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Physician and Limited English Proficiency Parent's Perceptions on Childhood Asthma in Primary Care

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Candidate for the degree

Bachelor of Sciences

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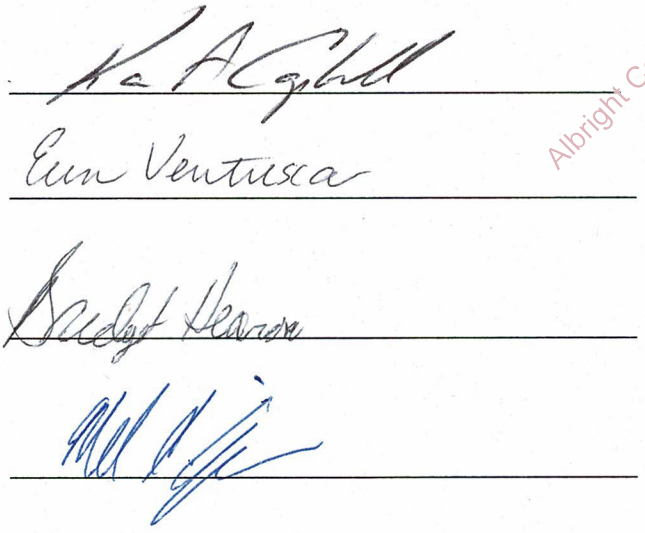

Physician and Limited English Proficiency Parent's Perceptions on Childhood Asthma in Primary Care

Karen Alejandres

Albright College

Senior Honors Thesis 2019

Abstract

In the U.S, there are nearly 37.5 million residents and native Spanish speakers, of which 44% are considered to have some degree of limited English proficiency (LEP) (Riera et al., 2015). Despite the frequency of LEP individuals within the Latino community, the healthcare system is prominently geared towards English speakers (Bernard et al., 2006). Previous research has demonstrated the effects of language discordance resulting in limited ability of accessing quality healthcare and lower patient satisfaction (Claudio & Stingone, 2009). The current study examined the extent to which language barriers contribute to pediatric asthma treatment and management for LEP individuals in a primary care setting. Data analysis from 93 patient surveys distributed at, All About Children Pediatric Partners revealed that LEP parents reported lower understanding of asthma management compared to fluent English speakers. LEP parents also reported having lower confidence in dealing with their children's asthma attacks. These findings compliment previous literature and may help explain why Hispanic children are two times more likely to die of asthma-related conditions than non-Hispanic white children (US Department of Human Services Office of Minority Health, 2017).

APhysician and Limited English Proficiency Parent's Perceptions on Childhood Asthma in Primary Care

According to the U.S. Census Bureau, there are about 37.5 million U.S. residents and native Spanish speakers with 44% considered to have some degree of limited English proficiency (LEP). According to previous literature, LEP is defined as speaking English less than a self-report rating of "very well" (Riera et al., 2015). Although Latinos are the largest minority population in the United States and almost half express some degree of limited English proficiency, the healthcare system is predominantly geared towards English speakers (Bernard et al., 2006), which presents a considerable language barrier. Previous research has demonstrated the effects of language discordance resulting in limited ability of accessing quality healthcare, poor communication with providers, and lower patient satisfaction (Claudio & Stingone, 2009). Similarly, Cohen et al. (2005) revealed that Latino adults perceived language differences as one of the major contributors impeding their ability to communicate and trust their medical providers (Claudio & Stingone, 2009). Despite previous studies on the effects of language barriers and accessibility to healthcare, there continues to be a significant language discordance between training of medical providers and treatment of LEP individuals.

