced evidence maps have been applied to inform decision making in four strategic national policy areas: human settlements, early-grade education, state capability and spatial transformation.

B10 Descriptive analysis of the first 1000 trials in the Pan African Clinical Trial Registry (PACTR)

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BACKGROUND
A clinical trials registry is a database in which key administrative and scientific information about planned, ongoing and completed trials is stored. The Pan African Clinical Trials Registry (PACTR) aims to assist regional efforts towards transparency and harmonisation of clinical trial research, by promoting prospective clinical trial registration and providing a database to register and search for African clinical trials. It is important to describe the first 1000 trials registered on PACTR to explore and map data on African trials. This can inform researchers about potential collaborators working on the same disease conditions on the continent; can allow funders to understand which conditions are being researched; and, can assist the PACTR team to reflect on how we can improve the database and better serve African trialists and registry users, thereby enhancing clinical trial transparency on the African continent.

METHODS
This is a cross-sectional study. Data for the first 1000 trials registered in PACTR were extracted to Excel. This includes studies registered from 2007 to 2017. Data fields include intervention, condition, participant age, country, sample size, ethics approval, country of principal investigator, funders and number of sites. Descriptive analysis was conducted using STATA software. Frequency tables and graphs were generated in Excel.

RESULTS
There has been a steady increase in trial registration in PACTR. An increasing number of trials are registered retrospectively. We found 757 (76%) single-centre studies of which the majority are being conducted in Egypt 430 (56.8%), followed by South Africa with 75 (9.9%) and Kenya with 45 (5.94%). Median sample size was 98 with an interquartile range of 52 -240. Most of the trials (80%) were conducted in adults. Funding was most often from a university (37%) especially for Egyptian trials. A quarter of registered trials were on infectious and parasitic diseases (25%), followed by pregnancy and childbirth (6.4%). The category of infectious diseases continues to grow beyond the first 1000 trials registered. Drug therapy was the intervention in 258 (26%) trials, 176 (18%) were prevention interventions and 41 (4%) are diagnostic trials. Evidence of ethics approval was available for 893 trials (89%).

CONCLUSION
Despite the increasing registration of trials in PACTR, many trials from Africa are still registered elsewhere, if at all. This is usually due to requirements of funders, lack of legal mandates within countries, or lack of awareness regarding the availability of local registries. To identify all registered African trials, it would be necessary to search on the WHO International Clinical Trials Registry Platform. PACTR provides data to explore and understand the clinical trials conducted by local researchers on the African continent. It may provide leads for researchers, patients, regulators and funders regarding ongoing or planned research and suggest potential collaborations, gaps in research or opportunities to participate for patients/volunteers. However, given the high percentage of retrospectively registered trials, there is still an urgent need to raise awareness regarding the importance of prospective registration.

B11 Cochrane Nutrition KT – increasing accessibility and use of nutrition reviews among stakeholders

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BACKGROUND
The Cochrane Nutrition Field was established in May 2016 with the aim of supporting and enabling evidence-informed decision making for nutrition policy and practice by advancing the preparation and use of high-quality, globally relevant nutrition Cochrane reviews. Here, we showcase Cochrane Nutrition's knowledge translation (KT) activities which closely align with Cochrane's KT framework

METHODS
Our KT activities include developing products such as blogshots and infographics for specific reviews, publishing a bi-annual newsletter, and having a social media presence through Twitter. We also have a Cochrane Nutrition Reviews Database, which is kept up-to-date through regular screening of the Cochrane Library. We also coordinate projects that build demand for and users' capacity on nutrition evidence.

RESULTS

Since the Field's inception we have:• Developed 11 blogshots and two infographics on various nutrition topics; identified reviews for dissemination through communication with Cochrane Review Groups; regular screening of the Cochrane Library or the Global Health Calendar.

- Published and shared two newsletters with our contributors.
- Garnered 970 followers on Twitter, where we share blogshots, newsletters and other relevant contents.
- Added 940 Cochrane nutrition reviews and protocols to our Cochrane Nutrition Database (up to November 2018).
- Conducted a project assessing the payback on investing in nutrition evidence synthesis by determining reviews cited in guidelines.
- Piloted a generic KT approach for high-priority nutrition Cochrane reviews.
- Hosted two workshops on evidence-informed decision making and guideline development. We will present altmetrics data assessing impact of our Twitter account and usage of our Cochrane Nutrition Database.

CONCLUSION

Cochrane Nutrition has actively implemented and expanded its KT activities. Going forward we aim to involve more contributors in these activities and to introduce new products such as Cochrane Corners in international journals. We plan to develop a strategy to measure the impact of these activities, which is important to ensure efficient resource use.

