compared; traditional lectures, case-based studies, and a blended approach.

Methods: Educational assessments were developed to measure knowledge gained through each approach. Pre- and post- training results of an online survey tool to assess diagnostic capacity at each institution were compared, followed by site visits to validate survey responses. In addition, qualitative surveys to assess differences in the effectiveness of the approaches were conducted.

Findings: Results of individual and departmental assessments were analyzed to determine which teaching approach is most effective in this context. Case-based teaching resulted in a 13% higher average post-assessment score; reports of increased engagement from the faculty; and increased reports of changes in practice patterns, as indicated by both online survey tools and institutional site visits. The third workshop, which will feature a combination approach of training approaches, will be held in January 2017.

Interpretation: The study has showed that case-based training is more effective at engaging participants, allowing participants to retain information, and ultimately improving the expertise of the pathology workforce in ECSA. As a result of qualitative surveys, we hypothesize that the combination approach of training approaches may be more effective than one approach in isolation. Data from all three workshops will be available by the date of presentation.

The findings of the workshop facilitate a broader discussion of the challenges of training pathologists in complex topics when faced with limited time and resources. The training was logistically challenging, expensive, required significant resources for planning and organization, and necessitated the assistance of a local host. The challenges faced throughout this workshop indicate that expanding access to cancer care will require a higher level of planning and organization than has been used in past efforts to buil health care capacity.

Source of Funding: NCI PAR 15-155 grant.

Abstract #: *2.005_HHR*

Mentorship in Malawi: A Model for Empowering Medical Students with Skills for Coping, Resilience, and Career Success

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Program/Project Purpose: Mentoring programs are widely accepted as a critical component of medical education. Mentorship not only supports professional growth, it has also been shown to improve student well-being and reduce career burnout. High levels of stress are common amongst medical students across the globe, especially for those practicing in resource-limited settings. At the University of Malawi College of Medicine, students have limited access to faculty mentors and have expressed a desire for more structured mentorship opportunities. The aim of this study was to assess the impact and feasibility of a mentorship program designed to improve Malawian medical students' mechanisms for resiliency and coping, as well as to provide them with structured career counseling from local physicians.

Structure/Method/Design: Third year medical students at the University of Malawi College of Medicine were invited to participate in a weekly mentoring group led by internal medicine residents from the University of Pittsburgh Medical Center's Global Health and Underserved Populations track. The group met in an intimate classroom setting on a weekly basis for a total of eight weeks in 2015. Topics addressed included professional burnout; making mistakes; dealing with difficult supervisors; death and dying; communication and breaking bad news; as well as narrative medicine and reflective writing. Two of the six sessions focused on career counseling, with local faculty members speaking about their own careers.

Outcome & Evaluation: A total of 15 students participated in the mentoring group, with eight students participating on a regular basis. Students were asked to complete a survey at the conclusion of the eight weeks. On average, the students rated the group useful (4.75 out of 5), and felt comfortable sharing during the sessions (4.5 out of 5). They cited such reasons as "being listened to", the "lack of judgment", and the "shared experiences" as the most useful aspects of the mentoring group.

Going Forward: This study demonstrates that small-group sessions led by visiting Global Health residents can be an effective and well-received method of mentoring for Malawian medical students. Future goals include sustaining the mentorship program with local mentors and further assessing the impact of mentorship sessions on stress levels, coping ability, and career decisions.

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Abstract #: *2.006_HHR*

Role Development of Community Health Workers for Cardiovascular Disease Control in India

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Background: Cardiovascular disease (CVD) is the leading cause of mortality in India. Since Community health workers (CHWs) have historically played a pivotal role in improving maternal and child health, it has been hypothesized that they have the potential to mitigate the impact of CVD in low and middle income countries such as India. Project SEHAT (clinicaltrials.gov number- NCT02115711) is a cluster RCT to test the hypothesis that CHWs can improve the control of cardiovascular risk factors in a community in West Bengal, India.

Methods: This study sought to quantitatively assess the training outcomes of CHWs recruited for Project SEHAT, and qualitatively assess their recruitment, training and fieldwork experiences. CHWs were recruited through a 2 step process- a written test and an interview. Upon completion of training, their knowledge was assessed by direct interview, using a standard questionnaire. Their qualitative experience was captured through a focus group discussion (FGD).

Findings: 58 applications were received, of which 48 appeared for the screening test. 30 applicants were invited for an interview and 12 CHWs were selected, 6 each in the intervention and control groups.