Communication and trust are vital in healthcare to ensure that patients receive quality care, particularly with chronic diseases that require specific care instructions and management plans. Research suggests that physician and patient interactions are important in successful outcomes for chronic diseases like diabetes and pediatric asthma (Claudio & Stringone, 2009). Asthma is a chronic respiratory disease which is characterized by inflammation of the airways and lungs resulting in less air flowing into and out of the lungs. Asthma attacks are categorized by multiple symptoms including wheezing, chest tightness, and shortness of breath. Asthma attacks also vary in severity from mild to life threatening (United States Environmental Protection Agency; EPA, 2018). Asthma is the most common chronic illness among children (Mosniam et al., 2007). In the United States, there are approximately 7 million children who have asthma (Fallon et al., 2019). Nearly 3 million of those children reported experiencing an asthma attack or asthma episode in the previous 12 months (EPA, 2018). According to the United States Environmental Protection agency, in 2015 the prevalence of asthma in children was 8.4% signifying that nearly 1 in 12 children had asthma. Asthma affects children disproportionately having larger effects on children from minority groups and lower social incomes (Fallon et al., 2019). The Centers of Disease Control and Prevention (CDC) revealed that during 2016, asthma affected 15.7% of black children and 12.9% of children of Puerto Rican descent more than it affected white children (7.1%). These studies also showed that Mexican/Mexican-American children had an increase in asthma prevalence from 5.1% in 2001 to 6.5% in 2016 (Zahran et al., 2018).

The treatment of pediatric asthma is a good model for understanding the impact of language barriers between medical providers and parents because it requires constant communication to manage treatment interventions. Asthma treatment plans are written documents varying between patients and are individualized to help manage asthma treatments (Riera et al., 2015). LEP status is associated with less-frequent asthma action plan use by asthma caregivers. Reasons for this are not known but may be related to cultural differences or specific language barriers experienced by LEP caregivers (Riera et al., 2015). This study was designed to further explore the effects of language barriers in asthma treatment and adherence by surveying parents whose children had been clinically diagnosed with asthma, as well as to gain insights from healthcare providers. Surveys were made available in English and Spanish and were administered to primary caregivers whose children have an asthma diagnosis and receive care at All About Children Pediatric Partners (AACPP), a primary care clinic in Reading, Pennsylvania. A provider

survey was also administered to healthcare providers at this clinic to assess their perceptions of working with LEP patients. I hypothesized that LEP parents would report lower confidence in their comfort with, and understanding of, their child's treatment plans and perceive their child's asthma as less well controlled than patients who were not part of LEP families. I also hypothesized that LEP parents would endorse a desire for additional help in the form of translation services, time with providers, and written materials in their native language more frequently than non LEP parents. With regard to providers, I hypothesized that language barriers would be identified as a source of stress and that despite recognizing language barriers, treatment providers would underestimate the extent to which LEP parents believed communication barriers impede their ability to remain treatment adherent.

Methods

Data was collected as a part of Albright College's Senior Honors Thesis Program. This project was approved and reviewed by Albright College's Institutional Review Board and Dr. Eve Kimball, director of All About Children Pediatric Partners.

Participants:

Data collection began on November 14, 2018 and ended March 14, 2019. A total of 93 asthma concerns surveys were collected. 44 surveys were collected from parents who were identified as LEP and 49 surveys were collected from parents who were not identified as LEP. On average on data collection days there were anywhere from 0-4 surveys collected. In total there were 97 parents asked to participate in this study and 93 surveys collected. Five parents denied participation in this study. A total of eight healthcare professionals participated in this study. Three surveys were collected from pediatric doctors and five surveys were collected from certified nurse practitioners.

Measures:

Surveys for the primary caregiver portion of this study were adapted and designed using Crane et al. (2012) "Patient Asthma Concerns Tool" questionnaire (see appendix). The final survey consisted of a total of nine questions. The first question of each survey in both languages asked participants to rate how well they spoke English. Based on previous research it was established that a participant would be considered LEP if they spoke English "less than very well" (Riera et al., 2015). The asthma concern survey for primary caregivers was designed to ask seven questions relating to asthma confidence levels in English, and it was translated into Spanish for those participants who could only understand or preferred to take the survey in Spanish. Consent forms and debriefing statements were also written in English and Spanish following the guidelines from Albright College's IRB web pages. Albright College's Visiting Professor of Spanish, Professor Andrea Olivares who is fluent in both languages reviewed the documents in Spanish to ensure they were translated accurately.

