Community Resource Needs Assessment Among Families Presenting to a Pediatric Emergency Department

Janet E. Semple-Hess, MD, MS; Phung K. Pham, MS, MA; Samuel A. Cohen, BS; Danica B. Liberman, MD, MPH

From the Division of Emergency and Transport Medicine (JE Semple-Hess, PK Pham, and DB Liberman), Children's Hospital Los Angeles; Department of Pediatrics (JE Semple-Hess and DB Liberman), Keck School of Medicine, University of Southern California, Los Angeles; Division of Behavioral and Organizational Sciences (PK Pham), Claremont Graduate University of the Claremont Colleges, Claremont; and Department of Preventive Medicine (SA Cohen), Keck School of Medicine, University of Southern California, Los Angeles
The authors have no conflicts of interest to disclose.
Address correspondence to Janet E. Semple-Hess, MD, MS, Division of Emergency and Transport Medicine, Children's Hospital Los Angeles, 4650 Sunset Blvd., Mailstop 113, Los Angeles, CA 90027 (e-mail: jsemple@chla.usc.edu).

ABSTRACT

OBJECTIVE: To identify community resource needs among families presenting to a pediatric emergency department (PED).

METHODS: A convenience sample of English- and Spanish-speaking caregivers residing in Los Angeles County who presented to the PED of a large urban children's hospital were surveyed. The needs assessment survey assessed demographics, food insecurity, and previous and anticipated need for 12 common community resources.

RESULTS: Of 768 caregivers who completed the survey, 75% identified as Hispanic/Latinx. Across all survey participants, 83% used at least 1 resource in the past, and 67% anticipated needing at least 1 resource in the next 12 months. Low-cost/free health clinics were the most common resources used in the past and needed for the future. Caregivers with younger children tended to need baby formula/breastfeeding and women's health resources, whereas caregivers with older children tended to need safe housing, subsidized utilities, and counseling/therapy.

Many families who needed resources in the past and for the future resided south of the children's hospital where median household income was relatively lower than in other areas of the county. A pattern of heightened use emerged among caregivers who primarily spoke Spanish. On average, caregivers reported feeling comfortable approaching hospital staff about community resources.

CONCLUSIONS: We found significant needs for community resources among families who presented to an urban PED. Needs were particularly salient among Spanish-speaking families and families living in close proximity to the children's hospital. Findings from this study help to inform future work connecting families to community resources.

KEYWORDS: community resource needs; pediatric emergency medicine; social determinants of health; social needs screening

ACADEMIC PEDIATRICS 2019;19:378−385

WHAT'S NEW

Screening for community resource needs in an urban pediatric emergency department is feasible and revealed interesting patterns of past and future needs related to children's ages, Spanish language, and proximity to a safety net hospital.

IN THE UNITED States, 15 million children, or 18% of all children nationwide, live in poverty.[1] Research has shown that families need an income of about twice the federal poverty level to cover basic expenses, and using this standard categorizes 43% of children as living in low-income families.[2] Without state and federally funded safety net programs, many more children would be at risk. Childhood poverty is linked to poorer child health, including worse birth outcomes; increased prevalence of diseases such as asthma, obesity, and mental illness; and more frequent preventable injuries, emergency department (ED) visits, and hospital admissions.[3-7] Furthermore, social disadvantage (eg, limited English proficiency) seems to be additive —the more disadvantaged, the poorer the child health status, with worse health services access and quality of care.[8,9] Similarly, studies have shown a direct relationship between food insecurity and caretaker depression and poor caretaker and child health status.[10]

The importance of health and social needs screening during well-child clinic visits is evident in recent literature, especially for at-risk urban populations.[11,12] A recent American Academy of Pediatrics position statement on poverty and child health emphasizes well-child clinic visits as opportunities to screen for social needs and connect families to community resources.[13] To date, a number of studies have examined the effectiveness of screening and directly linking families to social services during well-child clinic visits to help improve child health outcomes.

Enhanced connection of families with resources occurred when directly navigated, and parents reported improvement in overall child health.[14-18] Yet, barriers persist despite the importance of social needs screening during well-child clinic visits, such as physicians' attitudes and families' lack of access to a medical home.[19,20]

As a common site for health care, particularly for those with limited access, EDs are prime locations for screening and identifying social needs. Studies have shown the benefits of identifying social needs in adult patients presenting to the ED.[21,22] However, data on the feasibility and effectiveness of routine screening for social needs among families presenting to the ED with their children are limited. Through a survey of caregivers of children being treated in a pediatric emergency department (PED) located in a large safety-net hospital in Los Angeles County, our objective was to assess community resource needs among families residing in the county. We examined the frequency and type of community resource use in the past and anticipated for the future, the prevalence of food insecurity, and caregiver preferences and comfort with speaking to hospital personnel about community resources. We also examined the associations of language and other demographic elements with community resource use and need. In addition, using zip code data, we explored the frequency and intensity of community resource use and need in relation to our hospital location and the median socioeconomic status of the neighborhoods where families resided. Our study was conducted as an initial step toward the development of a help desk in our PED to connect families to community resources.

