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Families Facing Language Barriers in Healthcare: When Will Policy Catch Up with the Demographics and Evidence?

More than 1 in 5 Americans—equivalent to 61.9 million—resides in a non-English primary-language (NEPL) household, and 25.1 million (approximately 9%) have limited English proficiency, defined as a self-rated ability to speak English less than “very well.”¹ A substantial body of literature from decades of research documents the

often-profound adverse impact of language barriers on health and healthcare, including access to care, health status, use of health services, quality of care, patient-physician communication, satisfaction with care, and patient safety.² For example, language barriers are associated with significantly greater odds of prolonged lengths of stay for hospitalizations,³ serious medical events during hospitalizations,⁴ and children with asthma ending up intubated in the intensive care unit,⁵ and have resulted in multiple cases of 10-fold drug overdoses⁶ and such disastrous outcomes as quadriplegia.⁷ I recently learned of a case at a major children’s hospital of a 6-month-old, previously healthy infant boy who was brought to an emergency department (ED) with vomiting and diarrhea. The triage history given by mother was interpreted by the boy’s 12-year-old sister (no medical interpreter was offered). The sister stated that the patient had 4 dirty diapers and 3 episodes of vomiting that day. The boy was triaged to a nonurgent level of care, in which documentation stated he had vomited 7 times that day with no diarrhea. He was discharged shortly thereafter with a diagnosis of vomiting, and with instructions only in English for rehydration solution by mouth. Three days later, the boy returned to the ED in severe distress, with new onset of

bloody stools. The boy was admitted to the hospital and died 6 hours later of septic shock.

In this issue of *The Journal*, Levas et al⁸ report the results of a multicenter study demonstrating that Latino children in NEPL households have a significantly greater odds of appendiceal perforation than non-Latino children in English-primary-language (EPL) households.

These critical findings add to the increasingly lengthy list of the deleterious consequences of language barriers in healthcare.² In addition, these results are particularly concerning because appendiceal perforation can be viewed as a preventable outcome, in that appendiceal perforation often can be avoided through early identification of appendicitis and timely surgical intervention.⁹ Indeed, the appendiceal perforation rate has been proposed as a measure of intrinsic hospital quality, and high appendiceal perforation rates can be viewed as “a failure of medical care,” because the natural history of appendiceal perforation is assumed to be under the control of physicians and hospitals.¹⁰ Thus, disparities in appendiceal perforation rates not only are ethically disturbing, because certain groups of children experience preventable, serious inequities in the quality of their healthcare, but also because these disparities extract considerable societal and economic costs, including approximately double the mean hospital charges (\$17 905 vs \$9076) and almost triple the mean hospital length of stay (5.5 vs 2.0 days), compared with hospitalizations for pediatric appendicitis without perforation.⁹

Why the significant disparities in appendiceal perforation risk for children with NEPL? First, national data document that, compared with children with EPL, children with

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ED	Emergency department
EPL	English-primary-language
NEPL	Non-English primary-language

The author declares no conflicts of interest.

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<http://dx.doi.org/10.1016/j.jpeds.2014.02.033>

NEPL have substantially greater risks of impaired access to healthcare, including 5 times the adjusted odds of unmet medical care needs because the family cannot find a physician who accepts the child's health insurance; more than triple the adjusted odds of being uninsured; and double the adjusted odds of lacking a usual source of medical care, experiencing problems getting specialty care, having made no medical visit in the past year, and never/only sometimes being able to get needed telephone help/advice from the usual source of medical care.¹¹ Thus, these substantial access barriers faced by children with NEPL with abdominal pain place them at high risk for delays in timely receipt of medical care, diagnosis, and treatment, and it is no wonder that Levas et al⁸ reported that Latino patients with NEPL appendiceal perforation had more than twice the risk of presenting to the ED with >72 hours of abdominal pain, compared with their non-Latino EPL counterparts (20% vs 10%; $P < .03$).

Second, clinician bias exists in the performance of diagnostic imaging studies. Diagnostic studies are most helpful when the clinical presentation is equivocal, rather than at the extremes of the clinical spectrum, in which very low-risk patients are less likely to have a condition because of few or no disease risk factors, and very high-risk patients are more likely to have a condition because of multiple and/or classic risk factors. Therefore, it is troubling that the study by Levas et al⁸ revealed a significantly reduced odds of advanced imaging (computed tomography or ultrasound) for children with NEPL vs EPL with moderate severity of illness, because this finding suggests the possibility of unconscious or conscious clinician bias. The existence of such bias in clinician performance of diagnostic procedures is well documented, both in adults¹² and children.¹³

Third, the evidence suggests that millions of Americans with limited English proficiency in need of language services in healthcare settings fail to receive these services. One study of Latino patients in the ED documented that no interpreter was used for 46% of patients with limited English proficiency for whom an interpreter was thought to be needed by the patient or clinician, interpreters were not called in one-third of cases in which both the clinician's Spanish and patient's English were poor, and 39% of interpreters used had no training.¹⁴

Methodological rigor is essential in studying and eliminating disparities in health and healthcare. Strengths of the study by Levas et al⁸ include the multicenter design and fairly large sample size. Certain study limitations, however, should be noted, to advance the field, and because these limitations continue to afflict other work in this field. The study by Levas et al⁸ erroneously defined limited English proficiency as speaking a primary language other than English at home. These are entirely distinct entities, because, for example, all members of a family that speaks a primary language other than English at home may be fluently bilingual in English—ie, just because a family chooses to primarily speak Spanish does not necessarily mean that they are not fluent in English (and other languages). This fact is borne out every year by US Census data; for example, the most recent statistics document that only 41% of individuals in NEPL households have

limited English proficiency. Furthermore, research shows that limited English proficiency is a far superior measure of language barriers than the primary language spoken at home, when examining health status, access to care, and use of health services.¹⁵ Other studies have compounded this issue by using even more flawed measures, including language of interview and patient language “preference.”

