



Health Care Disparities for Persons with Limited English Proficiency: Relationships from the 2006 Medical Expenditure Panel Survey (MEPS)

Journal of Health Disparities Research and Practice

Volume 3 | Issue 3

Article 4

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2009

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Recommended Citation

Smith, Diane L. (2009) "Health Care Disparities for Persons with Limited English Proficiency: Relationships from the 2006 Medical Expenditure Panel Survey (MEPS)," *Journal of Health Disparities Research and Practice*: Vol. 3 : Iss. 3 , Article 4.

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Abstract

Inadequate communication between patients with limited English proficiency (LEP) and providers can be associated with lower access to health care. The purpose of this research was to determine if there is a significant difference among those persons whose primary language is English and those with LEP in ability to access care and preventative screenings and perception of interaction with their physician. Chi square analysis was performed to determine if there was a significant relationship between primary language spoken and access to health care and patient-provider interaction. Data were obtained from the 2006 Medical Expenditure Panel Study. Results show that there is a significant difference in ability to access health care and screenings for persons with LEP. Those persons with LEP also perceived poorer patient-physician interaction compared to those persons who primarily speak English. Strategies such as interpretative services, translation of health care materials and provider education and training in communication with persons who are LEP and cultural competency should be established to improve access and communication between patient and provider.

Keywords

Health care access; Health literacy; Health services accessibility; Language and medicine; Limited English proficiency; Patient-provider communication; Physician and patient



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ABSTRACT

Inadequate communication between patients with limited English proficiency (LEP) and providers can be associated with lower access to health care. The purpose of this research was to determine if there is a significant difference among those persons whose primary language is English and those with LEP in ability to access care and preventative screenings and perception of interaction with their physician. Chi square analysis was performed to determine if there was a significant relationship between primary language spoken and access to health care and patient-provider interaction. Data were obtained from the 2006 Medical Expenditure Panel Study. Results show that there is a significant difference in ability to access health care and screenings for persons with LEP. Those persons with LEP also perceived poorer patient-physician interaction compared to those persons who primarily speak English. Strategies such as interpretative services, translation of health care materials and provider education and training in communication with persons who are LEP and cultural competency should be established to improve access and communication between patient and provider.

Key Words: limited English proficiency, health literacy, health care access, patient-provider communication

INTRODUCTION

“Effective communication between patient and doctor is critical to good medical outcomes” (Collins, et al., 2002, p. 21). This effective communication can include such components as the physician listening to the patient, explaining treatment and treatment options, spending enough time with the patient so that he/she understands treatment, listening and showing respect to the patient and allowing the patient to help decide treatment. However, cultural and language barriers, as well as low general literacy levels can exacerbate the problem of effective communication between patients and the health care system. Despite this concern, one study showed that physicians almost never (only 2% of the time) assess patient’s understanding of their instructions (Braddock, et al., 1997). Another study surveyed physicians regarding strategies to improve minority

care and found that although most physicians (75%-95%) surveyed agreed that strategies such as translated pamphlets and interpretation could be useful, only 44-66% had implemented these strategies (Klein, Schubiner, Gadon & Wynia, 2008). Currently, about 18% of the United States population aged 5 and older speak a language other than English at home (Fiscella, Franks, Doescher, & Saver, 2002). Of these, approximately 30% of Spanish-speaking and 23% of Asian-speaking persons report speaking no English or speaking English "not well."

