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The Influence of Hispanic Ethnicity on Parent/Provider Communication about Asthma

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Abstract

Research has shown that minority caregivers of children with asthma report poorer communication with healthcare providers than non-minority caregivers. Less is known about the specific influence of Hispanic ethnicity on parent/provider communication. Our objective was to evaluate the influence of Hispanic ethnicity on parent/provider communication regarding their child's asthma and on caregiver confidence in communicating with their child's provider at a primary care visit. Data were obtained from 166 caregivers of children (2–12 years) with persistent asthma. Caregiver perceptions of provider communication and confidence were evaluated. We found that Hispanic compared to non-Hispanic caregivers reported better communication with providers on several items. Hispanic caregivers also were more likely to indicate full confidence in their ability to communicate with providers. These findings suggest Hispanic caregivers may experience better parent-provider communication than non-Hispanics. Further investigation is needed to assess provider and clinic-specific factors that may influence communication between minority caregivers and providers.

Keywords

Asthma; Hispanic; communication; caregiver; doctor

Background

Asthma is one of the most common chronic diseases of childhood, affecting more than 6 million children in the United States.¹ The effects of childhood asthma are wide ranging and include missed school and work days, increased healthcare related expenditures including hospitalizations and emergency room visits, and decreased overall quality of life. Asthma has been shown in prior studies to disproportionately affect urban, minority populations, especially those of Black and Hispanic descent.^{1–3} Hispanic children experience significant asthma morbidity and mortality^{4–8} which is particularly pertinent given that there are currently more than 17 million Hispanic children living in the United States.⁹ Though the Hispanic population is the fastest growing minority group in the United States, prior

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Conflicts of Interest

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research on asthma disparities has focused primarily on Black children and their caregivers.^{10–13}

Effective patient/provider communication is essential to promote positive changes to preventive asthma care.^{14–18} Importantly, for pediatric patients, caregivers are the primary conduit to imparting critical information to providers about the patient's healthcare needs. Improved communication between patients, providers and their caregivers has been shown in multiple studies to improve outcomes in chronic disease management.^{19–22} Furthermore, the guidelines for asthma management put forth by the National Heart, Lung, and Blood Institute (NHLBI) stress patient/provider communication as an essential component to promoting adequate asthma therapy and the reduction of asthma symptoms.²³

Prior studies have indicated that minority caregivers report overall poorer communication with their child's providers than non-Hispanic White caregivers.²⁴ Hispanic caregivers are at particular risk for communication burdens due to language barriers that may lead to poor health literacy and lack of self-efficacy for communication with English-speaking providers.^{18,25–27} However, little research has focused specifically on communication between Hispanic parents and providers at the time of their child's healthcare visit.

This study aimed to evaluate the influence of Hispanic ethnicity on caregiver perceptions of their provider's communication regarding their child's asthma at the time of a healthcare visit, and on caregiver confidence in communicating with their child's provider.

Methods

Data were obtained from a larger study, the Prompting Asthma Intervention in Rochester-Uniting Parents and Providers (PAIR-UP) randomized controlled trial in Rochester, NY (overall response rate 82%). Caregivers of children 2–12 years old with physician diagnosed asthma were interviewed in 12 urban primary care offices to assess eligibility. For this analysis, only caregivers of children at the 6 practices assigned as control sites were included. There was no intervention delivered at these practices. Eligibility requirements included the child having persistent or poorly controlled asthma symptoms at the time of the visit (based on NHLBI criteria) and not having any other chronic conditions, including sickle cell disease or heart conditions that could affect accurate asthma symptom reporting. Informed consent was obtained from all caregivers and verbal assent was obtained from children 7 years old. Both English and Spanish consent and data collection forms were available, per family preference. The University of Rochester Institutional Review Board and the Rochester General Health System Institutional Review Board approved the study protocol.

We obtained data for these analyses from baseline surveys conducted in the waiting room of primary care offices prior to an office visit for any reason (not only for asthma), with follow-up data collected by phone within 2 weeks of the index office visit. Baseline data included parent-report of asthma symptom severity based on NHLBI guidelines and demographic information including child and caregiver age, caregiver education level (less than high school education/high school graduate), Medicaid insurance (yes/no), perceived child health status ('Excellent'/'Very Good'/'Good'/'Fair'/'Poor'), and smokers living in the home (yes/no). Hispanic ethnicity was assessed by asking caregivers whether or not they considered themselves to be Spanish/Hispanic/Latino; if yes, caregivers defined whether they consider themselves to be Mexican, Puerto Rican, Cuban or other Hispanic. Primary language was defined by the question 'What language do you speak in your home?' Families were considered to be Spanish-speaking if they spoke 'Spanish' or 'English and Spanish' in the home. Office visit type was defined as either an asthma visit (asthma follow-up or an acute

asthma visit) or a non-asthma visit (an office visit for any reason not specifically related to asthma).

