International worked with Namibia's Ministry of Health and Social Services to provide comprehensive emergency obstetric and neonatal care (EmONC) and lifesaving skills (LSS) training in four district hospitals in Kavango region (Andara, Nankudu, Nyangana, Rundu). Recognizing that services improve and communities thrive when health workers perform their jobs efficiently and effectively, IntraHealth also used its performance improvement approach to correct outdated practices and enhance and monitor health worker performance.

Structure/Method/Design: Performance problems are often complex, with difficult-to-pinpoint origins. IntraHealth's approach identifies the root causes of performance problems and offers solutions. The approach includes structured interviews, observation, record reviews, and on-site mentorship. The interviews assessed how well health workers in maternity departments were preventing, identifying, and managing obstetric/newborn complications; considered facilities' provision of essential services based on EmONC signal functions (a shortlist of key lifesaving obstetric interventions); and identified resource and expertise shortages. Observations of health workers during deliveries assessed practices—especially during active management of third stage of labor and immediate newborn care. Record review examined a 20% random sample of deliveries (past two months), focusing on timely, accurate, and complete partograph use and follow-up. When these methods identified problems or gaps, mentoring and coaching led by the ministry's regional management team and IntraHealth were put into place, including hospital team meetings to identify performance improvements.

Outcomes & Evaluation: Three of the four hospitals documented improvements in the quality of maternity care provided. Providing an excellent example of management's ownership of performance improvement initiatives, one hospital implemented best practices such as regularly reviewing maternity ward records and displaying posters on maternity ward walls to make it easier for staff to find information in emergencies and provide standardized care. In other instances, nurses who attended the EmONC/LSS training identified the need for more support from hospital managers to implement improvements, which became the focus of subsequent site visits.

Going Forward: Health workers who receive training require managers' support to institute new ways of doing things. Regional management teams must provide follow-up to reinforce learning and correct misconceptions. Moreover, because only a few staff can be trained at a time, colleagues should receive in-service training to expose all maternity staff to key EmONC concepts. Obtaining buy-in from managers at the regional/facility levels includes working through contentious issues to obtain support for best practices that may represent a shift from current practices.

Abstract #: *01ITIS014*

Review of the impact of demand-side interventions to improve maternal and neonatal outcomes: Is quality of care a problem?

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Background: Reducing maternal and neonatal mortality is essential to improve population health. Demand-side interventions are designed to increase uptake of critical maternal services, but associated change in service uptake and outcomes is varied. We undertook a literature review to understand current evidence of demand-side intervention impact on improving utilization and outcomes for mothers and their newborn children.

Methods: We completed a rapid review of literature in PUBMED. Title and Abstracts of publications identified from selected search terms were reviewed to select articles meeting inclusion criteria: demand-side intervention in low or middle income countries (LMIC), published after 2004, study design described and reporting on >1 priority outcome: utilization (antenatal care visits (ANC), facility based delivery, delivery with a skilled birth attendant) or a clinical measure (maternal mortality ratio (MMR), stillbirth rate, perinatal mortality rate (PMR), neonatal mortality rate (NMR)). Bibliographies of articles were searched to identify additional relevant papers. Articles were Abstracted using a standardized data collection template with double extraction on a sample to ensure quality.

Findings: 487 articles were screened with 49 selected for full review; 15 met the extraction criteria (eight community mobilization interventions, six financial incentive interventions, and one including both). Community mobilization interventions included participatory women's groups, training of community facilitators, and community-focused health promotion. Financial incentive interventions included conditional cash transfers or voucher schemes. Interventions were implemented across a range of LMICs and in rural and urban settings. We found that demand-side interventions are effective in increasing the uptake of key services important to reducing maternal and early neonatal mortality. Five of the seven community mobilization interventions and all of the financial incentive interventions reported an increase in utilization of maternal health services. Reported associations with clinical outcomes were more varied. Two studies reported reductions in MMR and four reported reduced NMR. None of the studies found an effect on stillbirth rate. Of the ten studies that reported on both utilization and clinical measures, only four (40%) reported both increased utilization and decreased mortality.

Interpretation: Although demand side interventions improve access to more skilled childbirth care, the variable effect on outcomes indicates that measures strengthening the quality of facility-based care will remain critical to achieving the promise of these interventions. Further research is needed to identify how to combine interventions focused on increasing demand and those designed to improve quality to more effectively reduce mortality for women and their newborn children.

Abstract #: *01ITIS015*

Evaluating progress in data availability and timeliness: A scorecard assessment of ministry of health and national statistical office websites in low-income countries

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Background: Demand for health information is growing beyond national policymakers as other stakeholders and decision makers are also participating in program development, implementation, and evaluation. Though research has shown that policy is often influenced by a multitude of factors, the increase in evidence-based practice, calls for data sharing, and accountability concerns are refocusing attention on the importance of accessible health information to guide decision-making. I designed a study to evaluate country progress in data availability and timeliness on the Ministry of Health (MOH) and National Statistical Office (NSO) websites of countries considered low-income (as classified by the World Bank) from January 2011 to September 2014.

Methods: Two cross-sectional evaluations were conducted, the baseline in January 2011 and the follow up in September 2014, which were then used to evaluate progress with the scorecard. The indicators assessed at baseline and follow up included website availability, data availability of select health data sources, and publication timeliness of these sources. The MOH assessment included four assessment indicators and the NSO assessment included eight.