B12 South-south collaboration in building capacity for systematic reviews in low–income countries: The Africa Centre for Systematic Reviews and Knowledge Translation

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BACKGROUND

There is limited systematic reviewing capacity among researchers in sub–Saharan Africa. To address this gap, the Africa Centre was established at Makerere University, College of Health Sciences in 2013. We report our five years' of experience in building capacity for systematic reviews across Africa.

METHODS

Design: Between August 2013 and January 2019, we administered a mix of a sequential 3–phase courses consisting of self–driven introductory learning (10 days), and/or face–to–face didactic lectures and hands–on group work (five days) in several African countries; for selected cases, followed by technical support in conducting systematic reviews (expected to last 18 months) and policy dialogues. Output measures: trained researchers, their countries and institutions. Outcome measures: systematic reviewing activities including: question identification, protocol development, protocol registration, review execution, publication, training and grant application; and policy-related work (briefs, dialogues).

RESULTS

We trained at least 232 researchers and techno-professionals in systematic reviews across Africa, of whom 66 (33%) were female scientists. Trainees represented 16 different universities or research institutes in 10 African countries: mostly Uganda (41%), Kenya, Tanzania, Rwanda, Botswana, Ethiopia, South Sudan, Cameroon, Ghana and Senegal. During this period, participants identified 26 potential review questions. Twelve (12) protocols were registered, seven (7) were published and one (1) new systematic review grant application was successful. We conducted six policy dialogues, and produced 21 evidence briefs for policy. Participants identified sustainability of funding, institutional support, time constraints and specific skills gaps as key challenges in conducting reviews.

CONCLUSION

The Africa Centre initiative reflects a robust south-south collaborative in strengthening evidence synthesis capacity in Africa. Future efforts could inform sustainability in institutions of higher learning such as Makerere University.

B13 Effects of engaging communities in decision making and action through traditional and religious leaders on fully vaccinated rates: A cluster randomised trial

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BACKGROUND

A low childhood vaccination rate is a major problem in Nigeria and is believed to be due to some extent to the low uptake of routine immunisation. Traditional and religious leaders (TRL) are influential and respected in their communities as opinion formers and guides in religious, social and family life. This research aims at determining the efficacy of a multicomponent intervention to strengthen the capacity of TRL as a means to improve uptake of immunisation in selected communities in Cross River State, Southern Nigeria

METHODS

Study site: The study is an RCT conducted in eight local government areas (LGAs) randomly selected from the north, central and southern senatorial districts of Cross River State. The Intervention: The control LGAs had routine services while the intervention LGAs had routine services in addition to the trial interventions such as training of TRL, community engagement, training of health workers, and strengthening of the Ward Development Committees (WDCs). Data collection: In February 2018 mid-term data evaluation was conducted in the eight study sites using an interviewer-administered questionnaire. The effect of the intervention was assessed as the difference in the change from baseline to mid-survey in the intervention arm compared to the change from baseline to mid-survey in the control arm.

RESULTS

In total, the caregiver's of 1268 children in the control LGAs and 1302 children in intervention LGAs were surveyed at midterm of the study. The proportion of unvaccinated children dropped significantly from 7% to 2% in the intervention arm (p=0.001) estimated using logistic regression with random effects for LGA, ward and village to take account of clustering in the sample. There was no significant difference in up-to-date vaccinations between the intervention and control sites.

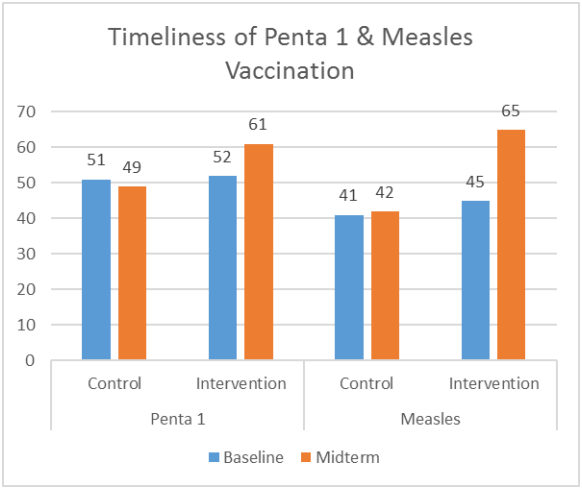

Figure 1Table showing the proportion of children vaccinated on time for Pentavalent and measles

CONCLUSION

The intervention may aid in the reduction of the proportion of unvaccinated children.

B14 Analysis of tobacco-control policies in Nigeria: Historical development and application of multi-sectoral action

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BACKGROUND

Tobacco use is a major risk factor for non-communicable diseases and policy formulation on tobacco is expected to engrain international guidelines. This paper describes the historical development of tobacco-control policies in Nigeria, the use of multi-sectoral action in their formulation and extent to which they align with the World Health Organization 'best-buy' interventions.