Inadequate communication between patients with limited English proficiency (LEP) and providers can also be associated with lower access to health care (Derose, Pitkin & Baker, 2000; Garrett, Treichel & Ohmans, 1998; Hu & Covell, 1986; Jacobs, et al., 2001; Lee, et al., 1998; Marin, Marin, Padilla, & De La Rocha, 1983; Millman, 1993; Sarver & Baker, 2000; Schur & Albers, 1996). One study found that language barriers ranked among the top three obstacles preventing minorities and the poor from receiving necessary [health] care (Solis, Marks, Garcia & Shelton, 1990). Patients with LEP report fewer physician visits and lower use of preventive care after controlling for factors such as health insurance, literacy, having a regular provider, and socioeconomic characteristics (Baker, et al., 1996; Jacobs, et al., 2001; Sarver & Baker, 2000; Stein, Fox & Murata, 1991; Woloshin, Schwartz, Katz, & Welch, 1997). Language barriers can also result in diminished patient comprehension of medical information, affecting the quality of health care received by patients with LEP (Chalabian & Dunnington, 1997; David & Rhee, 1998; Elderkin-Thompson, Silver & Waitzkin, 2001; Flores, et al., 2003; Gandi, et al., 2000; Karter, et al., 2000; Lasater, Davison, Steiner, & Mehler, 2001; Manson, 1988; Perez-Stable, Napoles-Springer, & Miramontes, 1997; Rivadeneyra, Elderkin-Thompson, Silver & Waitzkin, 2000; Tran, et al., 2001; US Conference of Local Health Officers, 1993). These barriers may reduce patient's abilities to follow provider instructions, adhere to treatments, or to comply with instructions for follow-up care (Collins et al., 2002; Perez-Stable, et al., 1997; Seijo, Gomez, & Freidenberg, 1991). These barriers also compromise the quality of care due to misdiagnosis, increasing costs and inefficiencies in the health care system due to unnecessary testing because of lack of a proper medical history (Baker, Hayes & Fortier, 1998; Kravitz, et al., 2000; Waxman & Levitt, 2000). In addition, medical error rates are higher when physician and patient speak different languages (Carrasquillo, Orav, Brennan, & Burstin, 1999). All of these factors can contribute to lower patient satisfaction for those with LEP (Hampers, et al., 1999; Kline, Acost, Austin, & Johnson, 1980; Kuo & Fagan, 1999). Through a series of focus groups Kimbrough (2007) identified four issues identified by immigrants affecting their perceptions of health care including the need for cultural competence on the part of the provider, concerns about receiving patient education, difficulty with medication compliance, and difficulty communicating symptoms without translation.

These studies consistently show that a lack of effective patient-provider communication and reduced access to care for patients with LEP can result in health disparities. The importance of addressing these disparities in the US is made even more apparent when one looks at the fact that the US population is becoming more diverse. Since 1980, the Asian American population has tripled, the Hispanic population has doubled, the Native American population has increased 62%, and the Black population has increased 31%, while the Caucasian population has remained stable (US Bureau of Census, 2004). This trend, according to the US census, is only expected to increase. From 2000 to 2050, both the Asian American and Hispanic populations are expected to triple and the overall US population is expected to be 50% nonwhite.

Several studies have looked at the relationship of language on access to health care and patient-physician interaction for specific conditions (Manson, 1988; Perez-Stable, et al., 1997; Tran, et al., 2001). Many of these studies are service specific, geographically limited, with only a small sample of participants ($n < 500$) (Chalabian & Dunnington, 1997; Derose, et al., 2000; Hampers, et al., 1999;

Hornberger, et al., 1996; Manson, 1988; Marin, et al., 1983; Stein, Fox & Murata, 1991; Waxman & Levitt, 2000). There have been a few studies that utilized larger samples ($n > 500$) but again, these studies were service or condition limited (Morales, et al., 1999). Two studies used data from the National Medical Expenditure Survey from 1987, and one study used data from the Community Tracking Study Household Survey in 1996 and 1997 (Garrett, et al., 1998; Harlan, Bernstein, & Kessler, 1991; Millman, 1993). Although these latter studies utilized larger nationally representative datasets, data are now over 10 years old. Therefore, this study will examine the relationship of primary language spoken, access to health care and patient-physician interaction utilizing a large nationally representative dataset. Results can then be utilized to develop strategies to address these issues in the broader sense. The purpose of this research is to determine if there is a significant difference among those persons whose primary language is English and those with LEP in ability to access care and routine screenings and perception of interaction with their physician. The research questions for this study are as follows: (1) Are there significant differences in access to health care and preventive screenings for persons whose primary language is English compared to persons with LEP?; and (2) Are there significant differences in the perception of interaction with the physician for persons whose primary language is English compared to persons with LEP? Hypotheses for this study are: (1) persons whose primary language is English will have more access to health care and preventive screenings than persons with LEP; and, (2) perceived positive patient-provider interaction would be higher for English-speaking patients than persons with LEP.

