

Outcomes & Evaluation: The study found that risk factors for CM are the presence physical and psychological abuse during the mother's childhood, being Afro-Colombian, a lower education level, a lower wealth index are all risk factors that would increase the likelihood of CM. Physical and psychological IPV are mediating variables which strongly increase the risk of CM; however, the effect of sexual IPV was not statistically significant. Protective factors are increased age and being Native Colombian.

Going Forward: This study only considers child maltreatment from the perspective of physical punishment, without considering psychological or emotional forms of punishment. Other factors, like employment status, should be taken into account due to possible confounding effects. Further analysis should include these factors into the final outcome. In Colombia, prevention strategies and effective interventions designed to decrease the incidence of CM should target Afro-Colombian women and populations with low education levels and wealth indices. By offering care and support to women who are victims of physical and psychological IPV in developing countries would not only decrease the disease burden caused by IPV but also diminish their risk of perpetrating violent acts toward their children.

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Evaluation of a community health worker intervention to improve adherence to therapy for non-communicable disease in Chiapas, Mexico

P. Newman¹, H. Flores Navarro², L. Palazuelos², M. Franke³, H. Carrasco⁴, K. Savage⁴, P. Elliott², A. Friedman⁵, D. Palazuelos⁶; ¹Harvard Combined Brigham and Women's/Boston Children's Med-Peds Residency, Jamaica Plain, MA/US, ²Partners In Health - Mexico, Boston, MA/US, ³Harvard Medical School Department of Global Health and Social Medicine, Boston, MA/US, ⁴Partners in Health - Mexico, Boston, MA/US, ⁵Yale University School of Medicine, Boston, MA/US, ⁶Partners In Health - Mexico, Jamaica Plain, MA/US

Background: Noncommunicable diseases such as diabetes and hypertension are leading causes of morbidity and mortality in Mexico. Community health workers are potentially effective in the care of these patients, but data regarding their effectiveness in the developing world are severely lacking. Our study aims to assess improvements in hemoglobin a1c, blood pressure, and adherence to therapy among diabetic and hypertensive patients after a community health worker intervention in rural Mexico.

Methods: *Compañeros en Salud* is a non-governmental organization operating in Chiapas, Mexico, and planned to introduce community health workers as an adjunct to routine care by a physician at every-three-month intervals in four rural communities. All adult patients on daily therapy for type 2 diabetes mellitus or hypertension were approached for verbal consent. Data collection utilized an observational stepped-wedge design, taking advantage of the programmatic plans of *Compañeros en Salud*. At baseline and every three months, just prior to implementation of community health workers in a new community, study investigators assessed adherence to medication, hemoglobin a1c, and systolic blood pressure among all study participants. The study was approved by the Partners Human Research Committee and by the Ethics board of Tecnológico de Monterrey Medical School.

Findings: 121 diabetic and / or hypertensive patients were enrolled during baseline data collection. At baseline, the range of average hemoglobin a1c in the four study communities ranged from 8.7% to 11.5%. Average baseline systolic blood pressure ranged from 132

mmHg to 149mmHg. Adherence to daily therapy was defined as self-report of taking medications in all of the preceding 5 days (5-day recall). Average baseline adherence to therapy by 5-day recall ranged from 41% to 82% across communities. Hypertensive patients who were adherent using 5-day recall had significantly improved systolic blood pressure as compared to those reporting non-adherence (difference in means 14mmHg, $p < 0.01$). At this time, community health workers have been introduced to three of four communities. The stepped-wedge design will allow for within-and-between-community comparisons of all endpoints. Preliminary results will be available February 2015, after community health workers have been operating in all communities for at least 3 months.

Interpretation: There is room for improvement in adherence to therapy and measures of disease control among patients with non-communicable disease in rural Chiapas receiving routing care by a physician, and community health workers may serve as a useful adjunct. Though there are no validated measures in this setting for measurement of adherence to therapy, 5-day recall correlates well with disease control. Through thoughtful collaboration, a high-quality evaluation of a programmatic implementation of a community health worker intervention is possible even in challenging rural settings naïve to medical research.