METHODS

We adopted a descriptive case study methodology guided by the Walt and Gilson policy analysis framework. Data collection comprised document review (N=18) identified through search of government websites and electronic databases with no date restriction and key informant interviews (N=44) with stakeholders in public and private sectors. Data were integrated and analysed using content analysis. Ethics approval was granted by the University of Ibadan and University College Hospital Ethics Review Committee.

RESULTS
Although the agenda for development of a national tobacco-control policy dates back to the 1950s, a comprehensive Framework Convention for Tobacco Control (FCTC) compliant policy was only developed in 2015, 10 years after Nigeria signed the FCTC. Lack of funding and conflict of interest (of protecting citizens from harmful effect of tobacco viz a viz the economic gains from the industry) are the major barriers that slowed the policy process. Current tobacco–related policies developed by the Federal Ministry of Health were formulated through strong multi-sectoral engagement and covering all the four WHO 'best-buy' interventions. Other policies had limited multi-sectoral engagement and 'best-buy' strategies. The tobacco industry was involved in the development of the Standards for Tobacco Control of 2014 contrary to the long-standing WHO guideline against engagement of the industry in policy formulation.

CONCLUSION
Nigeria has a comprehensive national policy for tobacco control which was formulated a decade after ratification of the FCTC due to funding constraints and conflict of interest. Not all the tobacco-control policies in Nigeria engrain the principles of multisectorality and best-buy strategies in their formulation. There is an urgent need to address these neglected areas that may hamper tobacco-control efforts in Nigeria.

B15 Extent of integration of the WHO 'Best buys' in Nigeria's non-communicable diseases prevention policies

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BACKGROUND
The prevalence of non-communicable diseases (NCDs) is rising rapidly in low– and middle-income countries and prevention remains a strategic option to reduce the burden. The World Health Organization recommends the adoption of 'Best-Buy Interventions' (BBI) as evidence-based options for addressing the risk factors for NCDs and countries are expected to integrate these into policies. Nigeria has developed some NCD prevention policies; however, there is limited information on the extent of adoption of BBI.

METHODS
This policy research adopted a descriptive case study design guided by the policy analysis framework of Walt and Gilson. Data collection comprised a review of policy documents (N=43) and interviews with 44 key informants in the public and private sectors. Data were thematically analysed using NVIVO 10.

RESULTS
Policy actions for the control of tobacco use and the promotion of healthy diets had all the recommended BBI though there is no regulatory legislation to limit the salt and trans-fat content of manufactured foods. Harmful use of alcohol has no comprehensive policy and only one of the best-buy interventions - restricted access to alcohol, exists in the policies. The influence of the alcohol industry remains a bane for the development of a comprehensive policy document for alcohol control. The BBI for physical activity is not included in policy documents.

CONCLUSION
These gaps have grave implications for the effective implementation of policy actions to address the growing burden of NCDs. There is an urgent need to review the current Nigerian NCD prevention and control policies to ensure the integration of the globally recommended 'best-buy' interventions.

B16 Validity and reliability of the Setswana translation of SF-8 HRQOL survey in adults

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BACKGROUND
The absence of culturally relevant measures in indigenous languages could pose a challenge to epidemiological studies on health-related quality of life in developing nations. In this study we explored the feasibility and determined the validity and reliability of the Setswana translation of the Short Form-8 (SF-8) quality of life (QoL) health survey among Setswana-speaking adults.

METHODS
The original English version (EV) of the SF-8 questionnaire was adapted and translated into Setswana. Sixty healthy men (n=26/42%) and women (n=34/58%) with a mean age of 45.5 ± 9.3 years completed a Setswana translation of the SF-8 questionnaire and the original EV twice, with a four-week interval between completions. The questionnaire includes eight itemised questions measuring: physical functioning (PF), role physical (RP), body pain (BP), general health (GH), vitality (VT), social functioning (SF), role-emotional (RE) and mental health (MH), and reporting two component summary measures: physical components summary (PCS) and mental components summary (MCS). A test-retest reliability of the instrument was evaluated by Spearman correlation coefficient.

RESULTS
The Setswana SF-8 has good concurrent validity with the Spearman correlation coefficients (ρ) ranging from 0.72 for RP to 0.91 for SF. Cronbach alpha coefficient for first and second measurement was 0.87 and 0.87 for the Setswana-translated SF-8 and for the original English SF-8 was 0.86 and 0.89 conferring to translated and original index a good internal consistency. The reliability coefficients were moderate for the MH (ρ= 0.60), SF (ρ= 0.56) and RE (ρ= 0.50) domains and the MCS (ρ= 0.50) and PCS (ρ= 0.45) components, but fair for the RP (ρ= 0.43), BP (ρ= 0.43), GH (ρ= 0.42), PF (ρ= 0.41) and VT (ρ= 0.38) domains on the translated Setswana version of SF-8.

