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### Building the ISRPM disaster acute rehabilitation team program

J. Verson<sup>1</sup>, A. Haig<sup>2</sup>; <sup>1</sup>Rush Medical College, Chicago, IL/US, <sup>2</sup>University of Michigan, Ann Arbor, MI/US

**Program/Project Purpose:** Rehabilitation response following a natural disaster has been progressively documented as an essential strategy for recovery and relief. In order to respond quickly, rehabilitation professionals, policy makers, relief volunteers and health officials need adequate training. The International Society for Physical and Rehabilitation Medicine arranged a directive to improve rehabilitation after disasters by creating a training program built off of the first hand documentation of past disasters around the world.

**Structure/Method/Design:** After putting together a preliminary online framework for the Disaster Acute Rehabilitation Team curriculum, three University of Michigan students travelled to China, Chile and Taiwan individually to conduct interviews with disaster victims, doctors, health officials, nurses, volunteers and hospital administration in post-disaster areas to assess their personal post-disaster rehabilitation experiences. Dozens of interviews were conducted and over 20 hours of video and over 2,000 photographs were collected. The student/physician team consolidated this information in the form of training videos for rehabilitation physicians, online quizzes, tutorials, disaster photography, and realistic disaster scenarios. We organized all of this information into a framework for initial trials as a PowerPoint presentation.

**Outcomes & Evaluation:** The framework for the core curriculum consists of 3 modules: a module for training rehabilitation professionals who will respond immediately to a natural disaster, another module for training rehabilitation professionals who will be team leaders and a third for rehabilitation professionals who will coordinate with national emergency planning organizations and NGO's. All of the modules have been successfully completed and edited by international disaster experts from the International Society for Physical Medicine and Rehabilitation. The next step consists of making the modules internet friendly and inviting physicians to become trained in disaster rehabilitation.

**Going Forward:** It is imperative that the rehabilitation response be rapid and efficient to improve survival rate following natural disaster. The DART curriculum provides a method for rehabilitation professionals who are involved in disaster work to plan and respond more effectively. The first-hand experience gained through interviews with rehabilitation professionals and tours of the disaster sites allowed for the production of a core curriculum and the preemptive planning for acute rehabilitation response during a natural disaster. The next challenges includes finalizing our curriculum into website format and recruiting rehabilitation physicians from around the world to become trained in Natural Disaster Response.

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### Community health workers understanding and attitudes regarding intimate partner violence in the dominican republic

N. Viswanathan<sup>1</sup>, O. Afzal<sup>2</sup>, T. Shirazian<sup>2</sup>; <sup>1</sup>Mount Sinai Hospital, New York, NY/US, <sup>2</sup>Icahn School of Medicine at Mount Sinai, New York, NY/US

**Background:** Intimate partner violence (IPV) is prevalent in Latin America and is a leading cause of death for women. A population survey of Latin American and Caribbean countries reveals that 17-53% of women in the region have experienced physical or sexual violence by an intimate partner, and many women do not seek help or report abuse. Health care providers may not have the knowledge or education regarding IPV to be a resource for affected women. Our objective is to explore the understanding and attitudes surrounding IPV among community health workers (cooperadores) in the Dominican Republic.

**Methods:** Five focus groups were conducted, totaling thirty-five cooperadoras, representing 9 regions in the Dominican Republic and 110 distinct rural communities. Focus groups included both male and female adult participants. Only community health workers were included. They were verbally consented for participation in survey research. Privacy was protected in that no private or protected health information was collected. To protect confidentiality, participants were asked to refrain from discussing responses outside of focus group. Nine open-ended questions were asked regarding domestic violence within their communities, including knowledge of and attitudes toward IPV in the community, understanding of causes and available resources, and the relationship between healthcare and affected women. Answers were recorded in order to obtain general and common themes as well as assess for concordant information.

**Findings:** Five common themes emerged from these focus groups. Cooperadores consistently believed IPV was a social issue, not a medical concern. They often stated that women were at fault and felt that conflict between partners was due to poor communication. They agreed that IPV was prevalent and that death was frequently an outcome. There also was a lack of understanding of appropriate resources for affected women. Ultimately, the community health workers largely did not feel they could or knew how to help affected women and do not currently serve as a resource to women affected by intimate partner violence.

