Objective: Return visits to the emergency department (ED) are used as a marker of quality of care. Limited English proficiency, along with other demographic and disease-specific factors, has been associated with increased risk of return visit, but the relationship between language, short-term return visits, and overall ED use has not been well characterized.

Methods: This is a planned secondary analysis of a prospective cohort examining the ED discharge process for English- or Spanish-speaking parents of children aged 2 months to 2 years with fever and/or respiratory illness. At 1 year after the index visit, a standardized chart review was performed. The primary outcome was the number of ED visits within 72 hours of the index visit. Multivariable logistic regression was used to examine the relative importance of predictor variables and adjust for confounders.

Results: There were 202 parents eligible for inclusion, of whom 23% were Spanish speaking. In addition, 6.9% of the sample had a return visit within 72 hours. After adjustment for confounders, Spanish language was associated with return visit within 72 hours (odds ratio, 3.49; 95% confidence interval, 1.02–11.90) but decreased risk of a second visit within the year (odds ratio, 0.28; 95% confidence interval, 0.12–0.66).

Conclusion: Spanish-speaking parents are at an increased risk of 72-hour return ED visit but do not seem to be at increased risk of ED use during the year after their ED visit.

Key Words: return visits, Spanish language, high frequency utilization

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because of the limited distribution of health literacy scores (Table 1), we were not able to include it in the final analysis. Analyses were completed in STATA version 13.19

RESULTS

The original study screened 259 patients of whom 202 were eligible, consented, and discharged on the initial visit. Forty-six (23%) were Spanish speaking. Ninety-one (45%) of the patients had only a single (index) ED visit. There were 38 patients (18.8%) with 2 visits, 32 (15.8%) with 3 visits, and 41 (20.4%) with 4 or more visits.

The mean age of children in the study was 11.2 (SE, 0.46) months. Ninety-four (56%) were triage level 4 or 5. Seven (4%) parents had marginal or inadequate health literacy. Sixty-two (30.7%) had private insurance, and 146 (72%) of the patients had access to a PCP with extended hours. There were 4 patients (2%) for whom we were unable to reach the PCP and 3 (1.5%) who reported no PCP. Those patients were considered not to have access to PCP with extended hours. Table 1 shows the demographics of the study population by primary language.

Of the 202 patients in the cohort, 14 (6.9%) had a second visit within 72 hours. Eight of the 156 English-speaking families returned within 72 hours versus 6 of the 46 Spanish-speaking families. Spanish language was not associated with return visit within 72 hours on univariate analysis (odds ratio [OR], 2.76; 95% confidence interval [CI], 0.91–8.46). After adjustment for age, acuity of initial visit, insurance, and availability of extended hours, Spanish language was associated with return visit within 72 hours (OR, 3.49; 95% CI, 1.02–11.90).

For the patients with a return visit within 72 hours, Spanish language was not associated with admission on return visit (OR, 1.67; 95% CI, 0.19–14.27) on univariate analysis. Because of small sample sizes, we were unable to construct a multivariate model for admission among the subset of patients with a second visit in 72 hours (n = 14).

Overall, 111 (55%) of the 202 patients had a second ED visit at any point during the year. Spanish language was not significantly associated with any revisit on univariate analysis (OR, 0.62; 95% CI, 0.32–1.19). After adjustment for age, acuity, insurance, and extended hours, Spanish language was associated with a decreased risk of a second visit within the year (OR, 0.28; 95% CI, 0.12–0.66). Forty-one (20%) of 202 of the cohort had 4 or more visits to the ED during the study year and were therefore defined as having high use of ED services. Of those, 10 (24%) of 41 spoke Spanish. Spanish language was not associated with high use of ED services (OR, 1.12; 95% CI, 0.51–2.50) on univariate analysis, nor after adjustment for age, acuity, insurance, and extended hours (OR, 0.54; 95% CI, 0.19–1.49).

DISCUSSION

In this cohort of young patients with an initial presentation of fever and/or respiratory illness, Spanish language was associated with return visit within 72 hours after adjustment for potential confounders. However, Spanish language was not associated with hospital admission on 72-hour return visit, increased overall likelihood of having a second visit within 1 year, or high use of the ED. In fact, Spanish language was associated with a decreased risk of a second ED visit during the study year. Taken together, these data suggest a period of short-term vulnerability after ED discharge rather than a pattern of high use of ED services.