METHODS

STUDY DESIGN

We conducted a cross-sectional needs assessment survey of caregivers (parents and legal guardians) of children residing in Los Angeles County who presented to the PED at an urban free-standing children's hospital. Covering 4751 square miles with a population of 10.17 million, Los Angeles County is the largest county in the United States and contains one fourth of California's 9.1 million children.[23] The study was approved by the hospital's institutional review board.

STUDY SETTING AND SAMPLE

Caregivers were approached in the hospital's PED between August and December 2016. Located in Los Angeles, California, the institution is an urban quaternary care pediatric center with an annual PED census of >90,000. Study eligibility was limited to caregivers who spoke English or Spanish (ie, the primary languages of most families presenting to this PED) accompanying a patient <21 years of age. Language proficiency was not directly measured; instead, caregivers were asked to determine their own comfort with answering the study survey. Caregivers who self-identified as Spanish-speaking were

given the choice of completing the survey in English or Spanish. Those who primarily spoke languages other than English or Spanish were given the option to either complete the survey in English or to withdraw participation. Caregivers were excluded if their child had durable medical equipment (eg, feeding tube, tracheostomy) and/or history of cancer or sickle-cell disease, as most caregivers of complex care patients at this institution routinely receive assistance from social work. Also excluded were caregivers of patients who presented to the PED for acute psychiatric evaluation or who were critically ill (ie, Emergency Severity Index level of 1). Eligible patients were designated at Emergency Severity Index levels 2 to 5. Given that the design of this study was to assess community resource needs among families residing in Los Angeles County, any caregivers who reported residency outside of the county were excluded.

MEASURES AND PROCEDURES

The survey was created solely for this study, written at a third-grade reading level, and translated into Spanish by a certified hospital interpreter. Development of the survey questions about community resources was shaped by existing screening tools from the literature and PED physicians' and social workers' anecdotal knowledge of the most common needs among PED families and adapted for the needs of this study and population of interest.[15,19,24] Before implementation, the survey was reviewed and edited by PED physicians, research staff, and a PED social worker. Subsequently, the survey was piloted on 20 PED families and refined again for clarity, revising any questions that families found confusing or difficult to understand.

Potential study participants were identified by research assistants using the PED real-time tracking board and in discussion with the treating physicians; enrollment was primarily dictated by research assistant availability. All research assistants underwent formal training on study enrollment procedures. Caregivers were approached by research assistants at any point during their child's PED stay after their child had been evaluated by a physician. Caregivers were informed that the survey was anonymous and participation was voluntary. After obtaining caregivers' verbal consent to participate, the survey was administered confidentially in a private room. Research assistants read aloud all items from the survey form to caregivers and manually recorded responses onto the form. Survey administration took approximately 10 minutes. In the instance in which more than 1 caregiver was present, only the self-identified primary caregiver was surveyed. When a research assistant was not proficient in Spanish, certified hospital interpreters coadministered the survey.

For official study data collection after the pilot phase, caregivers were asked, "Which of the following services have you/your child ever used?" and "In the next 12 months, which of the following services will you/your child need?" Specifically, we inquired about 12 common community resources: 1) public health/low-cost clinics; 2) low-cost/free dental and/or vision care; 3) women's health services;

4) baby formula and/or breastfeeding support services; 5) food banks, pantries, and/or meal services; 6) temporary housing and shelters; 7) safe housing services; 8) subsidized utilities; 9) psychological counseling and/or therapy for the child and/or family; 10) parenting classes and/or parent support groups; 11) parent education and/or job training; and 12) legal services (eg, immigration, divorce, custody, restraining orders). Caregivers affirmed all resources that applied and were then surveyed via 2 questions from the US Household Food Security Survey.[25] Finally, caregivers rated their comfort level (using a 5-point Likert scale ranging from 1 = very uncomfortable to 5 = very comfortable) in asking different hospital staff members (doctor, nurse, interpreter, registration clerk, social worker) about community resources. For caregivers with any emergent unmet need, social work consultation was provided per institutional practice; however, data on these consults were not recorded for the study. The following demographics were collected and analyzed: primary language spoken at home, ages of both the patient and the caregiver, patient health insurance, caregiver race/ethnicity, number of household members, home zip code, and number of years residing in Los Angeles County. Data were entered into Research Electronic Data Capture (ie, REDCap).[26]

