

Summary/Conclusion: Undergraduate students report less preparation and support and are more likely to work in challenging inpatient settings than graduate students. While academic departments are tasked with promoting graduate and faculty research, institutional support should be provided to all student researchers to ensure safety and ethical research conduct. These data could be applied to design training and support mechanisms that meet the needs of both graduate and undergraduate students.

Facilitating student exchanges in health professions education through institutional partnerships

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Background: International student exchanges during undergraduate medical education have become common. While these experiences are generally rewarding, they are not without challenges. Schools are not comfortable sanctioning international exchanges when details of the elective experience are unknown. Because these experiences are increasingly popular, particularly in developing countries, identifying a solution that improves transparency and facilitates the development of multilateral partnerships is paramount.

Structure/Method/Design: Interviews and face-to-face meetings with staff and faculty of international medical schools were conducted to identify features that would enhance the efforts undertaken by international medical schools associated with expanding partnerships to increase student opportunities. Key issues identified were identification of appropriate contacts, curriculum compatibility, readily available elective information, host school support, student safety, and a formal application process.

An eight-member advisory committee with global representation determined that development of an international partnership would facilitate transition from bilateral agreements to collaborative agreement among partner schools that included commitment to shared values that transcend differences in culture, curricula, resources, and local health care needs. The group further determined that this partnership should be facilitated by a charter that formalizes this commitment.

Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): Three components were developed to address the issues identified. A web-based system, the Charter, and regular virtual meetings comprise the system that supports this effort. The system formalizes the application process and showcases elective opportunities. Schools provide detailed curricular information, contact information, safety, location, and housing information. Partner schools can view the profile of other schools, approve their outgoing students and accept incoming students. By the end of 2013, 20 schools were recruited, and their medical school deans had signed the Charter, which outlined school roles and responsibilities, and defined activities that would be undertaken by home schools (those sponsoring students) and host schools (those receiving students). The 20 partner schools in 16 countries offered over 300 clinical and research opportunities to final-year medical students. The organization developing the web-based system hosted virtual and face-to-face meetings to build trust and generate collaborative relationships.

Summary/Conclusion: Creating an atmosphere of trust for the partner schools required diligence on the part of both the schools agreeing to the Charter and the organization facilitating the exchange process. While data on the value of the Charter and the software system has not yet been collected, the partner schools are already beginning to collaborate to facilitate exchange experiences for medical students.

Building research capacity in chronic disease prevention in Mesoamerica: Progress and lessons learned

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Background: Chronic noncommunicable diseases (NCDs) represent the leading cause of death and disability among both men and women in all countries in Central America. In 2009, the Institute of Nutrition of Central America and Panama (INCAP) obtained support from the U.S. National Heart, Lung, and Blood Institute (NHLBI) and the United Health Group to launch a network of Centers of Excellence (COEs) in Chronic Disease for nine countries in Mesoamerica. This presentation describes the INCAP COE's capacity-building model and reports on progress and challenges from its first 3 years, and recommendations for the future.

Structure/Method/Design: INCAP's research capacity-building approach is based on a systemic capacity-building model proposed by Potter and Brough (2004): a pyramid-shaped model with four levels: 1) tools; 2) skills; 3) staff and infrastructure; and 4) structures, systems, and roles. To determine the extent to which INCAP has implemented its research capacity-building work, a comparison was made of the project as originally designed with activities carried out to date, using proposal documents and project reports. Then, in order to elicit perceptions of progress, challenges, and lessons learned in its initial start-up phase, an internal assessment was conducted from July to September 2012 in which 18 people with different roles in the center and at partnering institutions were interviewed. Interviews were transcribed, input into Atlas.TI, coded, and analyzed using a content analysis approach.

Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): Activities successfully carried out as originally planned were six topic-specific workshops for trainees, enrollment of students in PhD programs to meet future research staff needs, and the implementation of three core research projects on nutrition-related chronic disease prevention. The COE was unable to make proposed changes in existing master's or undergraduate program curricula in institutions in the region. Primary weaknesses identified were lower-than-expected initial academic level of trainees; insufficient number of senior mentors; and low priority given to research at local universities. The research projects were identified as the most important activity as they: build trainees' skills in an applied way, represent an opportunity to learn rigorous methodology, and present concrete opportunities for employment. INCAP's regional nature, presents both opportunities for cross-country learning and also logistical and communication challenges.

Summary/Conclusion: INCAP has been most successful in implementing activities at the skills-level of the pyramid and has faced challenges closer to the base. Building capacity at the base of the pyramid will require working with decision makers at local universities and health institutions to allocate resources and prioritize research in NCDs.