**Interpretation:** Community health workers in the Dominican Republic could be a potential resource for women affected by IPV, but currently do not view themselves as such, as they have limited knowledge of the issue and how it should be addressed. Limitations of the study include self-selected participation and the possibility for recall and/or cultural biases. Strengths are that this study offers insights into the beliefs of cooperadores in an area where little research has been done and will inform future research. Future public health outreach approaches include education for health care workers to identify and advocate for women, appropriately referral of women to resources, and discussions with community members themselves regarding management and prevention of intimate partner violence.

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### Violence towards Tanzanians with albinism: A CHW program to improve awareness and prevent discrimination

K. Wall<sup>1</sup>, J. Peden<sup>2</sup>, J. Carithers<sup>3</sup>; <sup>1</sup>University of Iowa Carver College of Medicine, Iowa City, IA/US, <sup>2</sup>College of Health and Human Sciences, Georgia Southern University, Statesboro, GA/US, <sup>3</sup>Buena Vista, VA/US

**Program/Project Purpose:** People with albinism (PWAs) in Tanzania face overwhelming health and social challenges including high susceptibility to skin cancer and widespread discrimination. Tanzanians with albinism have also become targets of violent outbreaks. This violence is fostered by superstitions including

ideas that PWAs have supernatural powers that can be obtained by ingesting their body parts, and that having sexual intercourse with females with albinism can cure HIV/AIDS. Improving awareness of albinism is an integral step towards improving quality of life of PWAs in Tanzania. We developed a program to evaluate the use of community health workers (CHWs) to spread awareness of albinism and the challenges faced by this marginalized population in Tanzania.

**Structure/Method/Design:** We developed an educational program consisting of a video, PowerPoint presentation, and discussion topics and taught it to 33 CHWs trained by Empower Tanzania, an NGO with an infrastructure designed to disseminate public health practices in rural Tanzania. These CHWs delivered the presentation at schools and community gatherings in a rural district of Tanzania throughout February 2014. We administered questionnaires to program attendees before and after the presentation. We also gave questionnaires throughout the community before and after the month-long intervention. These questionnaires were used to assess baseline views about albinism, to evaluate the program's success, and to obtain additional feedback.

**Outcomes & Evaluation:** A total of 12,007 participants attended presentations. Questionnaires randomly administered to 426 participants demonstrated significantly higher knowledge about albinism after the presentations than before, and indicated that participants intended to share what they had learned with friends and family members. Community questionnaires administered to 896 randomly-selected community members in January and 743 additional community members in March suggested retained, community-wide gains in knowledge about albinism and the unique challenges faced by PWAs. Data analysis revealed the knowledge gains varied based on selected demographic characteristics. We conclude the program to be an effective means to improve awareness of and knowledge about albinism. We hope these knowledge gains can reduce the associated discrimination and stigma towards PWAs in Tanzania.

**Going Forward:** The UN has identified improving knowledge at a community level as a priority in addressing violence towards Tanzanians with albinism. Public health interventions utilizing CHWs are an effective tool to improve health outcomes in rural populations. Our program demonstrates a promising approach to alleviate the challenges faced by a marginalized population and supports the utility of CHW programs to enact cultural change. This program will continue to be used by Empower Tanzania to maintain the observed gains in knowledge. Potential applications of our findings include dissemination of this program to other areas of Tanzania and utilization of this CHW-based approach to develop interventions addressing other social determinants of health in developing countries.