DATA ANALYSIS

Data were analyzed in IBM SPSS, version 23 (IBM Corp, Armonk, NY). Descriptive statistics were used to output means and standard deviations (SDs) for continuous variables (eg, caregiver and patient ages), and also frequencies and percentages where appropriate for count data (eg, number of household members). Independent samples t tests were used on continuous variables to test for differences between families who had not needed any resources in the past and families who needed one or more resources in the past. Point-biserial correlations (r_{pb}) were used to test for associations between continuous variables and binary (yes−no) variables (eg, resources used in the past and

anticipated in the future). Odds ratios with 95% confidence intervals by way of binary logistic regression were used to examine patterns in the relationship between language (categorical variable) and resources (binary variables). Pearson Chi-square tests with post-hoc standardized residuals (z) were used to examine patterns in the relationships between categorical variables. Zip code data were explored in Tableau v. 10.1.2 (Tableau, Seattle, Wash) with median household income layering from OpenStreetMap.

RESULTS

Of 992 caregivers approached, 808 (81.5%) agreed to participate in the study and 184 (18.5%) declined for reasons such as "not interested" and "too tired." Of 808 caregivers who were surveyed, data from 768 (95%) were analyzed. Data from 40 caregivers (5%) were excluded because of incompletion (13 caregivers did not complete the survey) or response issues (27 caregivers gave more than 1 response where only one was expected). Apart from the 992 caregivers approached, there were 7 caregivers who were later deemed ineligible because they resided outside of Los Angeles County. Of 768 caregivers who completed the survey, 573 (75%) self-identified as Hispanic/Latinx, 66 (9%) white, 49 (6%) Asian/Pacific Islander, 47 (6%) black/African American, and 33 (4%) other. Demographics of our study sample largely mirrored those of the ED population at our hospital. Specifically, based on administrative records in the 2016 calendar year, 75% of families who presented to our ED self-identified as Hispanic/Latinx, and 35% of these families reported Spanish as their primary language. Table 1 shows demographic details of the study sample.

Among all caregivers surveyed, 521 (68%) used 2 or more community resources in the past, whereas 113 (15%) used 1 resource, and 134 (17%) used none. Furthermore, 114 (15%) caregivers who did not use any resources in the past did not anticipate needing resources in the coming year. On average, families who had not used any resources

Table 1. Sample Demographics

Demographic Characteristic	Mean (SD)				Mean (SD)
	English Survey, English Spoken at Home (n = 395)	Spanish Survey, Spanish Spoken at Home (n = 164)	English Survey, Spanish Spoken at Home (n = 157)	English Survey, Other Language Spoken at Home (n = 52)	Sample (n = 768)
Parent age, y	34.09 (9.15)	37.70 (9.07)	32.47 (9.03)	34.71 (9.28)	34.71 (9.28)
Patient age, y	6.53 (5.21)	8.15 (5.65)	5.86 (5.42)	5.66 (5.33)	6.68 (5.41)
Los Angeles County residence, y	26.62 (11.38)	15.90 (8.84)	20.75 (9.12)	16.31 (10.39)	22.43 (11.34)
Number of household members	5 (2)	5 (2)	5 (1)	4 (1)	5 (2)
	Frequency (% of Group)				Frequency (% of Sample)
Patient health insurance					
Public (Medi-Cal)	305 (77%)	155 (95%)	140 (89%)	38 (73%)	634 (83%)
Private (PPO or HMO)	80 (20%)	4 (2%)	15 (10%)	12 (23%)	111 (14%)
Self-pay or other	10 (3%)	5 (3%)	2 (1%)	2 (4%)	19 (2%)

SD indicates standard deviation; PPO, preferred provider organization; and HMO, health maintenance organization.

in the past and families who used 1 or more resources in the past did not significantly differ in parent age ($P = .28$), child age ($P = .16$), or years living in Los Angeles County ($P = .16$). However, on average, families who used 1 or more resources in the past had more household members (mean = 5, SD = 2) than families who had not used any resources in the past (mean = 4, SD = 1; $P = .02$).

When surveyed about anticipated community resource needs in the coming 12 months, 413 (54%) caregivers anticipated needing 2 or more community resources, whereas 102 (13%) caregivers anticipated needing 1 resource, and 253 (33%) caregivers anticipated needing none. Low-cost/free health clinics and dental/vision care were the most common community resources used in the past and needed in the coming year; safe housing was the second most common past used and future anticipated need. Table 2 presents the frequencies and percentages of community resources used in the past and needed in the coming year. As shown in Table 3, when data were analyzed by language, a pattern of heightened past use and future need emerged among caregivers who primarily spoke Spanish and were surveyed in Spanish. Also, among families speaking only Spanish, their future odds of needing the following resources were significantly greater than their past odds: public health clinics, women's health resources, temporary housing and shelters, child/family therapy, parenting/parent support classes, parent education/job training, and legal aid (Table 3).