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Creating and implementing low literacy cancer education materials: bridging the gap in sub-Saharan Africa

M. Olsen¹, V.E. Manzo², C. Cardenas³, A. Bhatt², A. Fajardo³, F. Huang⁴, M. Jacobs³, S. Kennell-Heiling⁵, L.S. May⁶, H. Mehrash⁷, K. Taylor⁸, M. Xu⁹; ¹Partners In Health, Cambridge, MA/US, ²Stanford University, Stanford, CA/US, ³THE MEME Design, Cambridge, MA/US, ⁴Dana-Farber Cancer Institute / Harvard Medical School / Global Oncology, Inc., Boston, MA/US, ⁵Brigham and Women's Hospital, Boston, MA/US, ⁶Harvard Medical School, Boston Children's Hospital, Partners In Health, Boston, MA/US, ⁷Boston University School of Public Health, Boston, MA/US, ⁸Harvard Medical School, Boston, MA/US, ⁹Harvard Medical School, Cambridge, MA/US

Program/Project Purpose: Global Oncology (GO) is a non-profit community of professionals and student volunteers helping global partners alleviate suffering through providing the highest quality cancer care. In January 2013, GO established a partnership with Queen Elizabeth Central Hospital (QECH) in Blantyre, Malawi. In June 2013, GO initiated the development of cancer educational materials for QECH's low-literate patient population, in collaboration with THE MEME Design in Cambridge, MA. The materials were completed in May 2014 and piloted in Malawi and Rwanda in June-September 2014. Through this project, GO aims to improve psychosocial support services and patient adherence in resource-limited settings.

Structure/Method/Design: Cancer care providers at QECH identified a need for educational materials for their low-literate patient population. In order to develop a clinically relevant and culturally appropriate product, GO is working with MEME, QECH, Partners In Health (PIH) in Rwanda, and has consulted with experts throughout Boston and sub-Saharan Africa. In addition to developing the materials, GO and its partners are investigating ways to integrate the booklets into clinical protocols as a platform to better engage patients and families in the treatment process.

Outcomes & Evaluation: In May 2014, GO and MEME created the materials, available in English, Chichewe (Malawi), and Kinyarwanda (Rwanda). Medical and public health graduate students assisted in quality improvement efforts at partner sites from July-September 2014. In order to test and refine the materials, focus groups were conducted among nurses at QECH and the distribution of booklets was evaluated at PIH's Butaro Hospital. Initial feedback has been positive — nurses and patients have commented that the booklets are useful and content and images are clear and understandable for low-literate patients. In Rwanda, the booklets are being used as a tool to teach patients about treatment and early evidence has suggested that they have facilitated conversations across the ward.

Going Forward: No previous models exist of educational materials targeting low-literate cancer patients in sub-Saharan Africa. As a result, a challenge has been balancing the level of detail necessary to adequately describe cancer, treatment, and self-care recommendations in an understandable way for a low-literate audience. Materials are being revised based on preliminary results from the pilots. Pending funding, a more robust impact evaluation will be conducted in order to further assess the effectiveness and ease of use of the materials in low-resource settings. Going forward, GO is committed to building on existing partnerships in Boston, Malawi, and Rwanda and hope to expand this initiative in 2015 to include other patient populations.

Funding: As of October 2014, this initiative has been volunteer-led and has received no external funding. THE MEME Design has contributed generously to the project through pro bono design services. Student travel and pilot costs have been self-funded.