CONCLUSION
The Setswana SF-8 version is feasible, acceptable and has acceptable concurrent validity and fair to moderate evidence of test-retest reliability for assessing health-related QoL among adult, Setswana-speaking community dwellers in Potchefstroom, South Africa.

B17 Evidence-based vaccinology: A study of hepatitis A in South Africa

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BACKGROUND
Hepatitis A is a vaccine-preventable disease caused by the Hepatitis A Virus (HAV). Currently, South Africa has been classified by the World Health Organization (WHO) as a high hepatitis A endemic region where ≥ 90% of children are assumed to be 'naturally immunised' following HAV exposure before 10 years of age. In high hepatitis A endemic settings, routine vaccination against HAV is not necessary due to high rates of 'natural immunisation'. Recent anecdotal evidence as well as clinical observations suggest a possible shift from high to intermediate hepatitis A endemicity in South Africa. Intermediate HAV endemic countries without routine vaccination programmes against HAV have a high risk of experiencing hepatitis A epidemics. Currently, there is no routine vaccination programme against HAV in South Africa. The objectives of this project include gathering context-specific evidence on the epidemiological features of hepatitis A, clinical characteristics of the disease, hepatitis A vaccine characteristics and cost of case management in order to inform future vaccination policies against hepatitis A in the country.

METHODS
The project's overall methods are informed by the WHO's Strategic Group of Experts on Immunisation's (SAGE) framework for developing evidence-based vaccine recommendations. The project includes a mixed-methods approach: systematic reviews, a retrospective clinical folder review and modelling. The results obtained from these studies will be taken together to inform parameters in the modelling study. The dynamic, compartmental model built will be used to estimate the future epidemiology of hepatitis A and potential impacts of introducing the hepatitis A vaccine in South Africa. An R-Shiny application will be developed to summarise the model outputs.

RESULTS
The true burden of hepatitis A in South Africa is unknown as few HAV seroprevalence studies have been conducted in the country. Over the last decade, the country has made significant improvements in water, sanitation and SES developments. These improvements are likely contributors to recent changes in the prevalence of clinically apparent hepatitis A and the decline in HAV seroprevalence. As SES developments continue to occur in South Africa, HAV seroprevalence is expected to decline and a large pool of HAV-susceptible older persons may accumulate in the population. Accumulation of HAV-susceptible adolescents and adults is a big public health risk as disease severity is directly correlated with age. Older persons previously not 'naturally immunised' are at an increased risk for severe clinical presentations of hepatitis A and disease-induced complications compared to young children. The high public health costs of managing hepatitis A cases are well understood. This study will explore the epidemiological and cost-effectiveness impacts of potential introduction of routine hepatitis A vaccination in South Africa.

CONCLUSION
A technical dossier will be prepared from the findings. The findings will be published in peer-reviewed journals and shared with the key stakeholders in the country such as the National Advisory Group on Immunisation (NAGI).

B18 Perceptions and experiences around plagiarism, conflict of interest and authorship in low- and middle-income countries

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BACKGROUND
Efforts to promote research integrity in low- and middle-income (LMIC) countries are limited and research to inform activities is lacking.

METHODS
We examined perceived and actual research reporting practices related to authorship, plagiarism and conflicts of interest among LMIC health researchers. We conducted: 1) a systematic review on the prevalence and causes of research misconduct in LMICs; 2) an online survey and interviews with LMIC Cochrane authors to explore perceptions and awareness of poor practices; 3) a survey of African biomedical journals to examine rates of plagiarism in published articles and analyse guidelines on plagiarism, authorship, and conflicts of interest; and, 4) a workshop in two African institutions to introduce good reporting practices.

RESULTS
Existing studies from LMICs reported a high prevalence of research misconduct. Of the 199 (34%) Cochrane authors responding to the survey, 77% reported guest authorship, 60% reported text-recycling, 43% reported plagiarism and 40% knew about colleagues that had not declared conflicts of interest. Four themes emerged: 1) authorship rules are simple in theory, but not consistently applied; 2) academic status and power underpin behaviours; 3) institutions and culture fuel bad practices; and, 4) researchers are uncertain about what conflicts of interest mean, and how this may influence research. Of 495 published articles, 63% (95%CI 58 to 68) had plagiarism of text: 17% (83/495) had 4+ linked or more than 6 copied sentences, 19% (96/495) had 3-6 copied sentences, while the rest had 1-2 copied sentences. Journal guidelines were lacking or poorly implemented. Workshop participants acknowledged the importance of research integrity and actively engaged in discussions.