Physician surveys of eight questions were designed with a focus on language barriers, accessibility of materials for both LEP and non-LEP families, and overall perception of asthma treatment adherence (Appendix C).

Procedures:

To identify potential participants for this study the director of the All About Children Pediatric Partners compiled a list of all the children at this clinic who had a medical diagnosis of asthma. From this list, it

was estimated that there were approximately 900 children who had an asthma diagnosis in their current medical record. Once it was established how many children had asthma at AACPP patient recruitment began November 14, 2018. As a volunteer translator for AACPP and previous scribe at the practice, permission was granted to me to access “Medi-Touch”, the primary electronic heath care record system used at AACPP. To begin identifying possible participants every day prior to data collection Medi-Touch was reviewed to see if any patients from the complied medical asthma list had appointments during data collection time periods. Once potential participants were identified they were approached in the waiting room or exam rooms at AACPP. Each caregiver was presented with an overview of the study and was then asked for their participation. If caregivers wished to participate in this study, they were given consent forms, surveys, and debriefing statements in their language of preference. Each parent was asked their language preference for the documents before filling out any materials. This process took approximately 5-10 minutes. Generally, there were approximately 1-2 surveys collected from primary caregivers daily.

Providers at the clinic were approached over a three-week period and were asked to participate in the physician portion of the study. After providing informed consent, they filled out the provider asthma survey (appendix C) and were given a debriefing statement. This process took approximately 5-10 minutes. A total of eight provider surveys were collected.

Data analytic plan

After data collection was finalized, results from the primary care giver and provider surveys were analyzed using SPSS. The first eight questions of the asthma concern surveys asked participants to make numeric ratings on a Likert scale, therefore Independent Samples t-tests were used to compare responses from LEP and non-LEP parents. For instances where Levene’s Test revealed unequal variances, Welche’s t-tests were used. The final item of the survey asked participants to check items they believed would improve their clinical experience. Pearson’s Chi-Square Tests of Independence were used to examine whether LEP and non-LEP parents preferred different options. Data from this survey were coded on a scale from 0-4 for questions 1-5 (see appendix). For question 1 a higher score corresponded to the primary care giver speaking English “very well” and was not identified as being LEP. For question 2 a lower score of 0 corresponded to “extremely severe” indicating that the participant felt that their child had extremely severe asthma symptoms over the last month. For question 3 a higher score indicated that the caregiver felt that their child’s symptoms were not at all controlled. For questions 4 and 5 a lower score indicated that parents were confident regarding how to manage their children’s asthma attacks and felt confident on how to manage their children’s asthma overall. For questions 6 and 7 a higher score indicated that caregivers felt comfortable with the instructions provided from physicians. For question number 8 on the survey a lower score indicated that participants were extremely satisfied with services offered at the AACPP. Responses from the provider surveys were analyzed using descriptive statistics to understand their perceptions on language barriers and asthma treatment adherence.

Results:

Perceptions of Asthma Management

Independent-samples t-tests were conducted to compare responses from LEP parents and non-LEP parents. In instances where Levene’s Test revealed unequal variances Welche’s t-tests were used. Full

results are summarized in Table 1. With regards to English proficiency levels, results showed that non-LEP parents (M=3.00, SD=.00) reported greater English proficiency than LEP parents (M=1.27, SD=.79; t (43)=-14.53. p<.01). With regards to asthma symptom severity of their children LEP parents reported no difference (M=2.09, SD=1.05) than non-LEP parents (M=2.47, SD=1.08; t (91) = -1.70, p=.09). LEP parents also reported no difference (M=1.48, SD=0.93) in asthma control levels than non-LEP parents (M=1.24, SD=0.85; t (91)=1.26, p=.21).