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### Assessing the efficiency of HIV prevention interventions in Kenya – the ORPHEA Project

R. Wamai<sup>1</sup>, R. Buzdugan<sup>2</sup>, O. Galarraga<sup>3</sup>, C. Chaumont<sup>4</sup>, S. Sosa-Rubi<sup>4</sup>, S. Bautista<sup>4</sup>, J. Wang'ombe<sup>5</sup>, I. Ochoa Moreno<sup>4</sup>, H. Nyakundi<sup>5</sup>, M. Mugo<sup>6</sup>, A. Kwan<sup>7</sup>, A. Sassi<sup>8</sup>, G. Bollinger<sup>9</sup>; <sup>1</sup>Northeastern University, Department of African-American Studies and Integrated Initiative for Global Health, Boston, MA/US, <sup>2</sup>University of California Berkeley, School of Public Health, Berkeley, CA/US, <sup>3</sup>Brown University, Department of Health Services, Policy and Practice, Providence, RI/US, <sup>4</sup>National Institute of Public Health, Division of Health Economics, Center of Evaluation Research and Surveys, Cuernavaca, Mexico, <sup>5</sup>University of Nairobi, School of Public Health, Nairobi, KE, <sup>6</sup>University of Nairobi,

School of Economics, Nairobi, KE, <sup>7</sup>National Institute of Public Health, Division of Health Economics, Center of Health Systems Research, Cuernavaca, Mexico, <sup>8</sup>Northeastern University, College of Science, Boston, MA/US, <sup>9</sup>Northeastern University, College of Social Sciences and Humanities, Brookline, MA/US

**Program/Project Purpose:** Despite limited resources for HIV prevention interventions, few empirical studies investigate the efficiency of HIV prevention interventions. Reliable data on costs and efficiency is critical to best inform the choice of service delivery model, budget allocation and financial decisions. Optimizing the Response of Prevention: HIV Efficiency in Africa (ORPHEA Project) assessed determinants of efficiency for three interventions in Kenya in 2012-2013: HIV testing and counseling (HTC), prevention of mother-to-child transmission of HIV (PMTCT), and voluntary medical male circumcision (VMMC).

**Structure/Method/Design:** Input data were collected retrospectively from a nationally representative sample of government and non-governmental health facilities for calendar year 2011 or 2012 and for the month prior to data collection. Multi-stage sampling was used to determine the sample of health facilities by type, ownership, size, and interventions offered totaling 175 sites in 78 health facilities in 33 districts across the country. Data sources included registers and time-motion methods. Process quality estimating provider competence and performance was assessed using cross-sectional provider 283 vignettes and 489 client exit interviews with randomly respondents. Total costs of production were computed using both the quantity and the unit price of each input. Average cost was estimated by dividing total cost per intervention by the number of HIV clients accessing that intervention.

**Outcomes & Evaluation:** Facilities differed by type (hospitals, 48%; health centers, 34%; dispensaries, 13%; medical clinics, 5%), ownership (government, 72%, non-governmental, 10%; private, 18%), size (personnel and patient clients) and number and cost of services. Most facilities (88%) offered more than one intervention. Average annual costs for HTC, PMTCT and VMMC samples were, respectively, US\$36,617 (s.d.\$72,145), \$36,617 (s.d.\$72,145) and \$26,232 (s.d.\$24,616). The average cost per client tested were, respectively, \$20.6 (s.d. \$38.4; weighted, \$21.2), \$63.5 (s.d. \$77.2; weighted, \$55.0) and \$80.4 (s.d. \$118.0; weighted, \$102.2). Across all interventions staff costs accounted for between 75% and 82% of total costs. Variation in average cost for HTC and PMTCT was evident for only private facilities while it is cheaper to perform VMMC at primary health centers. Scale and quality together explain approximately 30% of the variability in average costs.

**Going Forward:** It is possible to employ a complex package of methods to assess technical efficiency of HIV prevention interventions in low-income countries, but attaining perfect designs is challenging. Much cost variation is evident across the Kenyan HIV services system. Economies of scale are seen with increasing volume especially at lower level facilities. Analysis of provider competence and performance suggest that higher levels of quality are not associated with higher costs. There is large potential to increase efficiency within the current constraints particularly in altering staff costs and composition.

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### Health in the age of globalization: Combining theory, practice and social justice in global health teaching

D. Weksler<sup>1</sup>, N. Davidovitch<sup>2</sup>; <sup>1</sup>Ben Gurion University of the Negev, New York, NY/US, <sup>2</sup>Ben Gurion University of the Negev, Beer Sheva, IL