METHODS

Instrument

To answer the research questions, data were obtained from the 2006 Medical Expenditure Panel Survey (MEPS). MEPS is a nationwide survey of families and individuals, health care providers and employers. MEPS collects data on specific health services including: frequency of use, the cost and payment mechanisms and health insurance. MEPS has two major components, the Household Component and the Insurance Component. The Household Component, used in this study, provides data from a sample of individuals and households, supplemented by data from their medical providers in selected communities drawn from a nationally representative sample. Data include demographic characteristics, health conditions, health status, use of medical services, charges and source of payments, access to care, satisfaction with care, health insurance coverage, income and employment (Agency for Healthcare Research and Quality, n.d.).

MEPS data have been used to support a highly visible set of descriptive and behavioral analyses of the U.S. health care system, including studies of the population's access to, use of, and expenditures and sources of payment for health care; the availability and costs of private health insurance coverage and those without health care coverage; and the role of health status in health care use, expenditures and household decision making, and in health insurance and employment choices (Cohen & Buchmueller, 2006).

Sample

In total, 33,471 persons were surveyed using the MEPS in 2006 (Table 1). Of those, 26,425 have a primary spoken language of English, 5,935 have a primary spoken language of Spanish, and 1,111 have a primary spoken language other than English or Spanish. When separated by primary language spoken, those who spoke Spanish were slightly younger, and more likely to report their race as white and ethnicity as Hispanic than those who spoke English or another language. Those speaking another language were most likely to be Asian. For all populations, there were more

women than men. Those speaking Spanish or another language were more likely to be coupled than those who spoke primarily English. Those who spoke another language and those who spoke English were more likely to have some college or be a college graduate and have a higher income than those who spoke Spanish. Persons who spoke primarily English were more likely to have health insurance (83.4%) than those who spoke Spanish (56.9%) or another language (73.5%) ($\chi^2=2009.9$, $p<.001$). Those who spoke another language were more likely to rate their health as “very good to excellent” and less likely to rate their health as “poor” than those who spoke English or Spanish. Those who spoke Spanish were the least likely to rate their health as “very good to excellent” and those who spoke English were the most likely to rate their health as “poor.”

Operational Definition of Variables

In order to answer the research questions the independent variable was language spoken. This was determined by the answer to the question, “What language is spoken in your home most of the time [English, Spanish, Another language]?”

Outcome variables regarding access to care include responses to the following questions, “Is there a particular doctor’s office, clinic, health center, or other place that you usually go if you are sick or need advice about your health [yes, no]?”; “Do you go to your usual source of care for a new problem, preventive care, referral and for an ongoing problem [yes, no]?”; “In the last 12 months, were you unable to get medical care, tests, or treatments a doctor believed was necessary [yes, no]?”; “In the last 12 months were you delayed in getting medical care, tests or treatments a doctor believed was necessary [yes, no]?”; “In the last 12 months were you unable to get prescription medications a doctor believed was necessary [yes, no]?”; “In the last 12 months, were you delayed in getting prescription medications a doctor believed was necessary [yes, no]?”; “Are you able to get an appointment when you wanted [usually to always, sometimes to never]?”; “How difficult is it for you to contact your provider by phone [sometimes to very difficult, not too difficult to not at all difficult]?”; “How difficult is it for you to contact your provider after hours [sometimes to very difficult, not too difficult to not at all difficult]?”

Outcome variables regarding access to preventative screenings include responses to the following questions: “About how long has it been since you had your blood pressure checked, blood cholesterol checked, a routine checkup, a flu shot, a PSA, a pap smear, a breast exam, and/or a mammogram, by a doctor or other health professional [within past year, within past 5 years, more than 5 years ago, never]?”; and “Have you ever had a sigmoidoscopy or colonoscopy [yes, no]?”

Outcome variables regarding interaction with the physician include responses to the following questions, “Does someone speak the language or provide translator services for you? [yes, no]?”; “If there were a choice between treatments, how often would the medical provider ask you to help make the decision [usually to always, sometimes to never]?”; “Does the medical provider present and explain all options to you [yes, no]?”; “Does the provider listen to your medical concerns [usually to always, sometimes to never]?”; “Does the provider explain the treatment so that you understand [usually to always, sometimes to never]?”; “Does the provider treat you with respect [usually to always, sometimes to never]?”; “Does the provider spend enough time with you [usually to always, sometimes to never]?”