Several significant correlations were found between specific resources and age of the caregiver's child. In the past, caregivers of older children tended to use safe housing services ($r_{pb} = 0.10$, $P = .009$), subsidized utilities ($r_{pb} = 0.15$, $P < .001$), and psychological counseling/therapy ($r_{pb} = 0.14$, $P < .001$), whereas those with younger children tended to use resources related to women's health ($r_{pb} = -0.18$, $P < .001$) and baby formula/breastfeeding ($r_{pb} = -0.16$, $P < .001$). For the future, caregivers of older children anticipated needing resources related to psychological counseling/therapy in the coming 12 months ($r_{pb} = 0.11$, $P = .003$), whereas those with younger children anticipated needing resources related to women's health ($r_{pb} = -0.16$, $P < .001$) and baby formula/breastfeeding ($r_{pb} = -0.24$, $P < .001$).

Exploration of zip code data showed that many families who needed resources in the past and for the future resided south of the children's hospital, where median household income was relatively lower than in other areas of Los Angeles County. Furthermore, there were significant patterns between language and food insecurity in the past (Table 4). Specifically, caregivers who were only Spanish-speaking were the most likely to report that they sometimes had food insecurity, compared with other caregivers in the study sample. They were also the least likely to report that they never had food insecurity.

Finally, caregivers on average felt very or somewhat comfortable asking social workers, registration clerks, nurses, and physicians about community resources (Figure). Most Spanish-speaking caregivers felt very or somewhat comfortable asking a hospital interpreter about community resources (Figure).

Table 2. Frequencies and Percentages of Community Resources Used in the Past and Needed in the Next 12 Months

Resources		Frequency (% of Group)			
		English Survey, English Spoken at Home (n = 395)	Spanish Survey, Spanish Spoken at Home (n = 164)	English Survey, Spanish Spoken at Home (n = 157)	English Survey, Other Language Spoken at Home (n = 52)
Public health clinics	Past	180 (46%)	136 (83%)	81 (52%)	18 (35%)
	Future	126 (32%)	143 (87%)	66 (42%)	15 (29%)
Dental and/or vision care	Past	136 (34%)	118 (72%)	58 (37%)	11 (21%)
	Future	134 (34%)	127 (77%)	63 (40%)	18 (35%)
Women's health	Past	173 (44%)	66 (40%)	69 (44%)	8 (15%)
	Future	94 (24%)	59 (36%)	49 (31%)	9 (17%)
Baby formula and/or breast-feeding support	Past	164 (42%)	70 (43%)	60 (38%)	14 (27%)
	Future	36 (9%)	28 (17%)	23 (15%)	6 (12%)
Food banks, pantries, and/or meal services	Past	62 (16%)	46 (28%)	30 (19%)	6 (12%)
	Future	46 (12%)	49 (30%)	24 (15%)	8 (15%)
Temporary housing and shelters	Past	21 (5%)	4 (2%)	5 (3%)	2 (4%)
	Future	17 (4%)	13 (8%)	6 (4%)	2 (4%)
Safe housing services	Past	7 (2%)	18 (11%)	5 (3%)	1 (2%)
	Future	13 (3%)	28 (17%)	9 (6%)	1 (2%)
Subsidized utilities	Past	59 (15%)	53 (32%)	18 (11%)	4 (8%)
	Future	67 (17%)	51 (31%)	20 (13%)	5 (10%)
Child and/or family therapy	Past	114 (29%)	39 (24%)	36 (23%)	5 (10%)
	Future	76 (19%)	46 (28%)	22 (14%)	7 (13%)
Parenting and/or parent support classes	Past	87 (22%)	26 (16%)	18 (11%)	2 (4%)
	Future	55 (14%)	35 (21%)	23 (15%)	3 (6%)
Parent education and/or job training	Past	73 (18%)	17 (10%)	15 (10%)	2 (4%)
	Future	61 (15%)	46 (28%)	24 (15%)	5 (10%)
Legal aid	Past	55 (14%)	25 (15%)	17 (11%)	5 (10%)
	Future	37 (9%)	41 (25%)	25 (16%)	8 (15%)

Table 3. Odds of Community Resources Used in the Past and Needed in the Next 12 Months

