Building surgical capacity through the implementation of an online neurosurgical curriculum in Preah-Kossamak Hospital in Cambodia

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Program/Project Purpose: The establishment of strong surgical centers in low resource settings is a global health goal. We have employed online strategies to construct a didactic neurosurgery resident curriculum to strengthen and build capacity for the residents at the Preah-Kossamak hospital in Phnom Penh, Cambodia. The curriculum provides a venue whereby residents directly interact with international faculty online, review and discuss course material and surgical cases, and are evaluated with respect to their knowledge. The program was established in 2014 as a three year curriculum.

Structure/Method/Design: The program consisted of pre- and post-assessment examinations, lectures, discussion forum of the lecture material and integrated questions, to permit multimodal assessment and interactivity between residents and faculty. In addition, the curriculum was comprised of two parallel components. The first was course material deemed to be essential knowledge in neurosurgical training, moving from foundational to subspecialty level. The second involved discussion of surgical cases and addressed surgical decision making. We aimed to identify whether this online education model can be applied to surgical education, and by using metrics of course activity and qualitative data to ascertain whether this venue results in greater knowledge of subjects, procedures and outcomes, and elevated ability of case discussion. All neurosurgery residents at the Preah-Kossamak hospital were recruited.

Outcome & Evaluation: Three courses have been so far delivered: the pilot course, to introduce the online model, the first and the second curriculum courses (fundamentals of neurosurgical care, and advanced neuroanatomy). The current attrition rate is 0%, with consistent growth in participation of the residents in the discussion forum (19% increase), the number of discussion posts, and the estimated amount of time spent on the course material. Qualitatively, there is consistent increase in depth of discussion and online conversation between the residents, denoting a sense of comfort with this medium.

This method of surgical education, tailored to the institutions' need, appears to be a powerful tool of supplementing key aspects of surgical training.

Going Forward: Feedback from residents is continually assessed to improve program experience. Additional international locations are being evaluated for curriculum implementation suitability.

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Comparative effectiveness of didactic training and short course mentoring versus basic didactic training alone on the capacity of laboratory scientist to perform Smear microscopy for rapid Identification of TB in Nigeria

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Program/Project Purpose: Increasing case detection for TB is a major component in the rapid scale up of the STOP TB program. Low case detection rate is a major barrier to the effectiveness of the STOP TB program in Nigeria. Our mentoring program was designed to train and increase the capacity of laboratory personnel for smear microscopy across two states with high TB prevalence in Nigeria.

Structure/Method/Design: Forty-six laboratory personnel without appropriate skills to perform TB smear microscopy were selected and randomly assigned to one of two training group. Group A: Participants received basic TB smear microscopy training based on the National TB training curriculum and were paired with accredited and experienced Laboratory Scientist for a 2 weeks mentoring program. Group B participants also received the same basic training but did not participate in the short mentoring program. Participants in both groups were then assigned to perform TB testing. Outcome was measured by a pre and post-test evaluation which includes theoretical objective questions and a practical session to produce smear and identify the bacilli.

Outcome & Evaluation: A total of 27 laboratory scientist completed the training in Group A while 19 participants completed the training in Group B. The post evaluation showed that 63% of participants in Group A achieved the standard passing score of 80% compared to only 36% of participants in Group B that attained the passing score.

Going Forward: The addition of a short term mentoring program to basic didactic training significantly improved the capacity of laboratory staff to perform smear microscopy.

Funding: WHO STOP TB Partnership.

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Designing health information skills eLearning interventions for health sciences students in Tanzania: Application of information problem-solving (IPS) model

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Background: We intend to design electronic instructional interventions for the teaching and learning of health information skills in an electronic environment. The designed interventions will be used to teach health sciences students in Tanzania a set of skills to enable them to effectively utilise, evaluate and apply the available