CONCLUSION
LMIC health researchers are concerned about poor practices. These are fuelled by the desire for academic status, requirements for promotion and organisational culture. Efforts to promote research integrity should be multi-faceted and targeted at various stakeholders, including institutions and journals.

B19 Barriers to antiretroviral therapy adherence among HIV-positive children and adolescents in sub Saharan Africa- a qualitative systematic review

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BACKGROUND
Adherence to highly active antiretroviral therapy (HAART) is linked to improved disease outcomes and higher survival rates. Unfortunately, adherence rates in sub-Saharan Africa (SSA) remain quite poor, resulting in higher incidence of treatment failure and resistance than other parts of the world. Available systematic reviews examining barriers to HAART in SSA have exclusively focused on adults. However, HIV-positive children and adolescents bear a disproportionate burden of mortality with the rates in this group being three times higher than in adults. There are no reviews in this population. This review explores the barriers to adherence to HAART among HIV-positive children and adolescents living in SSA. The findings will inform policies and programmes aimed at improving health outcomes in this group.

METHODS
We performed a qualitative systematic review involving comprehensive and thorough searches of electronic databases, relevant citations and reference lists. Additionally, we hand searched key journals and conference proceedings to ensure maximal inclusion of relevant studies. We included qualitative studies which met the inclusion criteria, appraised all included studies using the CASP tool for qualitative studies and analysed derived information thematically.

RESULTS
Thirteen studies were included in this review. Barriers to HAART adherence were organised into the following themes: socio-cultural, child-related, caregiver-related, medication-related, financial accessibility; and, stigma and secrecy. Stigma and secrecy was the most overarching theme, reported across all studies. The fear of stigmatisation resulted in patients' refusal to take medication particularly when in the company of those unaware of their status.

CONCLUSION
Stigma plays a major role in adherence among children and adolescents. Despite this, many policies are directed at HIV-positive individuals rather than at the wider society. This review highlights the need for a multi-sectoral approach involving members of the extended community. Additionally, this review underscores the need for scientists within the region to engage in more qualitative research.

B20 Anti-chlamydia antibodies and sperm quality among male partners of infertile women in Nigeria

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BACKGROUND
Male infertility contributes a significant percentage of the total causes of infertility worldwide, and genital infections are important predisposing factors. This study aimed at assessing the prevalence of anti-chlamydia antibodies and relationship to sperm quality among male partners of infertile couples.

METHODS
This was a cross-sectional study of male partners of infertile women attending the infertility clinic at the University of Nigeria Teaching Hospital, Enugu, Nigeria. Their sera were assayed for anti-chlamydia antibodies and a semen analysis was done for each participant.

RESULTS
Two hundred and eighty two male partners of infertile women were studied. Overall, 81 (29%) had abnormal sperm parameters. The progressive motility, vitality and sperm count were significantly lower in participants with abnormal sperm quality than those with normal sperm quality ($P < 0.05$). However, there was no significant difference in terms of liquefaction time, volume and morphology between participants with normal and abnormal sperm quality qualities ($P > 0.05$). The prevalence of anti-chlamydia antibody was 55.0% (n = 155). There was significant association between anti-chlamydia antibodies and sperm quality, sperm count and bacterial isolates in seminal culture ($p < 0.05$). However, other parameters including liquefaction time, volume, progressive motility, vitality and morphology had no significant association with anti-chlamydia antibodies ($P > 0.05$).

CONCLUSION
The prevalence of anti-chlamydia antibodies among male partners of infertile couples in Enugu, Nigeria is high and there is significant association with sperm quality, sperm count, and bacterial isolates in seminal culture. It is therefore recommended that male couples of infertile couples in Enugu be screened for anti-chlamydia antibodies and appropriate treatment offered wherever indicated. There is also need for increased public awareness and advocacy campaigns on the impact of chlamydia infection on male factor infertility. This primary preventive measure may help in reducing the burden of chlamydia infection and male factor infertility.

B21 Effectiveness of castor oil in preventing post-term pregnancy: A randomised-controlled trial

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BACKGROUND

Castor oil has long been used for inducing labour and preventing post-term pregnancy. However, its safety and effectiveness has not been conclusive thereby necessitating the need for further studies. This study aimed at evaluating the effectiveness and safety of single oral dose of castor oil at 40-41 weeks of gestation for preventing post-term pregnancy.

METHODS

This was a randomised-controlled trial of pregnant women attending the antenatal care clinic at University of Nigeria Teaching Hospital, Enugu, Nigeria. The intervention group received a single oral dose of castor oil (60 mls) while the control group did not receive castor oil.

