Title
Language concordance and diabetes care in managed care.

Authors
Brown, AF
Zulman, DM
Steers, WN
et al.

Publication Date
2005

Peer reviewed

abetes. We examined the relationship between diabetes self-efficacy, or patients' confidence in their ability to manage their disease, and self-management behavior, in an urban, diverse population.
METHODS: We identified patients with type 2 diabetes from the clinical database of 2 primary care clinics at a university-affiliated public hospital in San Francisco. Bilingual trained interviewers administered an oral questionnaire to 408 patients in English or Spanish. We measured diabetes-specific self-efficacy using a validated eight-item scale in which patients rate their confidence in their ability to perform recommended self-management routines. To measure diabetes self-management, we used an established instrument that asks patients to report their behavior for the prior 7 days in five domains: diet, exercise, self-monitoring of blood glucose (SMBG), foot care, and medication adherence. Respondents self-reported their ethnicity. We administered an abbreviated form of the short-form Test of Functional Health Literacy in Adults (s-TOHFLA), in English or Spanish. We separately analyzed the relationship between self-efficacy score and the proportion reporting optimal performance in each self-care domain. We then examined whether the observed relationships varied by ethnicity and literacy level.
RESULTS: The study participants were ethnically diverse (18% Asian, 25% Black, 42% Latino, 15% White), and 48% had adequate functional health literacy (s-TOHFLA score >23). The mean self-efficacy score was 74/100 (SD 18). The internal consistency-reliability for the self-efficacy scale was high (standardized Cronbach alpha 0.78) and was highly consistent across ethnicity and literacy levels. The proportion of patients who reported optimal self-management over the prior week ranged from 33% for diet to 64% for medication adherence. Diabetes self-efficacy was associated with four of the five domains of self-management ($p<0.01$). With each 10% increase in self-efficacy score, patients were more likely to report optimal diet (0.13 days more per week), exercise (0.09 days more per week), SMBG (OR 1.15), foot care (OR 1.20), but not medication adherence (OR 1.00, $p=0.40$). The associations between self-efficacy and self-management were consistent across adequate (s-TOHFLA>23), marginal (s-TOFHLA 17-22), and inadequate (s-TOFHLA 0-16) literacy levels for diet, exercise, foot care, and SMBG. Similarly, self-efficacy was consistently associated with self-management across all 4 ethnic groups, with the following exceptions. Among Asian participants, we did not detect an association for diet; among African Americans, we did not observe an association for exercise; among Latinos, we did not observe an assocation for SMBG. For medication adherence, which was not associated with self-efficacy score in the population overall, a significant association was present in the white group (OR 1.60, $p=0.02$), and a borderline association was seen among African Americans (OR 1.03, $p=0.06$).
CONCLUSIONS: In a diverse urban population of low-income patients with type 2 diabetes, self-efficacy was a robust predictor of self-care, both across domains of self-care and across literacy and ethnicity. While further research should explore the ethnic variation in the relationship between self-efficacy and specific domains of self-management, self-efficacy appears to represent an appropriate target for interventions among diverse patients with diabetes.

IS WHAT WE HAVE HERE A FAILURE TO COMMUNICATE? A STATEWIDE EVALUATION OF THE ADEQUACY OF HOSPITAL INTERPRETER SERVICES FOR PATIENTS WITH LIMITED ENGLISH PROFICIENCY. D. Salas-Lopez[1]; G. Flores[2]; S. Torres[2]; L. Holmes[3]; S. Tomany[2]. [1]University of Medicine and Dentistry of New Jersey, Newark, NJ; [2]Medical College of Wisconsin, Milwaukee, WI; [3]Office of Minority & Multicultural Health, New Jersey Dept of Health & Senior Services, Trenton, NJ. *(Tracking ID #134225)*

BACKGROUND: Forty-seven million Americans speak a non-English language at home and 21 million (including 4 million children) are limited in English proficiency (LEP). With 11% of its population LEP, New Jersey is a model state for studying interpreter issues. The objective of this study is to assess the adequacy of interpreter services in NJ hospitals meeting LEP patients' needs.
METHODS: Cross-sectional survey in which representatives at all 122 NJ hospitals were contacted to answer 37 questions on the characteristics of hospitals and their patients, interpreter services, and perspectives on resources/policies needed to provide quality services to LEP patients.
RESULTS: Sixty-seven hospitals completed the survey (55% response rate). A median of 9% of staff and 33% of physicians are bilingual. A median of 93 patients/hospital needed interpreters (range=0-15,000), and the median interpreter services budget was $10,063 (range=$0-458,000). Ninety-seven percent of hospitals use phone interpreter services. Approximately 87% of hospitals have no interpreter services department, 19% offer no written translation services, and 31% lack multilingual signs. Only 3% of hospitals have a full-time interpreter, indicating a ratio of 1 interpreter per 235,769 LEP persons in NJ. Eighty percent of hospitals offer no staff training on working with interpreters. Three hospitals had more extensive interpreter services considered to be model programs. Hospitals stated that the following would improve interpreter services at their institutions: more funding; federal/state interpreter certification/guidelines; more MD/staff education on interpreter use; listing locally available interpreters; and identifying bilingual staff. Most hospitals said third-party reimbursement for interpreter services would be beneficial, by reducing costs, adding full-time interpreters, freeing staff to provide other services, meeting future population growth, and improving communication and education.
CONCLUSIONS: Most New Jersey hospitals have no formal interpreter services department; 97% have no full-time interpreter, 80% provide no staff training on working with interpreters, and deficiencies were noted in hospital signage and translation services. Most NJ hospitals stated that third-party reimbursement for interpreter services would benefit their hospitals.

