Evaluating Effects of Public Health Nurse Home Visiting on Health Literacy for Immigrants and Refugees Using Standardized Nursing Terminology Data

Karen A. Monsen, RN, PhD, FAAN1, Eunice M. Areba, BSN, RN1, David M Radosevich, PhD, RN3, Joan K. Brandt, PhD, RN4, Amy B. Lytton, MS, RN1,4, Madeleine J. Kerr, PhD, RN1,2, Karen E. Johnson, BSN, RN1, Oladimeji Farri, MBBS2, Karen S. Martin, RN, MSN, FAAN5

1School of Nursing, University of Minnesota, 2University Of Minnesota Institute for Health, 3University Of Minnesota Department of Surgery, 4St. Paul-Ramsey County Public Health, Minnesota, 5Martin Associates, Omaha, Nebraska, U.S.A.

BACKGROUND
The Minnesota Health Literacy Partnership defined health literacy as the patient’s ability to obtain, understand and act on health information and the capacity of health care providers and healthcare systems to communicate clearly, educate about health and empower patients. Immigrant and refugee populations are at particular risk for low health literacy due to language and cultural barriers.

PURPOSE
To evaluate health literacy for immigrant/refugee parents before and after receiving public health nurse home visiting services using a large data set generated by practicing public health nurses.

INSTRUMENT
Health literacy can be operationalized using Omaha System Knowledge scores as a measure of observed health literacy. These data are available through standardized clinical assessments in the EHR.

METHODS
Sample: Existing clinical data for 2,931 adult and adolescent clients who cared for infants or children. Mixed model methods were used, accounting for baseline knowledge scores, age, and number of visits. A race/ethnicity variable was used as a proxy for immigrants and refugees in the sample.

Health Literacy Before and After PHN Intervention

Knowledge: Ability of a client to remember and interpret information.
1 = no knowledge, 2 = minimal knowledge, 3 = basic knowledge, 4 = adequate knowledge, 5 = superior knowledge

Knowledge scores improved from baseline for all problems and race/ethnicity groups. Before PHN intervention, patterns appear to reflect differences in race/ethnicity. After PHN intervention, patterns appear to reflect differences by problem.

RESULTS

Acknowledgments: Omaha System Partnership for Knowledge Discovery and Health Care Quality, University of Minnesota School of Nursing Center for Health Informatics; St. Paul-Ramsey County Public Health Department, St. Paul, Minnesota, USA

LIMITATION
A major limitation of this study is that the race/ethnicity variable is difficult to interpret. Cases within each of the groups may be immigrants, refugees, or US residents. Results should be considered to be an exemplar of a comparative health literacy study, and not a conclusive report of population characteristics.

CONCLUSIONS
Improving health literacy of disadvantaged populations may mitigate effects of health disparities among immigrants and refugees. This is the first study to investigate health literacy for immigrants and refugees using Omaha System knowledge scores. This observational health literacy measure appears to be useful for systematic data collection for evaluation and surveillance of health literacy outcomes.