Statistically significant differences were seen between LEP and non-LEP parents' confidence to manage their children's asthma attacks. For these survey items, coding was such that lower numbers signify greater confidence and understanding. LEP parents (M=1.05, SD=0.99) reported lower confidence levels than non-LEP parents (M=0.47, SD=0.62; t(91)=3.41, p<.01) to manage their children's asthma attacks. LEP parents also reported lower levels of understanding treatment instructions (M=0.84, SD= 0.99) on how to manage their children's asthma in comparison to non-LEP parents (M=0.47, SD=0.62; t(70.59)= 2.15, p=0.04).

Clinical Satisfaction and Care Perceptions:

Significant differences were seen in clinical satisfaction levels between LEP and non-LEP parents. Non-LEP parents reported greater frequency (M=3.36, SD=1.03) in receiving specific instructions from their physicians that they could understand and follow in comparison to LEP parents (M=2.73, SD=1.48; t(75.79)= -2.39, p=0.02). With regards to access to instructions in the parent's preferred language a trend indicates that LEP parents (M=2.84, SD=1.45) have less access to these instructions than non-LEP parents (M=3.32, SD=0.94; t(72.68)= -1.89, p=0.06). Overall, LEP parents (M=0.34, SD= 0.61) reported no difference in overall satisfaction levels with the services at All About Children Pediatric Partners than non-LEP parents (M=0.29, SD=0.46; t(91)=0.50, p=0.62).

Resources Needed:

Chi Square Tests of Independence were used to determine whether LEP and non-LEP parents endorsed different clinic resources that would be helpful. For translational services at this clinic a greater portion of LEP parents selected this option than non-LEP parents (X2 (1, N=93 =9.51, p=.002). There were no differences between LEP and non-LEP parents in requesting additional written materials. (X2 (1, N=93)= 0.24, p=0.62), There were also no differences between LEP and non-LEP parents wanting more time with their physicians (X2 (1, N=93)= 0.04, p=0.80). A trend shows that non-LEP parents requested wanting "something more" to improve their experience in comparison to LEP parents (X2 (1, N=93)=3.35, p=0.06). Specifically, non-LEP parents specified they wanted improved "check-in" services, "staff-services," shorter waiting room times, more aggressive treatments, and improved phone services.

Physician Data:

Descriptive statistics were used to examine physician responses to the physician provider survey. Fifty percent of physicians reported feeling extremely confident that they could explain asthma treatments to guardians in a manner that ensured understanding, 50% of physicians felt only moderately confident they could explain asthma treatments to their patients. With regards to confidence levels in communicating with patients whose primary language was not English 50% of physicians felt moderately confident they could communicate with these patients, 25% felt slightly confident, and 25% did not feel confident at all. When physicians were asked how often they give written asthma treatment instructions

to patients in their preferred language 25% answered always, 50% answered often, and 25% answered seldom.

When physicians were asked how easily accessible educational materials about asthma were at AACPP in English, 62.5% said it was extremely easy, 25% said it was moderately easy, 12.5% said it was slightly easy. When asked about the accessibility of resources in Spanish 37.5% responded it was moderately easy to access these resources, 37.5% said slightly, 25% said it was not easy at all. In regard to how often clinicians were providing asthma educational materials to patients in their preferred language 12.5% of physicians said often, and 87.5% responded seldom.

Overall, when asked about language barriers as a source of stress in the work environment 37.5% of physicians reported feeling extreme stress from language barriers, 50% reported moderate stress, and 12.5% reported slight stress. Lastly when asked to rate how language barriers contribute to non-adherence with asthma treatments in patients, 25% of physicians reported an extreme effect from language barriers, 50% reported a moderate effect, and 25% reported a slight effect.

