Program/Project Purpose: A pediatric HIV-focused non-profit (Pedi-HIV) sent its first cohort of US-trained physicians to provide HIV/AIDS care and treatment in clinics throughout sub-Saharan Africa in 2005. A study conducted by BIPAI five years after program implementation found that 11% of physicians reported feelings of depression during and after their placements. Contributing factors to these feelings have been identified as dealing with large-scale death encountered in resource-limited areas (RLAs), long work hours in countries with a lack of trained, local medical professionals, and adapting to a new culture in both work and social settings.

Structure/Method/Design: The health, safety and well-being of staff should be as important as that of the communities served by health care delivery programs. In response to the study findings, Pedi-HIV sought to improve the pre and in-service trainings provided to physicians serving in global locations. New physicians attend a month-long orientation and training course designed to enhance their ability to provide effective, high-quality care for children and their families in RLAs. In addition to sessions on HIV/AIDS and tropical medicine, the p;hysicians also attend sessions on the practicalities of working in RLAs, coping with grief after death, as well as reflective practice and leadership.

Outcome & Evaluation: Addressing the mental and emotional health needs of long-term staff in RLAs requires a strategic approach which should begin during recruitment and continue through to the termination process. Pre-service sessions are useful preparation for potential challenges, but they are not sufficient to address the ongoing needs of staff. Supplemental strategies identified by BIPAI include: formal in-country orientation with current physicians; site visits by the Pedi-HIV headquarters staff; quarterly GHC performance evaluations and "check-in" calls and exit survey calls.

Going Forward: Development of effective support systems for field-based staff is an important component of human resources planning. Although there is consensus that the emotional and mental health of staff has a tangible impact on program outcomes, there remain very few resources to help employees develop and maintain efficient coping strategies. Pedi-HIV will continue to develop and implement activities to support the mental and emotional well-being of Pedi-HIV staff working in RLAs.

Source of Funding: Funding is provided by the non-profit.

Abstract #: *1.041_HHR*

Quality Assessment of PMTCT Data Documentation among User and Non-User Data Clerks in a Nigerian PMTCT Program

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Background: High-quality routine data is needed to track progress and identify gaps in national PMTCT programs. In many resource-limited settings like Nigeria, the quality of data obtained from health facilities (HFs) has been poor. One of the major challenges is the documentation workload, in addition to non-utilization of data generated at the HF level. During the roll-out of a large PMTCT implementation research study, we piloted a comprehensive Mother-Infant pair (MIP) register at study sites. Data quality of MIP records was assessed by type of data clerk (DC) (User vs Non-User) documenting the data.

Methods: The MIP register was adapted from multiple pre-existing registers used to capture PMTCT data. We piloted the register at 20 rural HFs and retrospectively reviewed records collected over an 18-month period. At 10 of the HFs, the register data was routinely used to provide patient care; at the other 10, the data was only collected for reporting. Data documentation for 20 pre-defined indicators (10 maternal and 10 infant) was assessed for 10 randomly-selected clients at each HF. A score of 1 and 0 were assigned for complete and incomplete documentation, respectively. The level of completeness between the two groups was compared using proportions and t-test at p=0.05.

Findings: Of 20 indicators assessed, "Client Name" had the highest level of completeness for both User and Non-User DCs, at 97% and 98% respectively. Level of completeness for most indicators along the PMTCT cascade were all higher for User DCs vs Non-User DCs, respectively: "Maternal ART start date": 81% vs 71%; "Infant feeding option": 72% vs 28%; "Delivery Date:" 84% vs 38%; "Date Infant Nevirapine given": 77% vs 31%. Overall, the mean score was significantly higher for User DCs than Non-User DCs [73.40 (SD±14.94) vs 47.35 (SD ±4.94); p=0.002.].

Interpretation: The quality of documented PMTCT data was higher among DCs who routinely used the data. This suggests that registers developed for manual documentation should also be functional with respect to delivery of care. Simplifying PMTCT data collection tools and making them user-friendly for case management is likely to improve the quality of data reported.

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Abstract #: *1.043_HHR*

Barriers and Facilitators of Data Quality and Use in Malawi's Health Information System

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Background: The Malawi Ministry of Health's health information system (HIS) documents utilization of the health system, resource availability, and disease burden. Data are reported by MOH facilities to the central level monthly and stored in the HIS for reporting and program planning purposes. However, very few program planners use these data. We used qualitative methods to understand key barriers to use and perceptions of the quality of HIS data.

