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Application of Medical Student Research Objectives in an International Medical Elective: Voluntary Medical Male Circumcision in Swaziland

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Program/Project Purpose: University of Florida (UF) students began conducting annual one-week medical outreach trips abroad in 1998, with up to two-thirds of UF College of Medicine (COM) students participating in a trip. Though a Local/Global Health Equity Track and student-initiated clinical and research electives exist, the COM global health (GH) program lacks an overarching curriculum. To expand the focus of student GH engagement, a working group composed of students and faculty collaborated to create a new, comprehensive GH program based on long-term partnerships.

Structure/Method/Design: Engaging students in development of new curriculum seeks to ease the transition from longstanding brigade trips to a more responsible and sustainable GH education program. Senior medical students previously participating in GH outreach trips and affiliated faculty conducted a SWOT analysis of current programming and resources. An initial group of four students and one faculty member expanded to approximately 20 stakeholders, which met three times to complete the analysis. Priorities and immediate action items were identified for students to address with faculty support.

Outcome & Evaluation: Five priorities were identified—To establish: 1) a Planning Group composed of students, faculty, and administration to engage current stakeholders; 2) an inventory of potential partners on the UF undergraduate campus; 3) an inventory of potential partners outside UF potentially supporting a larger-scale program; 4) a finance group supporting programs; and 5) a curriculum track addressing an interdisciplinary GH program's needs. The desired outcome is to shift the focus from the current unsustainable short-term trips to more culturally competent and longer-term projects for interested students. A Planning Group is established and immediate action items have been developed for each of the other four priorities.

Going Forward: UF COM has a rich tradition of student-initiated service engagement. Fostering such enthusiasm to better meet UF principles of engagement requires a transition to improving organization and support for a more unified, sustainable GH program. Involving interested students in program design encourages participation and acceptance for improved offerings while best serving the needs of local partners.

Funding: UF Division of Infectious Diseases and Global Medicine, Office of Global Medical Education Programs, and student fundraising.

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Application of medical student research objectives in an international medical elective: voluntary medical male circumcision in Swaziland

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Background: Educational objectives for medical student international electives are essential. Learning research methodology and

engaging in research projects focus students during their travels and reinforce curriculum goals. Our project focuses on the use of an international database by medical students to produce clinically significant findings impacting international health policy. We examined the adverse event rate in voluntary medical male circumcision, a procedure demonstrated to reduce HIV transmission by over 60%. Voluntary medical male circumcision is nearly 40 times more cost-effective than antiretroviral medications. Academic research during student international electives augments career value of rotations for students.

Methods: The Luke Commission provides mobile health outreach to rural Swaziland, including HIV testing and prevention. They perform more than 100 voluntary medical male circumcisions each week. The Luke Commission maintains a database demonstrating program productivity and effectiveness. Information collected from 1500 Swazi males during the first six months of 2014 was de-identified and analyzed after approval by the Wright State University School of Medicine IRB.

Findings: During this time period, 34 adverse events—including bleeding, infection, and wound dehiscence—occurred in 31/1500 patients. The overall adverse event rate for the procedure was 2.3%. Boys <12 years old had adverse events in 22/1022 circumcisions (2.2%) and patients ≥13 incurred 11/478 (2.3%; p=0.66). Patients ≤29 kg body weight had 19/662 (2.9%) and patients ≥30 kg had 13/838 (1.6%; p=0.40). There were no adverse events reported in 75 HIV-positive patients. There were more wound dehiscesces during the summer months, 10/333 (3.0%) versus 10/630 (1.6%) in fall and 0/517 (0%; p=0.001) in winter.

Interpretation: Aid organization databases provide a source of information that can be readily accessed by medical students for research during international medical electives. The relationship between aid organizations, medical students, and patient populations is a collectively beneficial one. Global health research has many complexities, but through careful planning and cultural awareness, medical students can contribute by publishing research that brings attention to global health issues and improves policies while having a significant positive effect on their own educational experience.

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Perceptions and adherence to the World Health Organization surgical safety checklist in Cuenca, Ecuador 1 Year post-educational intervention

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Background: Surgical safety is an emerging global health priority. The World Health Organization's Surgical Safety Checklist has been shown to be effective in reducing adverse surgical outcomes in this context. A 2014 study of Canadian hospitals failed to replicate these findings; authors' commentary attributed the results to poor Checklist adherence amongst hospital staff. In 2014, our group investigated Checklist implementation at 2 hospitals in Cuenca, Ecuador that had recently integrated the Checklist into surgical workflow. Surgical observations and questionnaires to hospital staff