Discussion:

English-Spanish language barriers frequently occur in healthcare and clinical settings (Bernard et al., 2006) and have an effect on the quality of care LEP patients receive. Language barriers affect communication, treatment adherence, and treatment outcomes for patients and their families. The purpose of this study was to better understand the effects of language barriers between parents who are fluent in English and those who express some degree of limited English proficiency with regards to childhood asthma. The study was also deigned to better understand how language barriers impact healthcare clinicians and communication between parents. Our results indicate that there are significant differences between the perception of care children received from parents who are fluent English speakers and those who are limited in English. The results from the provider surveys indicated that physicians identified language barriers as a source of stress in the work place and also revealed significant differences in asthma resources given by providers for LEP and non-LEP families.

Our data revealed that there is a significant language barrier between LEP and non-LEP parents. This may be because many parents who have some degree of limited English proficiency did not grow up in a household where English was the primary language spoken. Thirty seven parents who participated in this survey completed it in Spanish as it was their preferred language. Although there was a significant language barrier present with both groups, both LEP and non-LEP parents reported no difference in their perceptions of the severity of their children's' asthma. Both LEP and non-LEP parents reported similar answers regarding their perceptions on how their children's' asthma was controlled over the past month saying it was controlled "perfectly, very well, fair, or not at all controlled". These results imply that both groups share similar confidence levels with regards to how well they believe their children's condition has been managed.

Although both groups reported having similar confidence levels regarding asthma symptom severity and asthma control our results indicate that LEP parents reported significantly lower confidence levels in knowing how to manage their children's' asthma attacks. This finding is compelling, because asthma attacks can be life threatening if not managed properly. Moreover, if parents are not aware of how to properly manage their children's' asthma this may lead to more frequent emergency room visits or higher mortality rates in children. This finding is consistent with research noting that Hispanic patients

who have asthma are twice as likely to visit the emergency room for asthma compared to non-Hispanic whites (U.S. Department of Health and Human Services office of Minority Health). Our results also indicated that, overall, LEP parents reported significantly lower confidence levels in understanding how to manage their children's asthma than non-LEP parents. This may be because of a lack of ability to comprehend specific instructions in English or the lack of communication between themselves and providers. This finding indicates a clear communication barrier between LEP families and providers and can be seen in provider responses as well. Results from the physician surveys indicated that 37.5% of physicians found it moderately easy to access educational materials in Spanish and 25% of physicians said accessibility to these resources was not easy at all. This suggests that educational materials about asthma are not easily available to these parents and may result in lower treatment adherence. LEP parents also reported lower frequencies in having received instructions that they could understand and follow from their physicians compared to non-LEP parents who reported having received instructions which they could follow. It is evident from these findings that language barriers play a role in asthma comprehension of limited English proficiency parents and their overall perceptions of their children's health. Future work in this field should address these disparities by including written asthma plans in Spanish for parents whose primary language is not English or educational material about asthma in Spanish which highlight key points about this condition.

Along with these findings, an increasing trend from LEP parents responses suggests that they do not have easy access to materials in their preferred language as compared to non-LEP parents. Providers reported similar results indicating that resources in English were more easily accessible than resources in Spanish. Although providing written instructions for LEP parents in Spanish may not resolve all the issues with language barriers and asthma, parents may gain additional insight on this condition that may help them make informed decisions about their children's' asthma condition. Controlling asthma can be difficult for even those who are fluent in English and can easily communicate with providers. For many parents knowing the differences between the effectiveness of rescue inhalers and controller steroid medications can be difficult, especially if other medications have to be taken. Written asthma plans which lay out and guide parents through each medication that needs to be taken during the day are essential for controlling and managing asthma. If LEP parents report they are not receiving sufficient information on how to manage their children's' asthma in their preferred language or do not have access to written asthma plans, their children may not be taking the correct medications they need or may be at risks for frequent asthma flare ups. Even though LEP parents reported the same levels as non-LEP parents in regard to asthma symptom severity and control (Table 1) their answers to other questions like confidence to manage asthma attacks, understanding specific treatment instructions, and receiving materials in their specific language suggest that they need more attention from clinicians and the healthcare community to gain general awareness about asthma. This study is a representation of what occurs to minorities like Hispanics and Latinos in the United States healthcare system daily. These minorities are limited through language barriers, social economic status, or cultural values and as a result they have worse health outcomes.