Follow-up data were collected by telephone within 14 days of the visit. Caregivers were asked to think about the prior visit and relay their perception of provider communication at that doctor's visit, level of satisfaction with the visit, and overall confidence in their ability to communicate with healthcare providers.

Provider Communication

Caregiver perception of provider communication was assessed using a 5-item Likert scale developed by Clark, et al.²⁸ ranging from 'Strongly Agree' to 'Strongly Disagree'. Responses were dichotomized to either Agree ('Strongly Agree'/'Agree') or No Opinion/Disagree ('No Opinion'/'Disagree'/'Strongly Disagree'). Examples of scale items include; 'My child's doctor looked into how my child's family manages asthma day to day' and 'My child's doctor enabled my family to know how to make asthma management decisions.'

Office Visit Satisfaction

Caregiver satisfaction with their child's doctor's office visit was measured by asking caregivers their level of satisfaction with the office visit. Response options included 'Completely Satisfied'/'Somewhat Satisfied'/'Somewhat Unsatisfied'/'Completely Unsatisfied'. Responses were dichotomized to either *Completely Satisfied* or *Not Completely Satisfied* with the office visit.

Caregiver Confidence

Caregiver confidence in their ability to communicate with their children's providers about their child's asthma was measured using a modified 10-point Perceived Efficacy in Patient-Physician Interactions²⁹ (PEPPI) scale ranging from 0 ('not at all confident') to 10 ('completely confident'). Caregivers responded to 5 questions including, for example; how confident are you in your ability to 'know what questions to ask your child's doctor' and 'to make the most of your visits with your child's doctor.' Due to most caregivers reporting very high confidence on this scale with answers between 8–10, responses were categorized as either being *Completely Confident* (10) or *Not Completely Confident* (0–9).

Analyses

We performed all analyses using SPSS software, version 17.0 (Statistical Product and Service Solutions 17.0; SPSS Inc, Chicago, IL). We used bivariate statistics and t-tests to evaluate Hispanic ethnicity and parent/provider communication, caregiver confidence, satisfaction with the visit and demographic variables. Logistic regression analyses were conducted to control for variables that differed significantly between Hispanics and non-Hispanics at baseline (including Medicaid status, caregiver education, ethnicity, visit type and gender.) A two-tailed p-value .05 was considered statistically significant.

Results

Of the 166 caregivers with available data at the time of the analyses, 36% were Hispanic (82% Puerto Rican) and 35% were African American (Table 1). Mean caregiver age was 33.4 years, 73% had a high school education or greater and 37% were married. The majority of caregivers (70%) only spoke English in the home and 64% had Medicaid insurance. Most children were male (59%) and the mean child age was 6.4 years old. Forty-seven percent of children had mild persistent asthma at baseline (versus moderate or severe persistent

asthma) and 22% were being seen for an asthma visit. Almost half (48%) had one or more smokers living in the home.

Hispanic children were older (7.1 years v. 6.0 years, $p=.029$), and more likely to have Medicaid insurance (80% v. 56%, $p=.002$) than non-Hispanic children. Fewer Hispanic caregivers spoke English at home (25% v. 96%, $p<.001$) and fewer Hispanic caregivers had more than a high school education (57% v. 82%, $p=.001$) compared to non-Hispanic caregivers. There were no significant differences between groups for child gender, caregiver age, caregiver marital status, smokers in the home, baseline asthma severity or office visit type.

Overall, the majority of all caregivers felt that their child's doctor was 'reassuring and encouraging' during the office visit. However, we identified several areas in which Hispanic caregivers expressed better communication with their child's physician about their child's asthma than non-Hispanic caregivers. Hispanic caregivers were more likely to agree that their doctor 'looked into how the family manages asthma day to day' (77% v. 56%, $p=.021$), 'gave the family information to relieve worries' (78% v. 52%, $p=.002$) and 'enabled the family to make management decisions about their child's asthma' (73% v. 52%, $p=.022$) compared to non-Hispanic caregivers (Table 2).

We also explored the extent to which each caregiver's needs were met at their office visit as well as their level of satisfaction with their visit (Table 3). Most caregivers noted that they were completely satisfied with their office visit and there was no significant difference in satisfaction based on ethnicity (83% v. 73%, $p=.10$). The majority of both Hispanic and non-Hispanic caregivers reported that all of their needs were met at their child's office visit, with no differences between groups (76% v. 78%, $p=.414$).

Table 4 shows caregiver confidence regarding communication with the provider about asthma at the healthcare visit. There were no significant differences in the proportion of caregivers reporting complete confidence on most of the individual items on this scale, except that Hispanic caregivers were more likely to feel completely confident 'to know what questions to ask their child's doctor', (70% v. 53%, $p=.026$). Further, Hispanic caregivers were more likely to have an overall confidence score of 10 (59% v. 41%, $p=.03$), indicating complete confidence in their ability to communicate with providers on all scale items, compared to non-Hispanic caregivers.