Resources		Spanish Survey, Spanish Spoken at Home (n = 164)	English Survey, Spanish Spoken at Home (n = 157)	English Survey, Other Language Spoken at Home (n = 52)
		OR (95% CI)*		
Public health clinics	Past	5.80 (3.69-9.12)[†]	1.27 (0.88-1.84)	0.63 (0.35-1.16)
	Future	14.54 (8.78-24.08)[†]	1.55 (1.06-2.27)[‡]	0.87 (0.46-1.64)
Dental and/or vision care	Past	4.89 (3.28-7.28)[†]	1.12 (0.76-1.64)	0.51 (0.25-1.03)
	Future	6.69 (4.39-10.19)[†]	1.31 (0.89-1.91)	1.03 (0.56-1.89)
Women's health	Past	0.86 (0.60-1.25)	1.01 (0.69-1.46)	0.23 (0.11-0.51)[†]
	Future	1.80 (1.21-2.67)[§]	1.45 (0.97-2.19)	0.67 (0.32-1.43)
Baby formula and/or breast-feeding support	Past	1.05 (0.73-1.52)	0.87 (0.60-1.27)	0.52 (0.27-0.99)[‡]
	Future	2.05 (1.21-3.49)[§]	1.71 (0.98-3.00)	1.30 (0.52-3.26)
Food banks, pantries, and/or meal services	Past	2.09 (1.36-3.24)[†]	1.27 (0.78-2.05)	0.70 (0.29-1.71)
	Future	3.23 (2.05-5.09)[†]	1.37 (0.80-2.33)	1.38 (0.61-3.11)
Temporary housing and shelters	Past	0.45 (0.15-1.32)	0.59 (0.22-1.58)	0.71 (0.16-3.13)
	Future	1.91 (0.91-4.04)	0.88 (0.34-2.28)	0.89 (0.20-3.96)
Safe housing services	Past	6.83 (2.80-16.70)[†]	1.82 (0.57-5.83)	1.09 (0.13-9.01)
	Future	6.05 (3.05-12.02)[†]	1.79 (0.75-4.27)	0.58 (0.07-4.50)
Subsidized utilities	Past	2.72 (1.77-4.17)[†]	0.74 (0.42-1.30)	0.48 (0.17-1.37)
	Future	2.21 (1.45-3.37)[†]	0.72 (0.42-1.22)	0.52 (0.20-1.36)
Child and/or family therapy	Past	0.77 (0.51-1.17)	0.73 (0.48-1.13)	0.26 (0.10-0.68)[§]
	Future	1.64 (1.07-2.50)[‡]	0.68 (0.41-1.15)	0.65 (0.28-1.50)
Parenting and/or parent support classes	Past	0.67 (0.41-1.08)	0.46 (0.27-0.79)[§]	0.14 (0.03-0.59)[§]
	Future	1.68 (1.05-2.68)[‡]	1.06 (0.63-1.80)	0.38 (0.11-1.26)
Parent education and/or job training	Past	0.51 (0.29-0.90)[‡]	0.47 (0.26-0.84)[‡]	0.18 (0.04-0.74)[‡]
	Future	2.13 (1.38-3.30)[†]	0.99 (0.59-1.65)	0.58 (0.22-1.52)
Legal aid	Past	1.11 (0.67-1.86)	0.75 (0.42-1.34)	0.66 (0.25-1.73)
	Future	3.23 (1.98-5.26)[†]	1.83 (1.06-3.16)[‡]	1.76 (0.77-4.02)

OR indicates odds ratio; and CI, confidence interval.
*Compared with the reference group of English survey, English spoken at home (n = 395).
[†]P ≤ .001.
[‡]P ≤ .05.
[§]P ≤ .01.

Table 4. Food Insecurity Frequencies and Percentages*

In the Past 12 Months	English Survey, English Spoken at Home (n = 395)	Spanish Survey, Spanish Spoken at Home (n = 164)	English Survey, Spanish Spoken at Home (n = 157)	English Survey, Other Language Spoken at Home (n = 52)
Worries about food running out[†]				
Often	12 (2%)	11 (1%)	4 (<1%)	3 (<1%)
Sometimes	90 (12%)	84 (11%)[‡]	39 (5%)	4 (<1%)
Never	293 (38%)	69 (9%)[§]	114 (15%)	45 (6%)
Food ran out before having money to buy more[†]				
Often	5 (< 1%)	8 (1%)	5 (<1%)	2 (<1%)
Sometimes	74 (10%)	74 (10%)[‡]	26 (3%)	4 (<1%)
Never	316 (41%)	82 (11%)[§]	126 (16%)	46 (6%)

*Food insecurity frequencies were measured using 2 items from the US Household Food Security Survey Module 2012. Sample (total) = 768.
[†]P (Monte Carlo) < .001, from Pearson Chi-square test for association.
[‡]Standardized residual (z) ≥ 2.58 represents a significant pattern at P (post-hoc) ≤ .001.
[§]Standardized residual (z) ≥ −2.58 represents a significant inverse pattern at P (post-hoc) ≤ .001.

