their needs and organizing strategies to meet those needs to a desired performance. There is inadequate evidence on interest, level of influence and effects of participation on facility performance. This study sought to explore the structures, intrests and level of influnce of collaborative level representatives in provision of primary care services in Uasin Gishu County

Structure/Method/Design: Case Study Methodology. Five primary health care facilities were selected purposively, from the six different sub-Counties. Study population included health facility committee representatives and other stakeholders working to represent community members in health activities. Data collection was through observation, Key Informant interviews, informal group discussions and review of documents including minutes. . Data was captured using audio recording, pictures, notetaking and a reflective journal. Data was and transcribed cleaned coded and analyzed into emerging themes.

Findings: A total of 26 respondents were interviewed, and minutes of 5 facilities for s reviewed of the past 2 years starting 2014. Attended 3 public health public participation activities, and sat in three meetings. Health Facility Committee is the main formal government structure for community members to participate. There was no formal schedule for meetings attendance except for one facility.

Committee mainly meet when there is funds for facility or any project going on. The facility committee's members participated majorly in projects as opposed to day to day functioning of facility. The committee members generally attended all meetings funds.

Committee members with bigger influence were former political leaders or retired government officials. They are also able to lobby with government for mainly infrastructure support

Sometimes the committee members whistle blow on lack of drugs or shortage of facilities to political leaders like Governor.

Outcome & Evaluation: Structures of collaborative representation should be strengthened. A coordinated and collaborative response is required to tackle the complexity collaborative participation. Collaborative participation is a delicte process and needs strentnening for representation of community inteests

Going Forward: Community has some level of influce which utimately affects the service delivery.

Abstract #: *LAN.003*

TEAM Malawi: Low Cost Digital Microscopy for Automated Lab Testing

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Background: Today, Malawi is suffering from a major shortage of qualified lab technicians to scan, diagnose, and treat its population.

Increased accessibility of accurate diagnostic mechanisms is the first step towards better specialized treatments which ultimately can lead to a healthier global population. Although not prevalent in developed countries, Tuberculosis affects 281 people per 100,000 in lesser developed nations, particularly in Africa. Current conventional light microscopy that examines Ziehl-Neelsen-stained direct smears requires trained staff and time. Fluorescence microscopy (FM) can be applied for specific situations and has shown to have high sensitivity, short examination time, and requires less sample magnification, rendering it more efficient. However, its widespread use has been limited by its high equipment cost, which warrants the need for automated, low cost digital fluorescence microscopy and systems for the detection and diagnosis of Tuberculosis.

Methods: The system we propose to build must be capable of running on battery power for an extended period of due to the limited reliability of power grids in Malawi. It will be able to use its on board computer to automatically focus, scan and process the fluorescing sample to accurately give a diagnosis by the WHO standards; freeing up to six hours of the technicians' time per day to perform other tasks. To increase its durability and assure reliability, the device will be designed to withstand a fall from chest height. Furthermore, the applications of this automated, low cost digital fluorescent microscopy unit are not limited to just Tuberculosis and can be potentially used to scan for neglected tropical diseases such as Schistosomiasis.

Findings: Interviews with lab technicians on past trips to Malawi indicated a clear benefit for improved technology to process and screen lab samples. Most of the technicians had a high workload and many did not have access to the equipment to manage that. This test platform will provide low-cost light-field and fluorescence digital microscopy that can take auto-focused images to scan slides for automated computer vision screening of samples.

Interpretation: The development of this low cost device will significantly increase the accessibility to FM techniques and improve global health overall.

Abstract #: *LAN.004*

Development and Testing of a Low Cost Videolaryngoscope in a Resource Limited Setting

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Background: The role of videolaryngoscopy has been increasingly recognized for training and management of difficult airways. Videolaryngoscopes improve visualization of the glottis for the anesthesia team and enhance supervision of intubation technique. Videolaryngoscopy requires less force than direct laryngoscopy, reducing cervical spine movement and permitting awake airway inspection and intubation. Current commercial videolaryngoscopes are too expensive for many resource-limited settings. We sought to address this problem by developing an inexpensive, reusable videolaryngoscope.