Demographic variables include race [white, black, Asian, other]; Hispanic ethnicity [yes, no]; gender [male, female]; education [no school-grade 8, some high school, high school graduate/GED; some college/college graduate]; employment [employed, not employed]; income [\$0-\$14,999, \$15,000-\$24,999, \$25,000-\$34,999, \$35,000-\$49,999, \$50,000-\$74,999, \$75,000-\$99,999, \$100,000 and up]; age [18-24, 25-34, 35-44, 45-54, 55-64, 65+]; marital status [coupled, uncoupled], having insurance [yes, no] and perceived health status [very good to excellent, fair to good, poor].

Analysis

A chi square analysis was performed to determine if there is a significant difference in the relationship of primary language spoken and the outcome variables representing access to health care, access to health care screenings and prevention and perception of patient-physician interaction. The chi-square test is a statistical measurement used to examine similarities and differences of categorical variables. All data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 16. This research was approved by the Institutional Review Board.

RESULTS

When looking at relationship of primary language spoken and access to health care (Table 2), those persons who speak English are more likely to have a usual source of care (82.3%) than those who speak primarily Spanish (63.2%) or another language (71.9%) ($\chi^2=1062.8$, $p<.001$). However, those persons who primarily speak English and Spanish are more likely to go to the usual source of care for a new problem ($\chi^2=30.6$, $p<.001$), preventative care ($\chi^2=27.4$, $p<.001$), referral ($\chi^2=49.2$, $p<.001$) and an ongoing problem ($\chi^2=15.2$, $p<.001$) than those who speak another language. Although there were no significant differences in ability to get necessary medical care, those who speak primarily English were more likely to experience a delay in getting necessary medical care ($\chi^2=57.9$, $p<.001$), get necessary medication ($\chi^2=26.6$, $p<.001$) or have a delay in getting necessary medication ($\chi^2=109.6$, $p<.001$) than those persons who speak Spanish or another language. Those who primarily speak a language other than English or Spanish were less likely to get an appointment when wanted (30.6%) compared to those that speak English (15.5%) or Spanish (19.7%) ($\chi^2=40.3$, $p<.001$). Those who speak primarily Spanish had more difficulty contacting the health care provider by phone (21.0%) compared to those who speak English (16.7%) and another language (15.5%) ($\chi^2 = 40.3$, $p<.001$) and more difficulty contacting the health care provider after hours (44.8%) compared to those who speak English (31.8%) or another language (31.3%) ($\chi^2=199.5$, $p<.001$).

Significant differences were found in ability to access to health care screenings and prevention and primary language spoken in all areas of analysis (Table 3). Those persons who speak primarily Spanish are more likely to have never had their blood pressure checked (7.9%) compared to those who speak primarily English (1.1%) or another language (3.5%) ($\chi^2=1100.3$, $p<.001$). Spanish-speaking persons are more likely to have never had their cholesterol checked (32.1%) compared to those who speak English (18.1%) or another language (18.0%) ($\chi^2=413.2$, $p<.001$). They are also more likely to have never had a routine medical check (19.6%) compared to 5.9% (English) or 8.4% (another language) ($\chi^2=854.0$, $p<.001$), never had a flu shot (71.0%) compared to 47.8% (English) or 54.1% (another language) ($\chi^2=682.3$, $p<.001$). Specific to cancer screenings, those who speak primarily Spanish are more likely to have never had a PSA (62.3%) compared to 37.5% (English) or 54.2% (another language) ($\chi^2=176.6$, $p<.001$), never have had a breast exam (17.5%) compared to 5.8% (English) or 14.7% (another language) ($\chi^2=334.1$, $p<.001$), have never had a mammogram (37.0%) compared to 23.4% (English) or 31.2% (another language) ($\chi^2=124.3$, $p<.001$), and have never had a sigmoidoscopy/colonoscopy (92.5%) compared to those who speak English (74.1%) or another language (85.7%) ($\chi^2=607.4$, $p<.001$). Those who primarily speak a language that is not English or Spanish are more likely to have never had a pap test (18.4%) compared to those who speak English (4.3%) or Spanish (12.4%) ($\chi^2=306.8$, $p<.001$).

