

et al., BMC Health Services Res 2014), with a dearth of literature on adherence to best practices for outpatient encounters. Both private and public outpatient clinics utilize clinical officers (COs), non-physician healthcare providers that complete three years of clinical training and a one-year internship, to deliver health services. Interventions to increase midlevel care providers' adherence to clinical quality guidelines could lead to substantial improvements in the standard of primary care. The aim of this study was to better understand factors that influence the uptake and adherence to clinical quality guidelines by midlevel care providers.

Methods: The study was carried out in three Penda Health outpatient clinics around Nairobi, Kenya. Penda Health is a chain of private outpatient clinics that delivers comprehensive primary care services to low and middle income Kenyans using midlevel care providers, servicing approximately 2,000 unique patient visits per month. In 2014, we developed 17 clinical quality guidelines based on internationally recognized best practices across four health areas: urinary tract infections, vaginal discharge, tonsillitis and childhood diarrhea. COs received interventions to increase adherence to these guidelines, including: 1) An online educational module assigned to each provider; 2) A mandatory 2 hour educational and training session; 3) System changes; and 4) Monthly feedback with each provider. This quasi-experimental, longitudinal study took advantage of this new protocol set-up at Penda to track adherence and performance to Penda clinical quality measures (CQMs). Relevant data were Abstracted from patient medical charts to develop CQMs. Demographic and professional information was also collected on each provider. Penda employs temporary COs that are not permanent Penda staff, and were not subject to the study treatments. The locums, therefore, acted as a natural control group. Multivariable logistic regression and interrupted time series analysis are being used to determine whether the intervention had a significant effect on adherence, and, if so, at what point in time this effect occurred.

Findings: Preliminary analyses indicate a significant increase in adherence to CQMs over the study period, with full-time Penda COs exhibiting a higher odds of adhering to guidelines than locums. Final results, and a discussion on the factors that prove to be the strongest predictors of adherence, as well as a formative evaluation of the interventions themselves, will be presented.

Interpretation: Simple interventions related to clinical education, CQMs, and organizational process changes can improve adherence to clinical quality guidelines in a resource-limited setting.

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Abstract #: 01ETC024

New medical schools in Africa – challenges and opportunities CONSAMS and the value of working in consortia

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Program/Project Purpose: Context Africa bears 24% of the world burden of disease but has only 3% of the global health work force. Health worker capacitation to cope with this burden of disease is therefore a priority. This goal is best achieved by establishing new medical schools to graduate more healthcare workers. By some estimates over hundred new medical schools will open in Africa over the next decade. Whether these new schools will be capable of sustaining

themselves remains uncertain Program/Project Period CONSAMS –the Consortium of New Southern African Medical Schools – represents such a consortium. Currently comprised of 5 new southern African medical schools of less than 5 years since opening (in Namibia, Zambia, Mozambique, Lesotho and Botswana and two Northern partner schools at Vanderbilt University in the USA and Oulu University in Finland). Why the program/project is in place, in one or two sentences A seminal Lancet report of 2010 (Frenk et al.) suggested that resource-constrained medical schools can best achieve sustainable capacitation by collaborating within “networks, alliances and consortia” to share ideas, faculty, resources and innovative programs. Aim We describe here some of the challenges and opportunities facing new schools in Africa and present a case for the value of working together in consortia like CONSAMS

Structure/Method/Design: Program/Project Goals, Desired Outcomes Through joint meetings and numerous regional exchanges between partner schools CONSAMS has implemented several successful context-appropriate educational strategies and programs aimed at health care strengthening and health worker capacitation. Participants and Stakeholders: How were they selected, recruited? Partners were brought into CONSAMS as medical schools known to be less than 5 years old since opening and through shared interests and determination to meet challenges and opportunities. Capacity Building / Sustainability: What is the plan, structure in place to encourage viability? The Consortium is sustained through regular meetings, through south-south and north-south sharing of faculty, programs and innovations. Other new African medical schools are being invited to join.

Outcomes & Evaluation: To date, what are the successes and outcomes achieved? Opportunities identified and achieved include: (1) Development of innovative context-based medical curricula; (2) Sharing of limited resources and pedagogical innovations with partner schools; (3) Faculty and student exchanges between schools; (4) Development of regional accreditation standards; (5) Submission of Consortia-wide funding applications

Going Forward: What are the ongoing challenges? Challenges identified for new medical schools in Africa include: (1) Curricula unsuited for the African context – either outdated or obliviously imported from Western medical organizations; (2) Faculty shortages, lack of faculty development and continuing medical education (CME) programs; (3) Lack of postgraduate training programs; (3) Uncertainties about sustainable government funding and strategic planning for medical school development; (5) Inequitable student admissions policies favoring affluent urban applicants over disadvantaged rural applicants that fail to promote physician retention. Are there any unmet goals? To effectively achieve health worker capacitation in Africa scores of new medical schools are being established throughout the continent. The success of these new schools is not guaranteed as they face many challenges.

