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

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 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.

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 149 mmHg. 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 14 mmHg, 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 routine 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. Bhatt4, A. Fukardo1, F. Huang1, M. Jacobs3, S. Kennell-Heiling4, L.S. May5, H. Meirhaeghe1, K. Taylor1, M. Xu1, 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-literacy 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-literacy 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.

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