DISCUSSION

In this large cross-sectional survey study set in an urban PED, we demonstrated substantial past use and future anticipated need for community resources among our study sample. Our findings reinforce what other investigators have found when screening for social needs and food insecurity in pediatric primary care settings.[15-18] When enrolling primary caregivers of children <6 months in a well child clinic, Garg et al [17] found that >90% had at least 1 unmet social need, with 68% reporting 2 or more unmet needs. Similarly, 90% of caregivers surveyed in a predominantly Medicaid population in Baltimore had used at least 1 of 12 onsite services in a well-child clinic that addressed social and health needs, with 42% using 3 or more services.[27] Of note, only 10% of patients seen in our PED are seen in our hospital's general pediatric clinic, and many of the remaining 90% have no identifiable medical home; therefore, screening in the PED
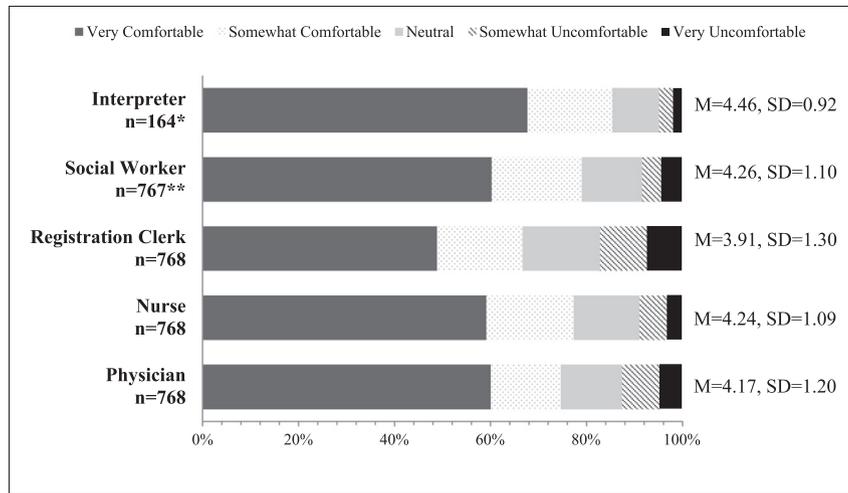
Figure. *Caregivers' comfort levels in asking hospital staff about community resources. * Group of Spanish survey, Spanish spoken at home (n = 164). **Data missing from 1 parent/caregiver. M indicates mean; SD, standard deviation.*

offers the opportunity to engage a potentially missed population. Although some families surveyed had accessed services in the past, which is encouraging, we cannot conclude that the population with past access has needs that are completely satisfied or unchanging, nor that the population anticipating needs in the future will have access to community resources. Thus, our findings suggest an opportunity for screening and connecting families in the PED to available community resources. A recent RAND report points to this changing role of EDs throughout the United States and how the ED's role in the delivery of both emergent and nonemergent health care is growing.[28] Specifically, among the report's key findings are that "in any given year, 1 out of 5 Americans makes at least 1 visit to an ED" and "the major reason patients visit EDs for health problems treatable or preventable by primary care is lack of timely options elsewhere."[28]

The socioeconomic status of our study sample is similar to the other studies cited, with 83% of our patient population covered through Medicaid. However, Los Angeles County has among the greatest child poverty rates in all of California—at 25.3%, a rate that is 7.3% above the national average.[29] In 2015, the poverty rate for Latinx children (29.6%) was more than double that of Asian American (14.4%) and white (11.5%) children in California.[29] Knowing this clarifies our results demonstrating greater needs for community resources and increased rates of reported food insecurity among Hispanic/Latinx families, findings supported by the literature, and may be useful going forward in guiding resource allocation and provision.[10,25] Patterns in food insecurity were similar, with greater reports of food insecurity among Spanish-speaking caregivers.[19,24] Our demonstration of greater community resource needs for Hispanic families surveyed in Spanish, as compared with Hispanic families surveyed in English, is corroborated by Flores et al,[30] who demonstrated non-English primary language at home was associated with greater access barriers to health care in children.

O'Malley et al[31] studied families presenting to 2 PEDs and 4 urgent care services, looking at adverse childhood experiences and current adversities (measured by the iHELP survey). It should be noted that their sample consisted of English-speaking families, and only one half of these families were Medicaid recipients. Their results suggested that caregivers using urgent care and PEDs may have a greater prevalence of adverse childhood experiences and current adversities. As in our study, O'Malley et al found that families were open to being screened by health care team members (physicians, nurses, social workers) and did not have a preference for any specific member. This provides motivation for all providers to improve screening in medical settings. Unfortunately, despite growing acknowledgement among physicians that screening for social needs is important, it is still rarely standard practice.[15,32-34] The low rate of screening during routine clinic visits as well as inpatient encounters suggests that these patients may slip through the cracks, heightening the importance of ED and PED settings as opportune places to address otherwise unmet social needs.