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Abstract #: 01ETC025

Mitigating the digital divide: Access, attitudes, and training in information and communication technologies among medical students at University of Zimbabwe College of Health Sciences, Harare, Zimbabwe

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Program/Project Purpose: A historical divide exists between Western countries and their African counterparts in technical features of medical education and learning. With 15% of the world's population, Sub-Saharan Africa has a mere 7% of internet users [1, 2]. When such countries acquire technology, many healthcare professionals lack the training to capitalize on it [3]. The aim of this project is to determine the level of access, attitude, and training concerning meaningful use of electronic resources among medical trainees.

Structure/Method/Design: Mitigating the Digital Divide is a collaborative project between Western Connecticut Health Network (WCHN), and University of Zimbabwe College of Health Sciences (UZCHS), Harare, Zimbabwe. The needs assessment tool consisted of a 20-question voluntary and anonymous survey. After brief introduction regarding goals of the project, the investigator distributed the questionnaire among participants. Participants were mainly medical students undergoing clinical rotations in medicine, surgery, and pediatrics. Descriptive statistics were used for analysis. IRB approval of both institutions was obtained.

Outcomes & Evaluation: The response rate to the survey was 91% (64/70). Eighty-seven percent of responders had adequate access to a variety of digital medical resources, a finding that emphasizes access to electronic medical resources as not a major obstacle for medical students and trainees at UZCHS. The majority of responders were comfortable in the use of various online search engines, including Google (83%), Wikipedia (83%) and PubMed/Medline (72%). However, printed textbooks were still the most popular reference among the majority of 52%. Twenty-three percent of responders had training in evidence-based medicine though only 7% found it adequate. Ninety-three percent of participants did not receive formal training in journal club presentation and scientific reading skills, among which 77% showed interest in learning these necessary skills.

Going Forward: As a result of recent educational grants, including Medical Education Partnership Initiative (MEPI) and President's Emergency Plan for AIDS Relief (PEPFAR), medical education in countries such as Zimbabwe has enjoyed significant technical growth. However, while more than half of participants, 67% had free access to the internet, lack of training in evidence-based medicine, journal club presentation, and analytical reading skills have limited the impact of existing technology in enhancing the level of knowledge among healthcare trainees in Sub-Saharan countries. Future directions involve the creation of a curriculum centered on equipping healthcare trainees in Sub-Saharan countries with these necessary skills: devising a clinical question, reading medical literature with a critical eye in search of an answer, and utilizing available resources to build one's fund of knowledge.

Funding: Western Connecticut Health Network Global Health Program

Abstract #: 01ETC026

Developing a successful program for global health in a medical school: Enhancing cultural and linguistic skills

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Program/Project Purpose: Global health education enhances students' interest in the care of underserved populations and the applied lessons may help improve USA health-care delivery systems. Our work in New Brunswick shows that local communities are becoming very diverse, and that a large number of primary care patients (over 60% in some clinics) are recent immigrants from nine

Latin American countries, a majority of whom speak only Spanish. Some of these populations are affected by existing health disparities that students will have to address during their clinical years. Thus, enhancing cultural and linguistic skills is an important goal in the education of our medical students.

Structure/Method/Design: We offer summer global fellowships to first year students and global health electives to third and fourth year students. These are widely advertised and include presentations at orientation and class meetings. We select more than 50 medical students for experiences abroad each year. Several sites are located in Spanish-speaking countries and this allows us to provide cultural and linguistic experience to the students (University-affiliated sites in Zaragoza, Spain, San Salvador de Jujuy, Argentina, Lima, Peru, Medellin, Colombia, Quito, Ecuador, and others). The objectives of these global experiences include enhancing core competencies, with particular emphasis on cultural sensitivity/competence, enhancement of linguistic skills, gaining knowledge about other health care systems, infectious or other unique local diseases in the host country. Before they go, students enroll in a Medical Spanish program offered by the school. They are provided information on the specific countries and connected to a local mentor or supervisor. Students review didactic materials throughout the rotation focusing on global health issues, work under the supervision of a local "mentor" and work collaboratively with other professionals in community settings and understand how health services are provided in other health care systems, some of them quite advanced (e.g., Spain) and others lacking resources.

Outcomes & Evaluation: During the past 4 years, 225 students have done global health rotations. Of these, 130 were first year students and 92 were third and fourth year students. Upon their return, students were briefed, evaluated their experience wrote a brief report and presented a poster at the annual global health event. 96 of these students went to Spanish-speaking countries. They were unanimous in expressing satisfaction with the experience (>95%), and >90% of those who were not primary Spanish-speakers reported a significant improvement in their Medical Spanish. According to personal interviews with the students, this experience significantly stimulated them to consider global health careers or practice in communities where there is a shortage of linguistically competent providers.

Going Forward: We will continue to enhance programs focusing only on a few selected sites and will carefully track outcomes.

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Nicaragua global health elective: An integrative and interprofessional education model

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Program/Project Purpose: Students of health care professions often seek global health experiences during their training. Educators need to facilitate these opportunities while emphasizing appropriate global health competencies and fostering interactions that are mutually beneficial with the host colleagues. The literature on student global health experiences focuses on burden of disease, travel medicine, healthcare disparities, primary care, cultural skills, and foreign systems. However, few sources describe the appropriate role of visiting