When analyzing the relationship of primary spoken language and physician interaction (Table 4), those who speak English were more likely to have positive physician interactions. Those who speak English were less likely to say that the physician didn't listen to them (9.8%) than those who speak Spanish (12.4%) or another language (14.8%) ($\chi^2=17.8$, $p<.001$). Those who primarily speak

Spanish or another language were almost twice as likely to feel that their physician did not explain treatment so that they understood (15.0% and 15.4%, respectively) as someone who primarily speaks English (8.9%) ($\chi^2=70.7$, $p<.001$). Those who speak Spanish or another language are more likely to feel that their physician does not treat them with respect (11.8% and 11.2%, respectively) compared to those who speak primarily English (8.3%) ($\chi^2=22.3$, $p<.001$). Those who speak a language that is not English or Spanish were more likely to feel that the physician did not spend enough time with them (23.0%) than those persons who speak primarily English (14.5%) or Spanish (15.4%) ($\chi^2=22.6$, $p<.001$). Persons who speak primarily Spanish or another language were more likely to feel that the physician did not explain treatment options (7.5% and 7.1%, respectively) than those persons who primarily speak English (5.4%) ($\chi^2=29.9$, $p<.001$). Of those persons who do not speak English, those whose primary language is Spanish were more likely to have a health care provider that spoke their language (92.6%) than those who spoke a language that was not English or Spanish (80.8%) ($\chi^2=22.4$, $p<.001$).

DISCUSSION

The results of this study show that, in general, there is a significant difference in access to health care and preventive screenings among those who speak primarily English when compared to those persons with limited English proficiency. However, the first hypothesis, which states that persons whose primary language is English will have more access to health care, is only partially supported. Interestingly, people whose primary language is English perceive a poorer health status than persons with LEP despite having access to health care that is equal to or better than persons with LEP. In addition, those who speak primarily English were more likely to experience a delay in getting necessary medical care and in getting necessary medication than those persons who speak Spanish or another language. Conversely, persons whose primary language is English are more likely to receive blood pressure and cholesterol checks as well as immunizations and pre-cancer screenings than persons with LEP, especially those persons who speak Spanish. This may be due to Spanish-speaking persons being generally younger and, therefore, not as likely to have pre-cancer screenings. Other confounding factors for persons who speak Spanish include lower educational status, lower income and a lower rate of being insured. The lower educational level could account for potential lack of awareness of screenings, whereas lower income and lack of insurance could account for inability to pay for preventive services.

Results of this study also showed that perceived positive patient-provider communication occurred more often for persons whose primary language is English in the areas of the physician listening to the patient, explaining treatment so the patient understood, explaining treatment options to the patient and showing respect to the patient. This disparity may not be just an issue of language as the majority of Spanish-speaking patients stated that the physician spoke their language (92.6%). In the interaction areas of the physician spending enough time with the patient and allowing the patient to help decide treatment, similar responses occurred between English-speaking and Spanish-speaking patients. Therefore, the second hypothesis that perceived positive patient-provider interaction would be higher for English-speaking patients was only partially supported.

Implications and Strategies

Implications of this study stem from the continued disparity in health care access for persons with LEP. These disparities contribute to poorer health outcomes and increased mortality (Chalabian & Dunnington, 1997; David & Rhee, 1998; Elderkin-Thompson, et al., 2001; Flores, et al., 2003; Gandi, et al., 2000; Karter, et al., 2000; Lasater, et al., 2001; Manson, 1997; Perez-Stable, et al., 1997; Rivadeneyra,

et al., 1991; Tran, et al., 2001; US Conference of Local Health Officers, 1993). One issue noted was the significant disparity in insurance coverage for persons with LEP. A strategy to address this issue would be to provide at least a minimal level of insurance coverage for these populations. Despite a similar level of employment, income for populations with LEP is lower as is education. A strategy to address these issues would be to provide opportunities to increase education, thereby improving opportunities for full-time permanent employment, which could offer higher income and insurance coverage. Insurance coverage could increase access to health care. However, this strategy would not necessarily address issues involving the health care disparities faced by those who speak a language that is not English or Spanish and who, by this analysis, are primarily Asian. This population has educational and income levels similar to those persons who speak English. Therefore, although not an exclusive factor, language must be a consideration when discussing strategies to improve access to health care and patient-physician interaction.