Methods: We purposively selected specific cadres of health systems actors to solicit their experiences and opinions about collecting and reporting data through the HIS, as well as data quality and use. Specifically, we conducted (4) focus group discussions with clinic-based data clerks and (4) key informant interviews (KII) with district-based HMIS. KIIs were also conducted with (5) national

health program managers and (5) national monitoring and evaluation staff. We organized and interpreted the data using "framework analysis" methods. Preliminary results are shared below.

Findings: Data quality concepts described by health systems actors include completeness, timeliness, representativeness, and correctness with an emphasis on data reflecting the disease burden within facilities and their districts. According to respondents, good data quality is linked with feedback, partner support, and collaboration of program coordinators and HIS staff at district-level. Additionally, respondents highlighted that innovations, including tools for data aggregation and activities around data use, played a key role in improving quality. Identified barriers to good data quality included resource constraints, training/knowledge gaps, problems with tools for collection, and other systems issues. Data use was reported to be driven by availability of data and responsiveness to stakeholders' needs. Respondents indicated that data use leads to improvements in data quality, but use is low when the HIS is perceived to provide poor quality data.

Interpretation: Our study points to important structural barriers to use of data in Malawi. Innovative activities that can improve data quality are already being tried in some locations and could be shared more widely in Malawi. Common barriers to data quality may be partially addressed through targeted support, including training and material resources, and stakeholder collaboration.

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Abstract #: *1.044_HHR*

Evaluating the Process and Impact of Global Health Education in a Social Accountability Perspective

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Program/Project Purpose: Global Health (GH) Education initiatives are numerous and diverse. They include initiatives for students in multiple health professions who may be at different levels of their educational pathway. They all aim to consider GH competencies in their professional disciplinary development. Competencies include a wide array of knowledge, skills and attitudes focussing on how to optimally work with vulnerable, marginalized and underserved populations, with an emphasis on equity, social justice and consideration of social determinants of health, more particularly cultural diversity. The challenge faced by program leaders is to adequately evaluate the process and impact of programs of the inclusion of GH perspective on students' competencies, change of attitudes and ultimately on their future career pathway.

Structure/Method/Design: Since 2012, the *Université de Sherbrooke* Faculty of Medicine and Health Sciences has progressively implemented a comprehensive process to integrate GH competencies in its programs in Medicine, Nursing Sciences, Occupational Therapy and Physical Therapy. An evaluation framework was designed by a collaborative team of GH experts, education and evaluation specialists and students.

Outcome & Evaluation: The evaluation framework is built on the value of social accountability. It includes an ongoing monitoring process. This framework targets students' development of GH competencies; follows programs' changes and adaptation; aims to look at the influence GH education on students' attitudes and interest to practice with vulnerable communities or patients in the future.

Going Forward: The framework will be progressively implemented in future years with a scholarly approach. Major challenges will be: to adopt or develop relevant tools to reach our evaluation goals; to use the framework strategically to prioritise actions; to reinvest the evaluation results in order to improve programs and GH competencies development; to follow graduates into their practice. The development of GH education and its process and impact evaluation will contribute to the social accountability mandate of our medical school.

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Abstract #: *1.045_HHR*

A WHO Surgical Safety Checklist-based Infection Prevention Program in Ethiopia: Using Process Mapping to Identify Barriers for Implementation

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Background: The WHO Surgical Safety Checklist (SSCL) is proven to reduce post-operative morbidity and mortality, though it can be difficult to implement, particularly in low resource settings. Since surgical site infections (SSIs) account for substantial postoperative morbidity and mortality, we developed CLEAN CUT - Checklist Expansion for Antisepsis and Infection Control: Customization, Use, and Training - with two goals: (1) increase adherence to evidence-based perioperative infection prevention measures and (2) decrease post-operative infectious complications. We used process mapping of infection prevention measures to elucidate barriers to implementation.

Methods: This mixed methods health services research project involves implementation and evaluation of CLEAN CUT at Jimma University Specialized Hospital (JUSH), a 432 bed tertiary hospital in Ethiopia. The Consolidated Framework for Implementation Research (CFIR) and the Interactive Systems Framework (ISF) for Dissemination and Implementation were used to develop a tailored intervention strategy of checklist introduction, baseline data collection, and interrupted time-series analysis for data processing and feedback. The checklist was introduced to clinical staff through two-half day sessions in the operating theater (OT). Data was collected in all OTs: main (3), obstetric (2) and pediatric (1). Infection prevention standards were: (i) hand & patient skin decontamination, (ii) tracking of surgical gauze, (iii) timing of prophylactic antibiotics, (iv) instrument sterility, (v) integrity of gowns and drapes, and (vi) checklist compliance. Data sources included direct observation, patient chart review follow-up (infections, reoperations, length of stay, and mortality), qualitative interviews, and process mapping of all measures.