Methods: We have created a low-cost videolaryngoscope by combining a smartphone-compatible endoscope with a 3D printed hyper-angulated blade. The technology was iteratively designed using SolidWorks ® 3D modeling software, and printed with the Dremel 3D20 Idea Builder using biocompatible PLA. The device is reusable and costs $25. It was designed, manufactured and tested at United Mission Hospital, Tansen, Nepal.

Findings: The "Tansen Videolaryngoscope" was tested against a conventional Macintosh direct laryngoscope (DL) in a CPArlene ® airway manikin model. The study involved 32 participants with no prior videolaryngoscopy experience and varying levels of intubating skill. We found improved Cormack-Lehane grade of view on laryngoscopy (Videolaryngoscopy: 2.63 (SD: 1.54), Direct: 3.75 (SD: 1.14), p= .0035), and increased "ease of use" with our device (Videolaryngoscope: 1.31 (SD: .47), Direct: 2.28 (SD: .92), p= 0.0000047). There was not a statistically significant difference in the intubation success rate, time to visualize cords or time to pass ET tube between both laryngoscopes.

Interpretation: A smartphone compatible endoscope combined with a 3D printed blade provides a good basis for low-cost videolaryngoscopy. This work illustrates the potential for medical innovation in resource limited settings using simple, inexpensive technology. Further trials in a "difficult airway" manikin, followed by testing in patients, could enable this simple, low cost option for videolaryngoscopy to be clinically available in the near future.

Abstract #: *LAN.005*

Getting High Quality Data to Drive Programs: How is the Quality of the Data Collection System Associated with the Quality of Routine Health Data in Malawi?

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Background: Routine data can be a rich source of information for health systems. However, the perceived and actual quality of routine health data in low- and middle-income countries hinders its use for policy and programming. We conducted a data quality assessment (DQA) with the aim of characterizing the quality of routine data in Malawi's health system and identifying associated systems-level factors.

Methods: The DQA was led by the Central Monitoring and Evaluation Division of the Ministry of Health of Malawi. It was conducted in 15 randomly selected districts, stratified by zone. The sample included 16 hospitals, 90 randomly selected health centres, and 16 district health offices (DHOs), including one district with two DHOs. Registers, monthly reports, and computerized records were reviewed for five service areas: antenatal care (ANC4), family planning, HIV testing and counseling (HTC), and acute respiratory infection (ARI) and pneumonia diagnosis. Interviews were conducted with facility and district personnel to assess current Health Management Information System (HMIS) functioning.

Data quality was characterized within four domains: availability; completeness; consistency; and validity. Analysis of variance and multiple linear regression were used to measure the association between data quality and facility and DHO performance in HMIS functional areas.

Findings: Data quality varied across service areas; median verification ratios, comparing register and report totals, ranged from 0.78 [IQR 0.25 − 1.07] for ARI to 1.00 [IQR 0.96-1.00] for HTC. Procedures required by Malawi's HMIS policy are not implemented at many facilities: only 60% of facilities report receiving a documented supervisory visit for HMIS in the six months preceding the assessment. Adherence to data quality practices is low, with a mean score of 0.51 out of 1.00 [SD 0.30]. Half of facilities have a full-time statistical clerk; however, employment of statistical clerks at facilities is not significantly associated with the availability or completeness of data.

Interpretation: These findings can guide improvements in Malawi's HMIS, including increased awareness of and adherence to existing policies. The associations between systems-level factors and data quality can inform efforts to strengthen HMIS in other LMICs.

Abstract #: *LAN.006*

Bottlenecks and Red Tape Reduce Access to Government Support Programs by Botswana's Most Vulnerable Young Women

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Background: Botswana's HIV prevalence is among the highest worldwide, with young women disproportionately affected. Structural barriers such as poverty, lack of education, and gender violence mean that young women are unable to implement HIV-prevention choices. Transactional and age disparate sex increase their HIV risk. A national structural intervention, implemented as a stepped-wedge cluster randomized controlled trial (ISRCTN54878784), aims to prepare young women to apply to available government support programs and to align the programs in favour of young women. Records review revealed that these programs don't reach the most vulnerable.

Methods: An exploratory study reviewed demand- and supply-side challenges to accessing government support programs in the first intervention district. All participants gave verbal consent and received assurances of anonymity. A young woman from the district and a local researcher undertook semi-structured interviews with 18