Results from the physician surveys of the study revealed that health care providers rate the English-Spanish language barrier as a moderate to extreme stress factor in the work place. These results also indicated that physicians are not as confident in their ability to communicate information about asthma management to primary care givers if their language is not English. Providers also indicated that asthma materials in Spanish are not as easily accessible as materials in English. These findings support previous

research in the field and are synonymous with the current healthcare environment in the United States. Currently, the United States healthcare system is geared towards English speakers even though nearly 37.5 million residents of the United States are Spanish speakers (Riera et al., 2015). From this study it was seen that there are simply not enough educational resources about asthma in Spanish to give to limited English proficiency families. It is important to note that educational materials in Spanish will not solve all the issues with asthma disparities, but my serve as starting point where LEP families can begin to research and understand the basic mechanism about how asthma is a chronic illness and better understand its effects on the body. Additionally, another way to mend the differences between LEP and non-LEP families with regards to asthma educational awareness could be to initiate educational asthma classes as a supplement to asthma visit follow ups. Ideally, these classes could be held in both languages and would incorporate additional time aside from doctor visits where parents who are confused or have additional questions about asthma could ask and find answers to questions. Topics relevant in those classes could include, what is asthma and how it affects the respiratory system, what medications are used and when, and what to do when a child has an asthma attack. These changes could be implemented at All About Children Pediatric Partners, but should be incorporated in other clinics around Pennsylvania where there are high rates of Latino families. For physicians and the medical community, it's important to begin thinking about health conditions beyond the English-speaking population and find different resources for those are limited in English. Particularly with asthma, the leading chronic condition in children, more resources must be made available for minority groups like the LEP population.

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Table 1: Pairwise comparisons of LEP and non-LEP parent's responses to questions on an asthma concern survey using student t-test analysis.

	LEP Parents n = 44		Non-LEP Parents n = 49		
Variable	M	SD	M	SD	t (or Welch's t)
English Proficiency	1.27	0.79	3.00	0.00	-14.53
Asthma Symptom Severity	2.10	1.05	2.47	1.08	1.71

Asthma Control	1.48	0.93	1.25	0.85	1.26
Confidence to manage asthma attacks	1.05	0.99	0.47	0.62	3.41
Ability to understand treatment instructions	0.84	0.99	0.47	0.62	2.15
Receiving clear instructions (from provider)	2.73	1.48	3.37	1.03	-2.39
Access to instructions in preferred language	2.84	1.44	3.33	0.94	-1.90
Satisfaction with clinic	0.34	0.61	0.29	0.46	0.50

Appendix A

Primary Caregiver Asthma Survey

Shown below is the survey asthma concern survey administered to primary care givers in English consisting of nine total questions.

1.How well do you speak English?

Not at all Not Well Well Very Well

□ □ □ □

2.How would you rate your child's asthma symptoms over the last month?

Extremely Severe Severe Moderate Slight None at all

□ □ □ □ □

3. How well do you think your child's asthma has been controlled over the last month?

12

Perfectly Very Well Fair Poorly Not at All

□ □ □ □ □

4. How confident are you that you know what to do if your child has an asthma attack?

ExtremelyModeratelySlightlyNot at All

□ □ □ □

5. How well do you think you understand what you are supposed to do to properly manage your child's asthma?

ExtremelyModeratelySlightlyNot at All

□ □ □ □

Please answer the following questions regarding the services at this clinic:

6. When meeting with my child's provider, I was given specific instructions that I could understand and follow

Strongly disagree Disagree Neither agree/disagreeAgree Strongly Agree

☐ ☐ ☐ ☐ ☐

7. I have access to instructions for managing my child's asthma in my preferred language

Strongly disagree Disagree Neither agree/disagreeAgreeStrongly Agree

☐ ☐ ☐ ☐ ☐

8 I am satisfied with the services at this clinic

ExtremelyModeratelySlightlyNot at All

☐ ☐ ☐ ☐

9. Of the following what would improve your experience at this clinic (check all that apply)?

Translating services

Receiving written materials

More time with clinician

Other(please specify)_____

Appendix B

Primary Caregiver Asthma Survey (Spanish Version)

Shown below is the survey asthma concern survey administered to primary care givers in Spanish consisting of nine total questions.