Findings: This scorecard assessment revealed that some countries have made progress but that others have regressed in making data available between 2011 and 2014. Little progress was noted in website availability, but that result was largely due to overall good availability in both assessment periods. Among the 20 countries that made progress in data availability between 2011 and 2014, 13 improved in multiple indicators. The assessment of data timeliness revealed that most countries (76%) have conducted a census within the past 10 years, but that the reporting of census data is poor and needs improvement in both availability and timeliness. Timeliness of the annual statistical Abstract and reference year of immunization data were good, demonstrating that countries are capable of reporting work in a timely manner if a report is produced.

Interpretation: This assessment is the first to evaluate the data availability and timeliness of key outputs expected from MOHs and NSOs. The use of two assessments permits characterization of the rate of progress during a time when many in the public health field are calling for greater data sharing, standards development, and evidence-based practice. However, the assessment is limited to government websites, which represent only one method of sharing data with interested parties and stakeholders. Low-income countries face challenges in supporting their public health needs, but this is all the more reason to prioritize effective data collection and dissemination to support evidence-based policy development and the tracking of targets. This study shows that low-income countries generally are capable of making data available in a timely manner, but that progress has been limited and uncertain.

Abstract #: 01ITIS016

Rare, serious and comprehensively described suspected adverse drug reactions reported by surveyed healthcare professionals in Uganda

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Background: The ability of healthcare professionals (HCPs) to suspect or recognize adverse drug reactions (ADRs) is a major challenge and lack of adequate detail compromises their analysis. We determined the comprehensiveness of the most recent of previous-month suspected ADRs recognised by HCPs in Uganda, the characteristics of those who provided comprehensive ADR-descriptions, and identified suspected ADRs with a safety alerting potential.

Methods: During 2012/13 in public health facilities including the National Referral Hospital, five Regional Referral Hospitals representative of the Eastern, Northern, Western, Southern and Central regions of Uganda, HCPs were invited to self-complete a questionnaire on recognition and reporting of ADRs. Lower level public health facilities, private for-profit and private not-for-profit health facilities in the district where a Regional Referral Hospital was selected were included. Ethical approval was granted by the Uganda National Council for Science and Technology and HCPs gave written informed consent.

Findings: Questionnaires were returned by 1,345 respondents, about two-thirds of those to whom they were distributed. Ninety per cent (241/268) of HCPs who suspected ADRs in the previous month provided information on five key descriptors as follows: body site (206), medication class (203), route of administration [explicitly (127) and implicitly (63)], patient age (133), and ADR severity (128). Comprehensiveness, defined as explicit provision of at least four key descriptors, was achieved by at least two-fifths (46%, 124/268) of the HCPs who suspected ADRs in the previous month. More comprehensive descriptions were received from HCPs in private health facilities and regions other than central and those not involved in teaching medical students. Overall, 106 serious and 51 rare past-month ADRs were described by 1,345 respondent HCPs who, on average, saw 41 (SD = 46; n =1,226 of 1,345) patients daily: 1,544,060 patient-days. The commonest serious and rare ADR was Stevens-Johnson syndrome (SJS), mostly associated with oral nevirapine or cotrimoxazole. Other notable serious ADRs were quinine-associated child fatality, severe post injection paralysis, and miscarriage; Artemisinin-based Combination Therapy [ACTs (artemether/lumefantrine)]-associated severe hypoglycaemia, swelling of the face, and generalized body sores; post-exposure prophylaxis (PEP)-associated SJS after a needle-stick injury; nevirapine-associated hepatotoxicity; and analgesics (oral diclofenac)-associated haemoptysis.

Interpretation: Comprehensive ADR descriptions were reported by at least two-fifths of surveyed Ugandan HCPs who had suspected an ADR in the previous month. More comprehensive descriptions were received from private health facilities and regions other than central, but were less likely from HCPs who taught medical students. Comprehensive ADR reporting by HCPs is an essential alerting tool for identifying rare and serious ADRs in sub-Saharan Africa. Limitations Recall bias due to use of self-report and that no ADR causality assessment was done.

Abstract #: 01ITIS017

Visions of Big Data and the risk of privacy protection: A case study from the Taiwan health databank project

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Program/Project Purpose: As cloud computing increases and large databases expand in the Internet era, "Big Data," is going to transform how we live, work, and think. However, these new phenomena also create a unique challenge for current legal frameworks to handle privacy protection, individual autonomy, and data applications. A database created by Taiwan's National Health Insurance (NHI) provides a valuable opportunity to study the complex and dynamic issues raised by the recent frenzy of "Big Data". Since 1995, the government of Taiwan has integrated 99 percent of its health-care providers under single-payer universal coverage, which insures its entire population of twenty-three million. Due to Taiwan's advanced IT industry and infrastructure, the National Health Insurance Research Database (NHIRD), which includes datasets of service claims, billing, payments, hospital visits, and drug prescriptions, has become one of the largest health-care database systems in the world and is widely used for academic research. Recently, the government announced an initiative to link the NHIRD with other public databases for academic and commercial value-added applications. Upon its completion, the data consortium will be an incredible tool for medical research, health-care management, and commercial