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## Strengthening the capacity of medical faculty in Haiti to appraise clinical research papers and participate in journal clubs

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**Background:** In Haiti, very few medical training institutions offer courses aimed at understanding and evaluating clinical research methodology. Many medical instructors have little to no knowledge or experience conducting or assessing clinical research. The lack of access to this knowledge creates a challenge for research capacity building at medical facilities. Basic research methodology is needed for original research. It is also necessary for Haitian faculty to have competency in research methodology to provide guidance and mentorship for future physicians. Zanmi Lasante, a Haitian based medical organization, conducted a workshop aimed at strengthening the capacity of medical faculty to critically appraise clinical research papers and effectively participate in journal clubs.

**Methods:** Medical program directors and nurse educators from two medical teaching hospitals were invited to participate in a 20-hour workshop. The course material included clinical research papers found using HINARI, a guideline for critical research appraisal, a review chart and a PowerPoint presentation. Study design, bias, measures of association, statistical significance, techniques and approaches to facilitating a journal club were major concepts discussed. A pre-and-post-questionnaire was given to evaluate attitude. Participants were also asked to prepare and lead a journal club within their departments two-weeks after the training.

**Findings:** There were 16 participants for the workshop. Results from the pre-questionnaire demonstrated that 12.5% was very comfortable reading or presenting a clinical research article. None of the participants reported feeling comfortable participating in a journal club. Post-questionnaire results revealed an increased to 75% for reading, 25% for presenting a clinical research article and 87.5% for participating in a journal club. A total of 87.5% participants expressed moderate or high satisfaction with the workshop. After the course all the participants conducted in a journal club in their respective departments.

**Interpretation:** Zamni Lasante organized a research methodology workshop to strengthen the capacity of trainers to make appraisal of clinical research papers and effectively participate in a journal clubs. Participants felt more comfortable reading a clinical research paper and conducting a journal club. Potentially adding workshops to medical training institution's curriculum may help future research capacity building efforts.

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A study in South American host perspectives of US medical personnel on foreign medical rotations

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**Background:** International rotations are very popular amongst US medical schools and residency programs. South American rotations offer unique clinical and language experiences. The purpose of our study was to investigate how US trainees are perceived by South American hosts so US institutions can better prepare their personnel to optimize the experience within medical training.

**Methods:** Our survey was designed to assess the attitudes and experiences of South American physician-hosts during their interactions with visiting US trainees. The survey was exempt after review by the University of Utah IRB. It was sent to 206 physicians throughout South America via host program directors. Participation was voluntary. As of October 2015, 40 physicians have completed the survey. This study will present preliminary findings from those responders.

Findings: A total of 40 physicians took the survey. Respondents were from Colombia, Brazil and Chile. Most were Emergency Medicine physicians (30, 75%). Primary objectives in hosting were evenly split between improving own medical knowledge (23%), clinical skills (26%) and broadening cultural exposure (30%). Knowledge exchange occurred in both directions, 54% felt they improved US trainee knowledge and 80% felt they had their own knowledge base improved by the trainee. Most thought that 4-8 weeks was the optimal time for a rotation (78%). Free text responses highlighted the value of cultural interaction to both parties. Suggested areas of improvement included the importance of the visiting trainee's ability speak their native language (92%). This was emphasized in free text responses. Other areas of improvement included knowledge of endemic diseases, understanding local culture and understanding host resources. All respondents would continue to host US trainees.

**Interpretation:** Most South American hosts take part in international exchange for educational and cultural purposes and find this interaction beneficial. Our survey suggests that the relationship works best when the medical trainee is a resident with the ability to speak the native language, a good fund of knowledge of endemic diseases and the ability to visit for four or more weeks. Overall, the relationships between US trainees and South American hosts appears beneficial to both parties in terms of medical and cultural experiences.

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## Improving hand hygiene at a district hospital in rural Rwanda

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**Background:** Healthcare-associated infections remain a significant risk for hospitalized patients around the world. Hand hygiene is known to be a critical action in ensuring patient safety. The

objective of this study is to improve hand hygiene compliance among doctors and nurses in a rural hospital in Rwanda using the World Health Organization's (WHO) "Five Moments for Hand Hygiene" and modified hand hygiene educational tools.