1. ¿Qué tan bien habla usted inglés?

Nada en absoluto Mal Bien Muy bien

□ □ □ □

2.¿Cómo calificaría los síntomas de asma de su hijo durante el último mes?

Extremadamente Severos Severos Moderados Ligeros Ninguno en absoluto

□ □ □ □ □

3. ¿Qué tan bien cree usted que se ha controlado el asma de su hijo(a) durante el último mes?

Perfectamente Muy bien Aceptable Mal Nada en absoluto

□ □ □ □ □

4. ¿Qué tan seguro está usted de que sabe qué hacer si su hijo(a) tiene un ataque de asma?

ExtremadamenteModeradamenteLigeramenteNada en absoluto

□ □ □ □ □

5. ¿Qué tan bien cree usted que entiende lo que debe hacer para controlar adecuadamente el asma de su hijo (a)?

ExtremadamenteModeradamenteLigeramenteNada en absoluto

□ □ □ □ □

Por favor responda a las siguientes preguntas con respecto a los servicios en esta clínica:

6. Cuando me reuní con el proveedor de mi hijo(a), me dieron instrucciones específicas que podía entender y seguir

Totalmente en desacuerdo En desacuerdo Ni de acuerdo/ni en desacuerdo De acuerdo Totalmente de acuerdo

□ □ □ □ □ □

7. Tengo acceso a las instrucciones para controlar el asma de mi hijo en mi idioma preferido

Totalmente en desacuerdo En desacuerdo Ni de acuerdo/ni en desacuerdo De acuerdo Totalmente de acuerdo

□ □ □ □ □ □

8. Estoy satisfecho (a) con los servicios de esta clínica

ExtremadamenteModeradamenteLigeramenteNada en absoluto

□ □ □ □ □

9. De lo siguiente, qué mejoraría su experiencia en esta clínica? Marque todas las respuestas que apliquen.

Servicios de traducción

Más tiempo con el providero su hijo(a)

Otro (por favor especifque)_____

Appendix C

Provider Asthma Survey

Shown below is the survey asthma concern survey administered to primary care providers in English consisting of eight total questions.

1. How confident are you that you can explain asthma treatment options to your patients/patient guardians in a manner that ensures understanding?

ExtremelyModeratelySlightlyNot at All

□ □ □ □

2. How confident are you that you can communicate effectively with your patients/patient guardians if their primary language is not English?

ExtremelyModeratelySlightlyNot at All

□ □ □ □

3. How often do you give written asthma treatment instructions for your patients in their preferred language?

AlwaysOftenSeldomNever

□ □ □ □

4. How easy is it to access educational materials (e.g. pamphlet, information sheet) about asthma at this facility for use with patients/patient guardians:

That are written in English:

ExtremelyModeratelySlightlyNot at All

□ □ □ □

That are written in Spanish:

ExtremelyModeratelySlightlyNot at All

□ □ □ □

5. How often do you provide asthma education materials for your patients/patient's guardian in their preferred language?

AlwaysOftenSeldomNever

□ □ □ □

6. How would you rate language barriers as an overall source of stress in your daily work experience?

ExtremeModerateSlight Not at All

□ □ □ □

7. To what extend do you believe language barriers contribute to non-adherence with your recommended treatment plans for asthma patients?

ExtremelyModeratelySlightly Not at All

□ □ □ □

8. Please indicate the approximate percentage of patients you see whose primary language is not English

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