RESULTS

Women who received castor oil had a lower incidence of post-term pregnancy compared to the control group [18/105(17.1%) vs. 44/106(41.5%); RR: 0.41; 95% CI: 0.26 - 0.67; P < 0.001; NNT = 4.1]. The procedure significantly reduced the need for 'formal' labour induction [18/105(17.1%) vs. 44/106(41.5%); RR: 0.41; 95%CI: 0.26 - 0.67; P < 0.001; NNT = 4.1]. Participants who received castor oil were more likely to go into labour within 24 hours of recruitment than the control group [60/105 (57.1%) vs. 4/106 (3.8%); RR: 15.14; 95% CI: 5.71 - 40.12; P < 0.001). The need for labour augmentation was less in the intervention group than the control group [41/87(47.1%) vs. 44/62(71.0%); RR: 0.66; 95% CI: 0.51 - 0.87; P = 0.003]. However, mean duration of active phase labour did not differ between the two groups (10.9 ± 5.2 vs 10.8 ± 2.3; P = 0.93). Similarly, maternal and neonatal complications were similar between the two groups.

CONCLUSION

Single oral dose of castor oil reduces the incidence of post-term pregnancy, and need for formal induction of labour in post-date women, without increased maternal or neonatal complications. However, further research with larger sample sizes is needed to provide sound evidence on effectiveness and safety of castor oil in preventing post-term pregnancy.

B22 Assessing the completeness of outcomes in systematic reviews addressing food availability: A pilot study

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BACKGROUND
Systematic reviews (SRs) should specify all outcomes at the protocol stage. Pre-specification helps prevent outcome choice from being influenced by knowledge of included study results. Completely-specified outcomes comprise five elements: 1) domain (title), 2) specific measurement (technique/instrument), 3) specific metric (data format for analysis), 4) method of aggregation (how group data are summarised), and, 5) time-points.

METHODS
Our objective was to assess the completeness of outcome pre-specification in SRs of interventions to improve food availability in low- and middle-income countries (LMICs). We examined SRs from an ongoing overview of interventions addressing food insecurity through improving food production, access or utilisation compared with no intervention or a different intervention, on nutrition outcomes. We examined the original protocols; if unavailable, we examined the Methods section of the SR's most recent version. For outcome domains reported in at least 25% of protocols, we examined whether the five elements had been pre-specified. We calculated the extent of outcome pre-specification as the number of specified outcome elements (out of five).

RESULTS
We examined 24 protocols; most were published between 2011 and 2014. Seven outcome domains were reported in at least 25% of protocols: adverse events (46%), cognitive development (42%), height (33%), weight (33%), psychomotor development (29%), all-cause mortality (25%) and haemoglobin (25%). No protocol specified all five elements for any outcome. Psychomotor development was the most-specified outcome (3/5 elements) and height and weight were the least-specified outcomes (1/5 elements). Method of aggregation was the most specified (91%) and specific measurement (16%) and time–points (20%) were the least specified elements.

CONCLUSION
None of the most frequently reported outcome domains were fully specified. Few protocols specify time–points and specific measurement, which may complicate comparing effects across reviews addressing similar topics. Researchers should better pre-specify outcomes in the area of food insecurity.

B23 The effectiveness of peer and community health worker-led self-management support programmes for improving diabetes health-related outcomes in adults in low- and-middle-income countries: A systematic review

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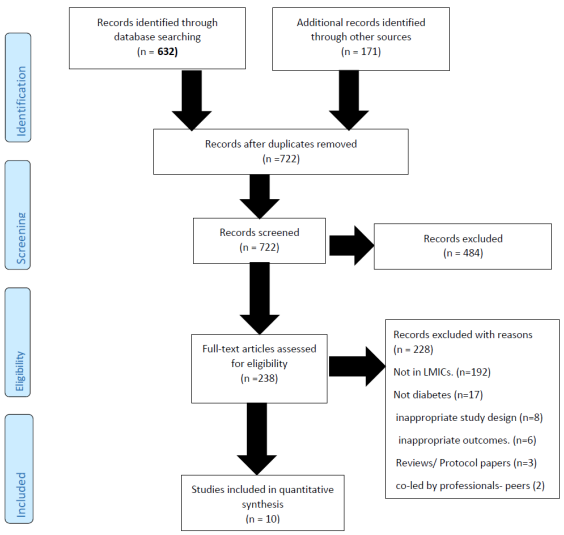
BACKGROUND
Community-based peer and community health worker-led diabetes self-management programmes (COMP-DSMP) can benefit diabetes care, but the supporting evidence has been inadequately assessed. This systematic review explores the nature of COMP-DSMP in low- and middle-income countries' (LMIC) primary care settings and evaluates implementation strategies and diabetes-related health outcomes.