Most significant results remained significant in logistic regression analyses controlling for Medicaid status, caregiver education, ethnicity, visit type and gender, with the exception of the statement 'My child's doctor enabled family to know how to make asthma management decisions.' Further, findings remained consistent in analyses which controlled for individual healthcare practices (data not shown).

Discussion

This paper explores differences between Hispanic and non-Hispanic caregiver report of communication with their children's healthcare providers about their children's asthma at a recent healthcare visit. Our data included a sample of Hispanic and non-Hispanic caregivers of children who all had persistent or poorly controlled asthma at the time of a healthcare visit to their primary care provider's office that warranted effective communication around their asthma. We found that Hispanic caregivers reported better communication with their child's healthcare providers about their children's asthma, and a greater proportion of caregivers were completely satisfied with their doctor's office visit. Additionally, we found that Hispanic caregivers were significantly more likely to report complete confidence in their ability to communicate with their child's healthcare provider than non-Hispanic

caregivers. To our knowledge, this is the first study to assess parent/provider communication about asthma for Hispanic caregivers at the time of an office visit.

These findings are in contrast to previous studies that examined the role of ethnicity on patient/provider communication. Prior studies report both cultural and language barriers in communication for Hispanic patients compared to non-Hispanic patients, including poor self-efficacy when communicating with providers.^{30,31} Chan, et al. specifically considered communication among Hispanic caregivers of asthmatic children and providers, and found that Hispanic caregivers had poorer overall asthma communication and asthma knowledge than both non-Latino Whites and Blacks.³² We are aware of only one study that reported better asthma communication among Hispanic caregivers of asthmatic children than other ethnic groups.³³ Our study supports this finding, and is unique in that it reports specifically on parent/provider communication about asthma at the time of a healthcare visit when the child was experiencing significant asthma symptoms.

We have considered several possible explanations for our somewhat surprising findings. First, all children included in this study had persistent or poorly controlled asthma symptoms at the time of their healthcare visit. Therefore, providers may have been more attuned to the need for optimal communication around asthma at the office visit. Further, our Hispanic sample was predominantly comprised of Puerto Rican Hispanics. The known high prevalence of asthma in the Puerto Rican population^{5,7,34} may have led providers to assume that the children in this population have significant asthma that should be discussed and to communicate more with Hispanic parents about their children's asthma. Since our sample included only children who were seen at a doctor's office, we may have missed families with communication barriers that did not access healthcare. However our findings are particularly striking since Hispanic caregivers reported better asthma-related communication with providers than non-Hispanic caregivers, regardless of the reason for the office visit.

There is evidence that language barriers between parents of children with a chronic illness and healthcare providers have a significant impact on the level of communication that Hispanic caregivers experience at an office visit.^{35–39} For example, concordance between the language and ethnicity of providers and caregivers can enhance the quality of an office visit.^{40,41} Interestingly, however, in our sample few healthcare providers at the participating clinics were Spanish-speaking or Hispanic. Further, we found that Hispanic parents experienced better asthma communication, even though the majority spoke Spanish as their primary language. This indicates that language differences between providers and caregivers did not necessarily have a significant impact on caregiver perception of communication in our sample. Also, while we do not have data on the actual language spoken at the visit, many of the clinics included in this study have in-person or phone translators available for clinic visits, or have providers available who are fluent in Spanish (Table 5). Several studies have shown that the use of trained translators results in greater quality of care.^{42–45}

Effective communication coincides with increased levels of parental satisfaction with office visits.^{28,46–48} We found that, in addition to reports of better communication, the majority of Hispanic caregivers were completely satisfied with their office visit. This is important because patient satisfaction at a visit is a key indicator of healthcare quality. Importantly, targeted interventions to improve provider communication, cultural competence, and satisfaction have been shown to have a positive impact on asthma outcomes.⁴⁹

There are some limitations to this study. Our focus on parent-reported data may have created a bias about the quality of parent/provider communication. However, parent satisfaction and communication was assessed within 2 weeks of a doctor's visit, limiting the potential for recall bias, and one could argue that the caregiver's perception of the visit is the most

pertinent factor. Responses by caregivers may also have been influenced by a social desirability bias, which leads some caregivers to report more positive communication with their providers than actually occurred. This would influence our study findings if the response bias was stronger for Hispanic compared to non-Hispanic caregivers. Further, while we only included families from control practices that did not receive intervention, caregivers were aware that we were interested in asthma care as part of the larger intervention, and this knowledge may have biased their responses to asthma-related questions.