LANGUAGE CONCORDANCE AND DIABETES CARE IN MANAGED CARE. A.F. Brown[1]; D.M. Zulman[1]; W.N. Steers[1]; M. Liu[1]; C.M. Mangione[1]. [1]University of California, Los Angeles, Los Angeles, CA. *(Tracking ID #134571)*

BACKGROUND: Inadequate access to Spanish-speaking providers or translation services may contribute to health disparities among Latinos with diabetes. We evaluated whether patient-provider language concordance influences diabetes care in a setting where access to Spanish-speaking physicians is high.
METHODS: We analyzed data from the 23 provider groups in the Texas site of Translating Research into Action for Diabetes (TRIAD), a multicenter study of diabetes care in managed care. Patient information was obtained from surveys and medical records and provider information from surveys and administrative data. The Reference Group, Latino Spanish-speaking patients seen by providers who speak Spanish (SP PT/SP MD), was compared to Latino English-speaking patients seen by physicians who do not speak Spanish (LE PT/ENG MD), Latino English-speaking patients seen by providers who speak Spanish (LE PT/SP MD), and white patients (WHITE PT). There were too few Spanish-speaking patients seen by providers who did not speak Spanish to include in these analyses. Multivariate models were adjusted for patient age, sex, income, education, and duration of diabetes; physician age, specialty, and sex; and clinician-level clustering. Dependent variables included satisfaction with getting needed care, provider communication, and the courteousness and helpfulness of the office staff from the Consumer Assessment of Health Plans Survey (CAHPS); process of care (rates of HbA1c, lipid profile, and nephropathy assessment, dilated eye examinations, aspirin use, and foot examinations); and outcomes (glycemic, lipid, and blood pressure control).
RESULTS: The response rate was 69% for the patient survey. We had data on 99% of the physicians. Among the 363 physicians, 48% were fluent in Spanish. Only 28 Spanish-speaking patients were cared for by physicians who did not speak Spanish. In adjusted analyses, SP PT/SP MD had the highest adjusted rates of satisfaction with getting needed care, physician communication, and the office staff (see Table). They also had lower rates of HbA1c assessment than LE PT/SP MD and higher HbA1c levels than whites. There were no differences in other processes or outcomes.
CONCLUSIONS: Spanish-speaking Latino patients with diabetes generally selected bilingual providers. Although these patients were more satisfied with their care than other Latinos or whites and had comparable processes and outcomes across most indicators, they had lower rates of HbA1c measurement and poorer glycemic control. Further work is needed to identify reasons for persistent disparities among Spanish-speakers despite language concordance.Differences in Satisfaction and Quality by Patient/Provider Language: Mean or % (P)

	SP PT/SP MD (Reference Group)	LE PT/SP MD	LE PT/ENG MD	WHITE PT
N	184	627	249	757
Getting Care (%)*	86	75 (0.005)	73 (0.007)	73 (0.003)
Communication (%)	68	61 (NS)	53 (0.005)	54 (0.002)
Office Staff (%)*	89	79 (0.006)	70 (0.0001)	74 (0.003)
HbA1c assessed (%)	84	90 (0.05)	84 (NS)	83 (NS)
HbA1c (mean %)	8.05	7.80 (NS)	7.84 (NS)	7.34 (<0.0001)

*% w/highest score
NS=Not Significant vs. Ref. Group

LANGUAGE OF RESPONSE TO A HEALTH INTERVIEW SURVEY AND ACCESS TO CARE AMONG NEW YORK CITY LATINOS. S.Y. Angell[1]; C.E. Brown[1]; T. Matte[1]. [1]New York City Department of Health and Mental Hygiene, New York City, NY. *(Tracking ID #135330)*

BACKGROUND: Measures of "acculturation", such as English language proficiency and, for the foreign-born, duration of residence in the US, have been associated with disparities in health care access, but few population-based studies have evaluated these associations within the Latino population. We assessed the relation of indices of acculturation to measures of limited health care access among Latino adults residing in New York City (NYC).
METHODS: We analyzed data for adult respondents to the 2003 NYC Community Health Survey who identified themselves as Hispanic, were aged 18-64 years, and were not covered by Medicare (N=1,943). Two indicators of limited access to care were used as dependent variables: usually going to the emergency department when sick or in need of health advice (ED), and having no primary care provider (NOPCP). Two independent variables were constructed to reflect acculturation among foreign-born Latinos relative to US-born: language in which the individual chose to be interviewed (English vs. Spanish) and duration of residence in the US (<4 years, 4-10 years, and 10 or more years). Separate logistic models were fit for each of the two access (dependent) variables and acculturation (independent) variables. Crude and adjusted odds ratios were compared to assess the extent to which observed disparities in access measures among Latino subgroups were explained by demographic factors associated with access to care, including age, gender, household income, and type of health insurance.
RESULTS: In our sample of Latino respondents, greater than 50% of respondents were between the ages of 25-44, just over one third were male, and almost