One solution to address these disparities for persons with limited English proficiency in the area of awareness of the importance of preventive screenings and patient-provider communication has to do with the availability and effective use of language services, particularly interpreter services, which have been found to increase effectiveness of physician-patient communication. Studies show that use of an interpreter increases patient satisfaction and the likelihood of returning to the health care site (Baker, et al., 1998; D'Avanzo, 1992). It has also been found that most patients prefer professional interpretive services over the use of family members either in the format of traditional face-to-face interpretation, telephone interpreting services, or remote-simultaneous interpretation (Hornberger, et al., 1996; Ngo-Metzger, et al., 2003). This may be due to desire by patients for privacy from family members or concerns about trust in accuracy of interpretation by family members.

Additionally, studies have shown that the use of trained interpreters increases clinical service use and improved patient-physician communication by reducing inaccuracies and increasing communication (Hornberger, et al., 1996; Lee, et al., 1998). However, availability of professionally trained medical interpreters is limited, especially in the rural areas. The availability, scheduling and quality of interpreters are major issues for many primary care clinics, especially those sites without staff interpreters (Barret, Dyer & Westpheling, n.d.). One solution to this problem has been the creation of telehealth interpretation services (Missouri Telehealth Network, n.d.; Nebraska State Telehealth Network, n.d.). Telehealth is the delivery of health-related services and information via telecommunications technologies. These networks provide interpreters via the telehealth network to patients who do not speak English and who might not otherwise have access to an on-site interpreter.

Another strategy to improve patient-physician interaction is through education of the provider on issues of cultural competency and communication with populations with LEP. When surveyed, physicians preferred learning about these issues through continuing medical education (CME), seminars and newsletters (Klein, et al., 2008). Therefore, education could be provided through these formats. Creation of an environment to include signage and written health materials in low-literacy multiple language formats has also been suggested as a strategy to improve interaction (Kimbrough, 2007). In addition, several medical schools, nursing schools and schools of health professions are beginning to incorporate these concepts into their curriculum although studies have not been conducted regarding their effect on overall health of patients. The issue of cultural competency is also being incorporated into these programs to assist health care providers in understanding how various cultures may differ in their perception of medical treatment.

Finally, patient-physician interaction can also be affected by the current health care environment where physicians and other health care providers are often constrained by time, compromising

patient-physician interaction, especially for those with LEP. These perceptions could lead patients to seek health care services less often and to become more passive in their own health care, resulting in decreased overall health. Utilizing some of these suggested strategies would make communication more efficient and potentially allow more time for meaningful interaction.

Strengths/Limitations

A strength of this study is the use of a large nationally representative dataset that can generate results that are more generalizable. However, there are several limitations. A limitation with the chi square analysis is that it for some analyses it cannot determine which categories (3 or more) are significantly different from each other (e.g., race/ethnicity). Therefore, it can only be determined that there is a significant difference but not where the difference lies. For instance there are many potential explanations besides language for disparity in access to health care and screenings that have been mentioned in the discussion such as age, access to insurance, lower educational status and income. Another limitation would be the definition of outcome and predictor variables such as patient-provider communication, which was limited to the issues represented in this database. Finally, another limitation is that data are based on perceptions of those sampled and represent a specific point in time. These factors need to be taken into consideration when interpreting results.

CONCLUSION

This study shows that access to health care, screenings and prevention vary significantly by primary language spoken by the patient and that patients whose primary language is Spanish perceive that their access and patient-provider interaction is worse than persons whose primary language is English. Therefore, it is imperative that strategies be implemented to improve access for persons with limited English proficiency. Several strategies have been described but, as of yet, have not been evaluated. Further research that evaluates these strategies is necessary to determine their effectiveness on improved access and patient-provider interaction. In addition, other factors besides language that contributes to lack of health care access need to be examined, including socioeconomic status, access to health insurance, race/ethnicity and disability. Further research that considers these factors is necessary in order to design the most effective interventions.

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