Previous studies have concentrated on caregivers with children of a specific age or limited age range.[16,17] The broad range of child ages captured in our study allowed for some interesting inferences. Knowing the general trends of community resource needs by child age can assist in tailored screening and linkage to services among specific families.

Using zip code data, we were able to explore "hot spots" of past use and future need located within 15 miles to the south of our hospital and situate them in the context of socioeconomic status. The literature has demonstrated that children living in neighborhoods with a low child opportunity index were more likely to have frequent urgent care visits.[35] The child opportunity index measures the context in which a child lives, accounting for both positive and negative indicators (eg, accessibility to open spaces for recreation, poverty of neighborhood schools, proximity to toxic waste) and is being used with increased frequency to guide community interventions and data-reporting.[35]

The limitations of our study should be considered. First, we surveyed a convenience sample of families using services in our PED and therefore might have incurred selection bias. However, our large sample size demographically mirrored the patient population of our PED. Second, in asking families to reflect on their use in the past, there was a possibility of recall bias that might have translated to under- or over-reporting of social needs. Third, social desirability bias might have compelled some caregivers to deny certain needs. The anonymity of the survey aimed to mitigate this, however. In addition, although Spanish was the only non-English survey offered, Spanish and English are spoken by the vast majority of families seeking care in our PED. Because our study was limited to a single institution with majority Hispanic/Latinx patients, our results may not be reflective of the community resource use and needs in other communities with different patient demographic characteristics. Although the number of community resources that were screened for was not exhaustive, we did include those most commonly identified in the literature. By not specifically asking how families had previously linked to resources and if they had encountered any barriers, it is possible that families may be able to access resources irrespective of any social needs screening. Furthermore, we asked families only if they would be comfortable approaching the hospital staff about services they might need and did not ask about acceptability by families of routine screening. Finally, we did not examine the impact of ages of other children in the household on family needs.

Looking ahead, the results from our study add to the growing literature on the importance and relevance of social services screening in pediatric health care settings and inform us of specific social needs among a sample population of families residing in Los Angeles County and seeking care at our PED. With the need for community resources identified, we have our call to action, and a logical next step is to begin addressing families' needs through development of a community resources help desk embedded within our PED. Help desk interventions have increasingly gained traction in the medical community and evidence of success has emerged across many different geographical locations and health care settings.[14,16-18,27] Effectively screening families for social needs in health care settings, including PEDs, and successfully linking them to community resources are promising ways to directly address social determinants of health to improve the health of the child, family, and community.

CONCLUSIONS

Community resources are commonly used and needed by caregivers seeking pediatric emergency services, especially those whose primary language is not English, and by families residing in neighborhoods with low household income levels. At a moment in our country's history when 18% of all children in the United States live in households under the federal poverty level, and the science linking social determinants of health to long-term individual and population health outcomes is growing exponentially, we have a shared duty to incorporate social needs screening and resource referrals within every element of our health care delivery system.

REFERENCES

1. United States Census Bureau. Income and Poverty in the United States. 2016. Available at: https://www.census.gov/library/publications/2017/demo/p60-259.html. Accessed March 18, 2018.
2. Council on Community Pediatrics, American Academy of Pediatrics. Poverty and Child Health in the United States (March 2016). Available at: http://pediatrics.aappublications.org/content/early/2016/03/07/peds.2016-0339. Accessed June 22, 2018.
3. Chaudry A, Wimer C. Poverty is not just an indicator: the relationship between income, poverty, and child well-being. *Acad Pediatr.* 2016;16:S23–S29.
4. Victorino CC, Gauthier AH. Social determinants of child health: variations across health outcomes—a population-based cross-sectional analysis. *BMC Pediatr.* 2009;9:53.
5. Ashiabi GS, O'Neal KK. Children's health status: examining the associations among income, poverty, maternal hardship, and parental factors. *PLoS One.* 2007;2:e940.
6. Cutts DB, Meyers AF, Black MM, et al. US housing insecurity and the health of very young children. *Am J Public Health.* 2011;101:1508–1514.
7. Gupta RP, de Wit ML, McKeown D. The impact of poverty on the current and future health status of children. *J Paediatr Child Health.* 2007;12:667–672.
8. Bauman LJ, Silver EJ, Stein RE. Cumulative social disadvantage and child health. *Pediatrics.* 2006;117:132–137.
9. Eneriz-Wiemer M, Sanders LM, Barr D, et al. Parental limited English proficiency and health outcomes for children with special health care needs: a systematic review. *Acad Pediatr.* 2014;14:128–136.
10. Cook JT, Frank DA, Berkowitz C, et al. Food insecurity is associated with adverse health outcomes among human infants and toddlers. *J Nutr.* 2004;134:1432–1438.
11. Cheng TL, Emmanuel MA, Levy DJ, et al. Child health disparities: what can a clinician do. *Pediatrics.* 2015;136:961–968.
12. Fierman AH, Beck AF, Chung EK, et al. Redesigning health care practices to address childhood poverty. *Acad Pediatr.* 2016;16:S136–W146.
13. Council on Community Pediatrics and Committee on Native American Child Health. American Academy of Pediatrics. Policy statement-health equity and children's rights. *Pediatrics.* 2010;125:838–849.
14. Garg A, Butz AM, Dworkin PH, et al. Improving the management of family psychosocial problems at low-income well child visits; the WE CARE project. *Pediatrics.* 2007;20:547–556.
15. Fleegler EW, Lieu TA, Wise PH, et al. Families' health-related social problems and missed referral opportunities. *Pediatrics.* 2007;119:e1332–e1341.
16. Garg A, Butz AM, Dworkin P, et al. Screening for basic social needs at a medical home for low-income children. *Clin Pediatr.* 2009;48:32–36.