Annals of Global Health, VOL. 83, NO. 1, 2017
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Upon completion of 1 year of training and fieldwork, all 6 intervention CHWs were retained. Each of the 6 intervention CHWs scored >80% on the knowledge test, implying a high rate of knowledge retention. Important themes identified during the FGD included satisfaction with a 2 step recruitment process, emphasis on communication skills, a preference for audio-visual aids in training and recognition of the importance of a supervisory framework. Respect from society and a positive impact on people was consistently cited as the most satisfying aspects of the job, followed by financial compensation.

Interpretation: A 2 step recruitment process allows better fit between CHWs and the CVD program. Training should emphasize audio visual aids, communication skills and allow adequate practise. Well-trained and supervised CHWs have high work satisfaction and minimal attrition. Recruitment and training processes for CHWs in CVD programs should be more standardized to enable replication, scalability and adequate assessment of their potential to mitigate CVD mortality in low and middle income countries such as India.

Source of Funding: Marwari Yuva Manch, Dalkhola.

Abstract #: *2.007_HHR*

Creation and Implementation of Standards for Ethical Global Health Volunteering

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Background: Growing concern about the quality and ethics of short-term volunteer trips in global health has led to the development of guidelines by a number of organizations and individuals (Caldron, 2016). Some of the best known are the Working Group on Ethics Guidelines for Global Health Training (WEIGHT) (Crump & Sugarman, 2010), the Catholic Health Association (2015), and the University of Minnesota's Global Ambassadors for Patient Safety (GASP). Different guidelines include recommendations targeted at organizations planning trips, criteria for potential volunteers to consider in choosing an experience, and procedures for running medical, surgical, or dental clinics. Such guidelines cover a broad set of issues, from safety concerns for volunteers to procedures for organizing clinics to the nature of partnerships with host communities.

Methods: This paper first reviews the key recommendations in existing guidelines and standards. It then asks about the extent to which they are reflected in current practices in global health volunteering. It is based on surveys and interviews with over 300 sponsoring organizations in the U.S. as well as numerous reports about volunteer experiences.

Findings: The research reveals a lack of attention to standards in many areas such as volunteer preparation, community-based needs assessment, partnership, and evaluation. Additionally, many reports from volunteers indicate a lack of enforcement of ethical principles regarding untrained volunteers practicing medicine. The paper concludes with a discussion of reasons for the lack of enforcement of any set of guidelines and the consequences for effective health programs.

Interpretation: Volunteers are confronted with innumerable choices of programs and little guidance for choosing the best ones. And spponsoring organizations are subject to few controls on their practices. Guidelines are for now mostly aspirational; serious consideration needs to be given to how to enforce them to improve effectiveness and ethics of volunteer programs for benefit of both host communities and volunteers.

Source of Funding: Lehigh University, Catholic Health Association.

Abstract #: *2.008_HHR*

Cost Analysis of Intramedullary (IM) Nailing and Skeletal Traction for Treatment of Femoral Shaft Fractures in Malawi

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Background: Femoral shaft fractures are among the most common musculoskeletal injuries worldwide. In high-income countries, intramedullary (IM) nailing is the standard treatment. In many low- and middle- income countries (LMICs) skeletal traction is still common because surgical treatment is deemed cost-prohibitive. However, the notion that surgery is not cost-effective lacks supporting evidence. The purpose of this study was to estimate the cost of both IM nailing and traction for treatment of femoral fractures.

Methods: In this prospective observational economic analysis we used micro-costing methods to calculate the fixed and variable costs associated with IM nailing and skeletal traction. Adult patients treated with IM nailing or traction at QECH in Malawi were enrolled. Variable costs assessed include surgical and traction personnel costs, ward personnel costs, medications, surgical implants and disposable supplies. Fixed costs included IM nailing-specific equipment cost and indirect costs such as overhead costs. We conducted sensitivity analysis examining the effects of reducing the length of stay and using diffrenent implants on the IM nailing cost.

Findings: Eighteen patients admitted between April and June 2016 were eligible for the study. Eleven were treated with IM nailing and 7 with skeletal traction. For nailing patients, the average length of stay (LOS) was 31.13 days (SD 18 days). For traction, it was 37 (SD 21.5). The total cost per nailing-patient was $539.04 (SD 145.77), and per traction-patient was $411.99 (SD 171.8). The mean variable cost per nailing patient was $295.93, and per traction patient was $294.68. The largest variable cost was the ward personnel cost ($225.9, SD $132.8), and ($266.01, SD 155.9) for nailing and traction respectively. Implants ($135.45), were the second largest cost for nailing. The overhead cost per patient per day was $3.19. At 19 days the cost of nailing was equal to traction and it was cost-saving at a rate of $11 for each day subtracted.