METHODS
We searched the Cochrane Library, PubMed-MEDLINE, SCOPUS, CINAHL PsycINFO Database, International Clinical Trials Registry Platform, Clinical trials.gov, Pan African Clinical Trials Registry (PACTR) and HINARI (Health InterNetwork Access to Research Initiative) for studies that evaluated a COMP-DSMP in adults with either type-1 or type-2 diabetes in World Bank-defined LMIC from January 2000 to December 2017. Randomised and non-randomised controlled trials with at least three months follow up and reporting on a behavioural, a primary psychological, and/or a clinical outcome were included. Implementation strategies were analysed using the standardised implementation framework by Proctor *et al.* Heterogeneity in study designs, outcomes, the scale of measurements, and measurement times precluded meta-analysis; thus a narrative description of studies is provided.

RESULTS
Of the 308 records identified, 10 studies with 5008 participants were included. COMP-DSMPs were inconsistently associated with improvements in clinical, behavioural and psychological outcomes. Many of the included studies were evaluated as being of low quality, most had a substantial risk of bias and there was significant heterogeneity of the intervention characteristics (for example, peer definition, selection, recruitment, training and type, dose and duration of delivered intervention), such that generalisation was not possible.



CONCLUSION
The evidence supporting the use of COMP-DSMP for people with diabetes in LMIC is equivocal. Well-designed and implemented trials are urgently needed to determine whether such programmes should form an integral part of diabetes care strategies, which necessitates better funding and training of researchers.

B24 The health data utilisation practices and challenges in a rural district in the Western Cape Province

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BACKGROUND
For effective decisions in an ideal public-health arena, scientific evidence should be incorporated in the health information practices for making these decisions, developing policies, and implementing health programmes. However, efforts have mainly focused on data collection, quality and processing, with relatively little development on the utilisation of the data. Thus, the degree to which data are being used for effective decision making, and the challenges of this use is often not empirically known. The study investigated the use of data for effective decision making and the challenges managers faced in using the data.

METHODS
The study used an exploratory qualitative study design with maximum variation purposeful sampling to identify 21 staff members at facility, sub-district and district levels for in-depth interviews. Content analysis was subsequently done on the collected data in order to develop a thematic framework consisting of themes and underlying key concepts. Concepts were further refined to determine associations that explained the challenges of data utilisation for decision making.

RESULTS
All participants agreed that evidence is paramount in decision making in relation to performance monitoring, service improvement, enhanced resource utilisation and the sharing of data, among others. In addition, the participants were aware of areas where data use could be improved, for example, as early warnings for outbreaks and disease; for enhancing inter-sectoral collaboration, and for planning outreach.

However, to enhance the effective use of data the district needs to overcome a few organisational, technical and behavioural challenges that were also identified.

CONCLUSION
The study described the health-data utilisation practices and challenges experienced by a rural district in the Western Cape and recommends improvement strategies. To overcome the challenges of the use of the data, it is recommended that the districts, among others, have dedicated data staff at all levels; increase the use of the technology by, among others, enhancing network connectivity, user-friendliness and technical training of staff; and, redefining the data elements required for decision making.

B25 Rating ROBIS – utility and inter-rater agreement of a new tool

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BACKGROUND

The new Risk of Bias in Systematic Reviews (ROBIS) tool permits classification of the conduct of a systematic review as at high, low or uncertain risk of bias. Risk of bias is dependent on an evaluation of review validity in four domains: 1) study eligibility criteria; 2) identification and selection of studies; 3) data collection and study appraisal; and, 4) synthesis and findings. We evaluated the utility and inter-rater agreement of ROBIS applied to an overview of systematic reviews of alcohol-control policy.

METHODS

We searched for systematic reviews across PUBMED, EMBase and the Cochrane Library in 2017 with no language limits. Two investigators independently conducted screening, eligibility, data extraction and quality assessment using ROBIS. Any disagreements in the ROBIS ratings were resolved by discussion, noting ambiguities in the tool. We calculated the inter-rater agreement for the ROBIS tool for each domain and overall with Cohen's kappa coefficient (for three categories: high, low and unclear risk of bias). We integrated the ROBIS rating with the results to produce a benefit indication.

RESULTS

Of 42 included systematic reviews identified from 5282 records, 10 were rated low risk of bias. Across reviews rated as high or unclear risk of bias, methodological deficiencies included publication and language limits in review searches; no duplicate assessment of included studies; no or limited assessment of study quality; and, no integration of quality into interpretation of review results (Table 1). The Cohen's kappa coefficient for overall risk of bias was 0.34. For Domains 1 to 4 the coefficients were 0.51, 0.38, 0.65, and 0.51 respectively.