Previous studies have reported approximately 3.5% return visit rates within 48 hours3 and 5.2% within 72 hours.6 Understanding the etiology of these return visits and reducing those that are preventable could therefore have a significant impact on ED use. Previous literature suggests that patients frequently do not understand their discharge instructions and may not recognize comprehension deficits.20 Written instructions at an appropriate health literacy level are an important baseline.21,22 However, written instructions alone seem inadequate to decrease the number of unneeded return visits,23 suggesting an important role for verbal communication at the time of discharge. Standardized verbal instruction has been shown to improve comprehension in the pediatric ED,24 but studies of ED communication show that verbal discharge instructions are frequently incomplete and very brief.25 Our previous work has shown significant differences in comprehension between English- and Spanish-speaking parents after ED discharge that remained despite adjustment for interpretation.12

Previous literature has suggested that families who do not contact their PCP before hospitalization are at increased risk of a preventable hospitalization,26 and access to care may be associated with decreased ED use.9 More recent work has shown an association between low density of primary care and increased rates of nonurgent ED visits.27 However, intensive ED efforts to link patients to a PCP have not resulted in reduced numbers of ED visits28,29 or improvement in outcomes.28 In this cohort, Spanish language was associated with return visit within 72 hours, after adjustment for confounders and the availability of extended hours at the PCP. Our results suggest that access to a PCP alone is insufficient to mediate the relationship between ED discharge and post-ED visit vulnerability.

The cohort we report on here allows for an important advancement toward understanding how communication and access to primary care influence return visits for emergency care. Unlike the administrative data that have primarily been used to examine ED revisits, we are able to directly examine the contribution of parental self-reported language, rather than relying on a language flag in a medical record or documentation of interpreter usage, which may not well reflect underlying language preferences and fluency. We are also able to link patients to their identified PCP and the availability of extended hours at that practice as a measure of access to primary care.

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**TABLE 1.** Study Population

<table>
<thead>
<tr>
<th></th>
<th>English Speakers</th>
<th>Spanish Speakers</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SE</td>
<td>Mean</td>
</tr>
<tr>
<td>Age of child, mo*</td>
<td>11.2</td>
<td>0.52</td>
<td>11.4</td>
</tr>
<tr>
<td>Acuity ESI, 4 or 5</td>
<td>71</td>
<td>54.4</td>
<td>23</td>
</tr>
<tr>
<td>Acuity ESI, 2 or 3</td>
<td>62</td>
<td>46.6</td>
<td>12</td>
</tr>
<tr>
<td>Insurance status</td>
<td>Private</td>
<td>58</td>
<td>37.2</td>
</tr>
<tr>
<td></td>
<td>Public or no insurance†</td>
<td>98</td>
<td>62.8</td>
</tr>
<tr>
<td>PCP Extended hours</td>
<td>108</td>
<td>69.2</td>
<td>38</td>
</tr>
<tr>
<td>No extended hours, no PCP, or unable to reach</td>
<td>48</td>
<td>30.8</td>
<td>8</td>
</tr>
<tr>
<td>Health literacy</td>
<td>Adequate</td>
<td>135</td>
<td>98.5</td>
</tr>
<tr>
<td></td>
<td>Marginal</td>
<td>1</td>
<td>0.73</td>
</tr>
<tr>
<td></td>
<td>Inadequate</td>
<td>1</td>
<td>0.73</td>
</tr>
</tbody>
</table>

*Two-sample Wilcoxon rank sum (Mann-Whitney) test.
†There was only 1 patient without insurance/using free care. (This is consistent with the 99.8% coverage of children reported in Massachusetts.)18
As this study was a secondary analysis of an existing cohort, the analysis is limited by small sample size and inability to conclusively determine whether the visit within 72 hours was related to the index visit complaint. We also were unable to characterize attempts to access PCP before use or report on measures of attachment to PCP. Patients with limited English proficiency have been previously found to be at increased risk of 72-hour return visit with admission, which was not replicated in our age and diagnosis-defined cohort, potentially because of small numbers or preferential recruitment of lower acuity patients. It is also worth noting that Massachusetts has a smaller portion of uninsured children than many other states, which may affect use practices.

Previous interventions to reduce 72-hour return visits have met with mixed success. These data suggest a potential important role for communication at the time of discharge, given the association between language and short-term return visits in patients who are not at increased risk for overall ED visits or high ED use. Further investigations should target improvements in ED communication practices as a potential method of decreasing unnecessary return visits.

CONCLUSIONS

Spanish-speaking parents are at an increased risk of 72-hour return ED visit but do not seem to be at increased risk of ED use during the year after their ED visit. Interventions to address ED revisit should address communication factors including parental language.

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