Maximizing rigor, clarity, and progress in the field will require consistent use of clearly defined measures of language barriers, and a strong argument can be made that limited English proficiency represents the most useful measure (short of more extensive but less practical instruments for health services research, such as the Test of English as a Foreign Language, which generally requires at least 140 minutes to administer). In addition, terms such as “English-speaking” should be avoided, given the lack of precision.

Another study limitation is separate classification of patient race and ethnicity, instead of using one race/ethnicity composite measure with mutually exclusive categories, which most investigators now endorse. The former approach results in categories, such as “white” or “black” Latinos, which are meaningless to patients and clinicians. A third study limitation is the incorrect use of all non-Latino racial/ethnic groups as the comparison group for Latinos, instead of only whites. This issue, which has plagued the disparities literature for decades,¹⁶ might have diluted or distorted some of the findings, because both African-American and Asian/Pacific Islander children have greater adjusted odds of appendiceal perforation than white children,^{9,10} and so mixing them with whites in the “non-Latino” comparison group is problematic.

How do we reduce or eliminate unacceptable inequities in appendiceal perforation rates and other key health and healthcare outcomes for children with limited English proficiency? Although it will require a concerted effort on several fronts, I believe that such a goal is achievable within a decade, by pursuing the following strategies.

First, data on the primary language spoken at home and the primary caretaker's English proficiency should be collected for every child in the US. This strategy is consistent with the recommendations of 2 recent reports from the Institute of Medicine.^{17,18} Such data would identify all children and families who need language services, and language disparities could be ascertained, monitored, and targeted as part of quality-improvement efforts. A national survey of 272 hospitals, however, revealed that only 39% collect data on patients' primary language,¹⁹ and no statistics are available on what proportions of hospitals or health plans collect data on English proficiency.

Second, language barriers should be a prominent component of quality and patient-safety discussions and initiatives. An extensive published literature over many decades provides a solid evidence base underscoring this point.²

Third, increase the number of bilingual clinicians and enhance the English proficiency of caregivers. Mechanisms for increasing the number of bilingual clinicians include providing population-relevant foreign language instruction in medical schools and as part of continuing professional education, providing employee bonuses for foreign-language

fluency, and enhancing efforts to recruit bilingual clinicians. Interpreters and clinicians can help patients and families with limited English proficiency learn English through referrals to free or low-cost English classes (via resources such as www.literacydirectory.org).

Fourth, all children and families with limited English proficiency should be provided with a trained medical interpreter or bilingual clinician. Substantial scientific evidence documents that optimal communication, patient satisfaction, outcomes, resource utilization, and patient safety occur when patients with limited English proficiency have access to adequate language services.² Title VI of the Civil Rights Act of 1964 states that the denial or delay of medical care because of language barriers constitutes discrimination, and requires recipients of Medicaid or Medicare funds to provide adequate language assistance to patients with limited English proficiency.²⁰ The Office of Civil Rights of the Department of Health and Human Services has resolved thousands of Title VI discrimination complaints against hospitals and health systems through settlements, enforcement, and corrective actions, and clinicians can file complaints with the Office of Civil Rights when efforts are needed to eliminate unlawful barriers preventing individuals with limited English proficiency from accessing services.²¹ Although in-person interpretation by trained medical interpreters or care by fluently bilingual providers are considered the optimal modalities for eliminating language barriers for patients with limited English proficiency,^{2,22} hospitals and clinics increasingly are relying on remote interpretation via videoconferencing, telephone, and video streaming on tablet and laptop computers and smart phones, which can be useful alternatives for low-prevalence languages and when there are barriers to timely availability of in-person medical interpreters. Current smart-phone applications, such as Google Translate, cannot be used for safety-critical tasks such as patient-physician communication, because they pose serious risks to accuracy and patient safety. In the not-too-distant future, However, it appears that hybrid technologies will be developed for smart phones that combine state-of-the-art speech recognition, large-vocabulary machine translations, and rule-based methods, indicating that reliable and accurate automatic spoken-language translation via smart phones in healthcare settings could become a viable method for providing language services.

Lastly, national third-party payer reimbursement should be provided for language services. An Office of Management and Budget report to Congress estimated it would cost on average only \$4.04 more per patient with limited English proficiency visit—equivalent to 0.5% of the cost of each visit—to provide language services for ED, inpatient, outpatient, and dental visits for all Americans with limited English proficiency.²³ Nevertheless, only 13 states currently reimburse for language services through Medicaid and the Children's Health Insurance Program, even though the federal government would reimburse 50%-73% of states' Medicaid costs (depending on each state's Federal Medical Assistance Percentage) and 70%-86% of Children's Health Insurance

Program costs (Federal Medical Assistance Percentage plus an additional 5% through the Children's Health Insurance Program Reauthorization Act) for providing language services.²⁴ In addition, research documents that state third-party reimbursement for interpreter services results in double the odds of use of professional interpreters in pediatric encounters.²⁵

The time has come for our state and national health policies to reflect US demographics and the evidence, so that no child suffers a serious, preventable outcome, such as appendiceal perforation, because of a language barrier. ■

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