Table 1: Integration of ROBIS results with the characteristics of included systematic reviews of interventions to limiting alcohol availability (restricting hours or days of sales; reducing outlet density)

ID	Publication year	Number and type of studies	Publication limits	Language limits	ROBIS Domains 1	2	3	4	Overall
LIMITING AVAILABILITY (HOURS AND DAYS OF SALE, OUTLET DENSITY)									
Nelson	2017	29 survey & registry data	Yes	Yes	High	High	High	High	High
Sanchez-Ramirez	2017	26 not clearly reported	Yes	Yes	High	Low	High	High	High
Wilkinson	2016	4 CITS, 6 ITS, 4 CBA, 3 BA, 3 DD, 1 'quasi-experimental'	Unclear	Yes	Unclear	High	High	High	High
Aguilera	2014	1 ITS	Yes	Yes	High	High	High	High	High
De Jong	2014	Not reported	Unclear	No	High	High	High	High	High
Wilson	2014	1 CITS, 1 ITS, 9 CS, 4 LS	Yes	No	Unclear	Unclear	High	Unclear	High
Bryden	2012	4 LS, 5 BA, 17 CS	No	No	Low	Low	Unclear	Low	Low
Hahn	2012	16 ITS, 1 LS	Yes	Yes	High	Low	Low	Unclear	High
Jones	2011	7 CT, 5 ITS, 3 LS, 6 BA,	Unclear	Yes	Low	Unclear	High	Low	High
Korszak	2011	1 LS, 2 CEA	No	Yes	Low	Low	Unclear	Low	Low
Rammohan	2011	10 CITS, 1 ITS	Yes	Yes	High	Low	Unclear	Low	High
Hahn	2010	1 ITS, 1 CBA, 2 LS, 10 UBA, 1 CS,	Yes	Yes	High	Low	Low	Low	High
Middleton	2010	9 CITS, 1 CBA, 1 BA	Yes	Yes	High	Low	Low	Low	High
Popova	2009	59 not clearly delineated	No	Unclear	Unclear	Low	High	Unclear	High
Spoth	2008	10 observational studies	Unclear	No	Low	Unclear	Unclear	High	High

Abbreviations: RCT – randomized controlled trial; CBA – controlled before-after study; BA – (uncontrolled) before-after study; LS – longitudinal study; CS – cross-sectional study; CITS – controlled interrupted time series; ITS – (uncontrolled) interrupted time series; CEA – cost-effective analysis; DD – difference in difference

CONCLUSION

ROBIS inter-rater agreement was moderate to poor. Ambiguity was highest in domain 2 (study selection). However, rating reviews independently and exploring differences through discussion provided a framework to judge review quality and a convenient indicator of review validity when interpreting results.

B26 Zinc and atopic dermatitis: A systematic review and meta-analysis

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BACKGROUND
Zinc plays a central role in skin integrity via barrier and immune mechanisms and may also be relevant in the pathogenesis of atopic dermatitis (AD). However, little is known about the relationship between zinc and AD. We performed a systematic review to determine 1) the association between zinc levels or zinc deficiency and AD and 2) the efficacy of oral zinc supplementation in the treatment of AD.

METHODS
We searched PubMed, Scopus, Web of Science and article references for observational studies on zinc levels or zinc deficiency in participants with AD versus controls and for RCTs on zinc supplementation in AD. For observational studies, we calculated pooled standardised mean differences (SMDs) or odds ratios (ORs) along with 95% confidence intervals (CIs) using a random effects model.

RESULTS
We included 14 observational studies and 2 RCTs. The pooled SMD demonstrated significantly lower serum (SMD 0.66, 95% CI 0.21-1.10, p=0.004), hair (SMD 0.95, 95% CI 0.38-1.52, p=0.001) and erythrocyte (SMD 0.95, 95% CI 0.38-1.52, p=0.001) zinc levels in participants with AD compared to controls. Pooled unadjusted data from 3 studies showed a non-significant increased odds of AD in those with zinc deficiency compared with those without zinc deficiency (OR=1.50, 95% CI 0.71-3.16, p=0.28). One RCT of oral zinc supplementation among AD patients with zinc deficiency showed improvement in extent and severity of AD, while another RCT among all AD patients showed no significant improvement. All the studies were of low or moderate quality.

CONCLUSION
Low serum, hair, and erythrocyte zinc levels are associated with AD. However, the poor quality of included studies makes interpretation of these results problematic. High quality observational studies are needed to confirm the association between low zinc levels and AD, and RCTs are required to evaluate the merit of zinc supplementation for the treatment or prevention of AD.