17. Garg A, Toy S, Tripodis Y, et al. Addressing social determinants of health at well child care visits: a cluster RCT. *Pediatrics*. 2015;135: e296–e304.

18. Gottlieb LM, Hessler D, Long D, et al. Effects of social needs screening and in-person service navigation on child health: a randomized clinical trial. *JAMA Pediatr*. 2016;170:e162521.

19. Palakshappa D, Vasan A, Khan S, et al. Clinicians' perceptions of screening for food insecurity in suburban pediatric practice. *Pediatrics*. 2017;140:e0319.

20. Olson AL, Kemper KJ, Kelleher KJ, et al. Primary care pediatricians' roles and perceived responsibilities in the identification and management of maternal depression. *Pediatrics*. 2002;110:1169–1176.

21. Kwan BM, Rockwood A, Bandie B, et al. Community health workers: addressing client objectives among frequent emergency department users. *J Public Health Manag Pract*. 2018;24:146–154.

22. Anderson ES, Hsieh D, Alter HJ. Social emergency medicine: embracing the dual role of the emergency department in acute care and population health. *Ann Emerg Med*. 2016;68:21–25.

23. Kidsdata.org, a Program of Lucile Packard Foundation for Children's Health. Demographics of California's Children. Available at: https://www.kidsdata.org/export/pdf?cat=7. Accessed June 22, 2018.

24. Kenyon C, Sandel M, Silverstein M, et al. Revisiting the social history for child health. *Pediatrics*. 2007;120:e734–e738.

25. Hager ER, Quigg AM, Black MM, et al. Development and validity of a 2-item screen to identify families at risk for food insecurity. *Pediatrics*. 2010;126:e26–e32.

26. Harris PA, Taylor R, Thielke R, et al. Research electronic data capture (REDcap)-A metadata-driven methodology and workflow process for providing translational research informatics support. *J Biomed Inform*. 2009;42:377–381.

27. Vasan A, Solomon BS. Use of colocated multidisciplinary services to address family psychosocial needs at an urban pediatric primary care clinic. *Clin Pediatr*. 2014;54:1–8.

28. Gonzalez Morganti K, Bauhoff S, Blanchard CJ, et al. The evolving role of emergency departments in the United States. *Rand Health Q*. 2013;3:3.

29. Public Policy Institute of California. Child Poverty in California. Available at: http://www.ppic.org/publication/child-poverty-in-california. Accessed June 22, 2018.

30. Flores G, Abreu M, Tomany-Korman SC. Limited English proficiency, primary language at home, and disparities in child's health care: how language barriers are measured matters. *Public Health Rep*. 2005;120:418–430.

31. O'Malley DM, Randell KA, Dowd MD. Family adversity and resilience measures in pediatric acute care settings. *Public Health Nurs*. 2016;33:3–10.

32. Hassan A, Blood EA, Pikcilingis A, et al. Youths' health related social problems: concerns often overlooked during medical visits. *J Adolesc Health*. 2013;53:265–271.

33. Colvin JD, Bettenhausen JL, Anderson-Carpenter KD, et al. Caregiver opinion of in-hospital screening for unmet social needs and resulting resource referral. *Acad Pediatr*. 2016;16:161–167.

34. Colvin JD, Bettenhausen JL, Anderson-Carpenter KD, et al. Multiple behavior change intervention to improve detection of unmet social needs and resulting resource referral. *Acad Pediatr*. 2016; 16:168–174.

35. Kersten EE, Adler NE, Gottlieb L, et al. Neighborhood child opportunity and individual-level pediatric acute care use and diagnoses. *Pediatrics*. 2018;141:e20172309.