Additionally, we had a relatively small sample of 166 caregivers that may have limited our power to detect some differences in our data. We were not able to assess provider-level variables at the time of the visit, including provider ethnicity and Spanish language proficiency. Due to population demographics, which include limited numbers of non-Puerto Rican Hispanics, our data may not necessarily be generalized to all Hispanic populations. Finally, as mentioned we have no data regarding language spoken, interpreter use, or whether patients received discharge information in their preferred language at the visit. Further study is needed to identify the impact that language and interpreter use has on parent-provider communication.

Parents of children with chronic illnesses may experience significant barriers to communication with their children's healthcare providers, and many Hispanic caregivers face unique cultural and linguistic barriers. Our study suggests that Hispanic parents of children with asthma may experience better communication and confidence when speaking with their children's healthcare providers than has been previously reported. Further analysis of the specific practice-level methods used to communicate with Hispanic caregivers and alleviate barriers, as well as factors that influence parental views regarding provider communication and self-confidence may be warranted. Understanding the ways in which providers are successfully reaching a population that historically has cultural and language barriers to effective communication may lead to improved overall outcomes for Hispanic children.

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Table 1

Patient Demographics by Ethnicity

Patient Demographics	Total N=166	Hispanic N=60	Non-Hispanic N=106	P-value
Child Mean Age, years (SD)	6.4 (3.0)	7.1 (3.0)	6.0 (2.9)	.029
Gender (Male)	98 (59%)	33 (55%)	65 (61%)	.511
Black Race	54 (32%)	0 (0%)	54 (50%)	<.001
Medicaid Insurance	107 (64%)	48 (80%)	59 (56%)	.002
English Spoken at Home	117 (70%)	15 (25%)	102 (96 %)	<.001
Asthma Severity				
Mild Persistent	78 (47%)	26 (43%)	52 (49%)	.520
Moderate Persistent	62 (53%)	34 (57%)	54 (51%)	
Visit Type (Asthma Related)	36 (22%)	16 (27%)	20 (19%)	.247
Caregiver Mean Age, years (SD)	33.4 (7.9)	32.1 (8.1)	34.2 (7.8)	.105
Caregiver Education (High School)	121 (73%)	34 (57%)	87 (82%)	.001
Caregiver Marital Status (Single)	104 (63%)	42 (70%)	62 (59%)	.182
One or More Smokers in Home	80 (48%)	30 (50%)	50 (47%)	.749

Table 2

Parent Communication with Child's Provider at 2 week follow-up

'My child's doctor...' Responses indicate <i>Agree/Strongly Agree</i>	Total N=166	Hispanic N=60	Non-Hispanic N=106	P-value
Was reassuring and encouraging	150 (90%)	55 (92%)	95 (90%)	.608
Looked into how my family manages asthma day to day	105 (63%)	46 (77%)	59 (56%)	.021
Described at least 1 of these goals: child sleep through night, child have no symptoms when active, child be fully active	95 (57 %)	40 (67%)	55 (58%)	.157
Gave family information to relieve specific worries	102 (61%)	47 (78%)	55 (52%)	.002
Enabled family to know how to make asthma management decisions	98 (60%)	43 (73%)	55 (52 %)	.022

Table 3

Caregiver Satisfaction with Office Visit

	Total N=166	Hispanic N=60	Non-Hispanic N=106	P-value
All My Needs Were Met	127 (77%)	47 (78 %)	80 (76%)	.414
Completely Satisfied With Visit	128 (77%)	50 (83%)	78 (73%)	.106

Table 4

Caregiver Confidence in Communicating with Providers

'How confident are you in your ability to...' <i>Complete Confidence Score of 10</i>	Total N=166	Hispanic N=60	Non-Hispanic N=106	P-value
Know what questions to ask your child's doctor	98 (59%)	42 (70%)	56 (53%)	.026
Get your child's doctor to answer all of your questions (about your child's asthma)	107 (64%)	39 (65%)	68 (64%)	.520
Make the most of your visits with your child's doctor	110 (66%)	44 (73%)	66 (62%)	.821
Get your child's doctor to take your chief health complaint seriously	124 (75%)	44 (73%)	80 (76%)	.440
Get your child's doctor to do something about your chief health concerns	124 (75%)	46 (77%)	78 (74%)	.302
Complete Confidence (mean overall score=10)	77 (46%)	34 (57%)	43 (41%)	.033

Table 5

Use of interpreting services by practice

Practice	Practice Type	Interpreting Services Available/Offered
Practice 1	Pediatric	In person interpreters (if indicated as needed in medical chart), Spanish-speaking providers (3 out of 30+ providers)
Practice 2	Family Medicine	Spanish-speaking providers, interpreter phones
Practice 3	Pediatric	Spanish-speaking providers, interpreter phones
Practice 4	Pediatric	In person translators
Practice 5	Pediatric	In person translators
Practice 6	Family Medicine	In person translators