Abstract #: 02NCD020

Cultural considerations for adaptation of an internet-based intervention for depression prevention in Mainland China

U. Patel¹, K. Sobowale², J. Fan³, N. Ni. Liu⁴, S.A. Kuwabara⁵, Z. Lei⁶, R. Sherer⁷, B.W. Van Voorhees⁸; ¹University of Illinois at Chicago, College of Medicine, Department of Pediatrics, Chicago, IL/US, ²University of Chicago Pritzker School of Medicine, Chicago, IL/US, ³Wuhan University, Wuhan, CN, ⁴NorthShore University Health Systems, Deerfield, IL/US, ⁵University of Illinois at Chicago, Atlanta, GA/US, ⁶Zhejiang University School of Medicine, Hangzhou, CN, ⁷University of Chicago, Chicago, IL/US, ⁸University of Illinois at Chicago, Department of Pediatrics, Chicago, IL/US

Background: Internet-based interventions to prevent depression during adolescence have been implemented in Western countries, but there is a lack of information about their feasibility in other countries. Project CATCH-IT (Competent Adulthood Transition with Cognitive-Behavioral, Humanistic and Interpersonal Training) is an internet-based intervention targeting teens at risk for developing depression. The intervention involves working through a set of modules using Cognitive Behavioral Therapy (CBT), Interpersonal Therapy (IPT), Behavioral Activation (BA), and Resiliency Theory. Two previous studies of the intervention in the U.S. showed high levels of user engagement and favorable outcomes on lowering depressed mood and strengthening protective factors for depression. This study explores cultural adaptation of the intervention and what changes, if any, are suggested by a sample of the intended Chinese user for use in Mainland China.

Methods: A small pilot study using the English version of CATCH-IT was conducted in Wuhan, China with adolescents from the Wuhan School of Medicine in April 2013. Students with advanced English proficiency completed 2 modules per week over the course of

two months. At the end, participants completed a feedback survey, in which they evaluated the format (ease of use and discomfort) and socio-cultural relevance for adolescents and emerging adults (Internet program rationale, content and coping skills helpfulness) for each component of the intervention. Twenty students (14 female, 6 male) were surveyed with an age range of 19-23 and an average age of 21. In April 2014, 3 Chinese psychiatrists evaluated CATCH-IT and completed a questionnaire to provide feedback and recommendations. Data obtained were collected and analyzed for recurrent themes.

Findings: All students deemed the intervention helpful for dealing with stress and down moods. Both groups suggested module stories to include themes relevant to the average Chinese adolescent such as pressure for academic excellence, filial piety, and balancing school and social life. Psychiatrists agreed on the retention of CBT and BA modules for an adaptation, however were split on use of IPT in an adaptation. All participants recommended complete translation of the content into Mandarin and the majority suggested more interactive features and less text. All participants agreed that the internet serves well as a delivery model, however dissemination through schools was recommended in the Chinese setting rather than a primary care setting.

Interpretation: This study suggests that an internet-based intervention to prevent depression in adolescents would be useful in China. The results support cultural adaptation of superficial facets of the intervention like language and visuals, and also deeper aspects like IPT and delivery model. Development of a Chinese adaptation should build upon the findings from this study and work to maintain fidelity.

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Evaluation of a community health worker training program on hypertension and diabetes in Limpopo Province South Africa: Retention of knowledge and application within the community one year later

D.L. Richards¹, C. Campbell¹, A. Adams², S. Fantahun³, K. Layne¹; ¹University of Virginia, Charlottesville, VA/US, ²University of Virginia, School of Nursing, Charlottesville, VA/US, ³University of Virginia, College of Arts and Sciences, Charlottesville, VA/US

Background: The loss of health care providers from due to AIDS-related deaths and out-migration is producing severe health care professional shortages in South Africa (SA). The South African Nursing Association (SAN) estimates that the patient-nurse ratio for all of SA is 417:1. Given this high ratio, health care leaders from the Department of Health (DOH) in SA have task-shifted activities traditionally in the domain of professional nurses to community health workers (CHWS). With the increased use of CHWS, there is an increased emphasis on their education and training, especially in the management of chronic health illnesses, hypertension and diabetes.

Methods: To evaluate the retention and application of knowledge by CHWS 12 months after participation in a training program. Subjects: Twenty-four CHWS who were employed by a DOH community-based clinic in Limpopo province. Methods: Self-administered questionnaires and a word-web created by the participants was used to collect the data. Data was analyzed using descriptive statistics (frequencies and percentages) Findings: Of the original twenty-four participants, 100% returned to participate in the study.