**Methods:** The study was a cross-sectional, quasi-experimental design divided into four phases: (1) Preparedness and hospital administration onboarding, (2) baseline evaluation, (3) intervention, and (4) follow-up evaluation. The intervention involved education, introduction of alcohol-based hand rub, and hand hygiene reminders. Hand hygiene evaluations were done using WHO's direct observation technique.

**Results:** Overall, hand hygiene compliance improved from 34.1% at baseline to 68.9% post intervention (p<0.001). There was one sink for 29 patient rooms, and 100% of hand hygiene opportunities used alcohol-based hand rub. Hand hygiene was significantly higher among doctors (69.3%) compared to nurses (31.3%) (p<0.001). The only measure of hand hygiene compliance that did not improve was "after body fluid exposure," which as 51.7% before intervention and 52.8% after intervention (p>0.05).

**Conclusion:** Hand hygiene campaigns using WHO methods in sub-Saharan Africa have almost exclusively been implemented in large, referral hospitals. This study shows that slightly modified WHO tools for improving hand hygiene can also be successfully executed in low-income, rural hospitals in sub-Saharan Africa.

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## Lessons learned in alumni networking with the Afya Bora Consortium

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**Program/Project Purpose:** The Afya Bora Consortium in Global Health Leadership is a highly successful health professional training program now in its 5<sup>th</sup> year with over 80 alumni spanning 5 countries. Yet, mechanisms for alumni communication and collaboration are still being explored. To address this, the Afy Bora Consortium offered alumni funding opportunities to come up with innovative strategies to engage, communicate with and promote each other to ensure continued investment, interest and support from alumni. This project aimed at developing alumni networking opportunities and continued professional development at the annual Afya Bora meeting.

**Structure/Method/Design:** This project assessed through surveys the perceived benefit of adding additional networking opportunities and varied learning styles to the annual Afya Bora meeting, including the addition of a professional poster session. Descriptive statistics and qualitative research methods were utilized based on the Plan, Do, Study, Act (PDSA) model. The study population were those in attendance at the annual Afya Bora meeting in Gaborone, Botswana in July 2015, including new and outgoing fellows, alumni, working group members, site mentors and global health leaders.

**Outcome and Evaluation:** Those in attendance at the Afya Bora annual meeting were satisfied with the posters of the alumni, working group and site mentors and they responded to surveys that the meeting increased their knowledge of the Afya Bora Consortium and the work the alumni and fellows were completing (89.3%). The delegates who attended the poster sessions also thought that it was a useful way to network (80.4%). Overall, the delegates completely agreed that including a poster session was a valuable addition to this final meeting.

**Going Forward:** Annual meetings for the Afya Bora Consortium could include poster sessions based on the satisfaction of attendees, and future programs should also include more networking opportunities so that fellows, alumni and leaders in the region will have the opportunity to share and engage in south-south collaboration even after the fellowship is completed.

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## Establishment of the GeneXpert Laboratory in Imo State, Nigeria

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**Program/Project Purpose:** In 2014, the Centre for Clinical Care and Clinical Research (CCCRN), through the Centres for Disease Control (CDC) set-up a diagnostic centre for MTB/RIF assays in one of its supported sites, the Imo State University Teaching Hospital (IMSUTH). The goal was to ensure a fast and accurate diagnosis of MTB and ultimately, its treatment and control. The centre was established with the six building blocks of the Health System Strengthening strategy in mind.

Structure/Method/Design: A stepwise approach was followed in the establishment of the center. Advocacy meetings were held with Imo State government and other partners to secure a location and sign a memorandum of understanding in which a staffing plan was laid out with the IMSUTH. A sustainability plan was developed and implemented, with eventual transitioning of the centre to the Government of Nigeria (GoN) in mind. CCCRN then conducted an assessment to determine the infrastructural needs of the centre and trained the laboratory personnel to manage the centre. Following an assessment to determine the infrastructural needs of the centre, an infrastructural upgrade commenced with the identified building being rehabilitated, the GenXpert device installed and back-up power systems provided. A supply chain management system was instituted at the centre, with a Logistical Management Information System (LMIS) being set up. Quality Management System strategies were set up at the centre to ensure quality of laboratory results.

**Outcome & Evaluation:** Subsequently, the diagnostic centre became a regional reference centre for MTB/RIF assays that