Fostering the nursing/midwifery workforce in sub-Saharan Africa

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Background: Sub-Saharan Africa faces a health workforce crisis with only 3% of the world's health care workers for 24% of the global burden of disease and only 1% of the world health expenditure. Recent data indicate that nurses in select African countries were not able to perform critical health care delivery tasks, highlighting the need for relevant nursing and midwifery curricula. The PEPFAR-funded Nurse Education Partnership Initiative (NEPI) aims to scale up nursing and midwifery preservice education programs to address essential health challenges through the introduction of competency-based curricula where students are taught, learn, and are evaluated based on how well they can put clinical skills into practice, and through clinical simulation where students gain patient care experience using lifelike models.

Structure/Method/Design: NEPI is partnering with governments in five African countries and collecting best practices in nursing curriculum development and clinical teaching and learning methodologies. Baseline assessment of teaching programs and outputs, as well as a desk and data survey of best practices in curriculum development, clinical simulation and training evaluation, were conducted to inform innovation in nursing education across the continent. New topics that require training were also identified, particularly Option B+ for PMTCT.

Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): Intersectoral collaboration has produced four competency-based preservice curricula, expanding the availability of comprehensively trained nurses to address general health and maternal and child health challenges in Zambia, Lesotho, and Malawi. Simulation laboratories were installed at six nursing education institutions in Lesotho and one refurbished in Malawi; over 1500 nursing students have utilized these laboratories to enhance their skills. A curriculum for Option B+ is being developed to respond to the urgent need for its scale up.

Summary/Conclusion: Nurse and midwives with the right knowledge, skills, and abilities are key to a country's mandate to deliver effective primary health care services and tackle priority health challenges. Competency-based curricula, including the Option B+ curriculum under development, and the expanded use of clinical simulation will facilitate increased learning and skill transfer when students care for patients in today's complex, health care environment. Various evaluation methods will assess the effectiveness of these interventions and inform scale up.

Building capacity of training institutions and Ministries of Health in sub-Saharan Africa: The PEPFAR approach

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Background: Shortages of human resources for health (HRH) remain a major bottleneck to increasing access to health services in sub-Saharan Africa. As the global health agenda evolves from a focus on the Millennium Development Goals to Universal Health Coverage, and as countries' disease priorities increasingly include both communicable and noncommunicable diseases, strengthening production of HRH remains a priority. While the President's Emergency Plan for AIDS Relief (PEPFAR) supports national HIV responses, its substantial investments in HRH have been leveraged to address priority health concerns more broadly.

The goal of this session is to describe the PEPFAR program's approach to strengthening health training institutions and HRH education, drawing on the experiences of several projects managed centrally and at the field level. At the preservice level, the Medical Education Partnership Initiative (MEPI), the Nursing Education Partnership Initiative (NEPI), and the Global Health Services Partnership (GHSP) offer three unique models of institutional capacity building focused on clinical providers. The Field Epidemiology Training Program (FETP) focuses on training of the public health workforce. Additional country-driven investments capacitate training and education of a range of cadres—from community health workers to those obtaining doctoral degrees in the health sciences to social workers. At the in-service level, PEPFAR increasingly supports linkages with both preservice training and service delivery, such as through development of national in-service training frameworks and institutionalization of continuing professional development structures. Finally, PEPFAR has facilitated interlinkages between institutions supported by these different programs, such as through linking FETP and MEPI curricula. PEPFAR's approach indicates that HRH investments in a vertical disease program can serve as a platform for strengthening training institutions and education systems more broadly.

Structure/Method/Design: Presentation(s) followed by Q&A/discussion

Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): CDC, USAID, HRSA, NIH, Peace Corps

Summary/Conclusion: * Leveraging a vertical disease platform to strengthen education and training systems comprehensively and broadly

* Capitalizing on the comparative advantages of multiple US government agencies to comprehensively build national capacity in education and training institutions

eLearning at a Medical School in sub-Saharan Africa: Use of the Technology Acceptance Model to evaluate implementation effectiveness

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Background: To achieve international health development targets such as the Millennium Development Goals (MDGs), the health workforce in sub-Saharan Africa (SSA) needs to be expanded by as much as 140%. In response to this challenge, schools of medicine have increased student enrollment substantially. This expansion has led to low faculty-to-student ratios, which may undermine the quality of education at these institutions. In an effort to support medical education in SSA, the US government has provided assistance through the Medical Education Partnership initiative (MEPI). Selected institutions within the MEPI network have deployed eLearning to support curriculum delivery. However, this deployment may not guarantee optimal utilization and adoption by students and faculty members. Careful evaluation of acceptability and technology fit is critical to ensure effective implementation and sustainability. This study focused on the eLearning platform deployed at the Kilimanjaro Christian Medical University College (KCMUCo), Tanzania. We utilized a theoretical framework to evaluate the level of acceptance of technology at KCMUCo. The Technology Acceptance Model (TAM) posits that perceived ease of