Barriers to Health Care Access for Latino Children: A Review

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Background and Objectives: *More than 9 million Latino children currently live in the United States. Latinos will soon be the largest minority group in the country, but little is known about access barriers to health care faced by Latino children. We reviewed the literature to define specific barriers to care for Latino children, identify methodologic problems, and highlight the clinical and research implications of the identified barriers.* Methods: *We did a MEDLINE search, using combinations of the key words* Hispanic, children, *and* access. *Study exclusion criteria included "not an original research article," "enrolled only adult subjects," "no separate data analysis for children," and "dental care focus."* Results: *The search yielded 497 citations, of which 27 met the inclusion criteria. Of the 32 potential barriers identified, 21 had good supportive evidence. Lack of health insurance was a consistent barrier; recent data revealed that 26% of Latino children are uninsured, compared with 10% of white children and 14% of African-American children. Latino children also are at greater risk for episodic insurance coverage, low rates of private insurance, and loss of employee-based coverage. Parent beliefs about the etiology and treatment of their child's illness, use of home remedies, choice of sources of advice, and folk medicine practices may also influence how health care is obtained. Few data are available on differences in access among major Latino subpopulations, and no studies focused primarily on barriers as perceived by Latino parents. Evidence is equivocal or lacking that the following are barriers for Latino children: immigration status, duration of parent residency in the United States, and acculturation. Several barriers were identified that originate with practices and behaviors of health care providers, including reduced screening, missed vaccination opportunities, decreased likelihood of receiving prescriptions, and poor communication.* Conclusions: *Lack of health insurance and lack of a regular source of care are major access barriers for Latino children, but many other barriers were identified that also can have a substantial effect on health care. In addition, the behaviors and practices of both health care providers and parents can affect access to care. Too little is known about what parents perceive to be the major barriers, access differences among Latino subpopulations, the roles of language and culture, and the causes of obstacles resulting from the actions of providers.*

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Latinos will be the largest minority group in the United States by the end of this decade, numbering an estimated 31 million and comprising 11% of our nation's population.[1-3] The growth rate of Latinos is expected to continue at more than three times the rate of the total US population,[4] due in large part to the greatest fertility rate of any ethnic group[3] and to sustained high levels of immigration. Latino families are more likely than non-Latino families to have children present; recent census data indicated that 63% of Latino families have children younger than age 18 living in the household, compared with 47% of non-Latino families.[3] Of the 24 million Latinos currently living in the United States, about 39%, or more than 9 million, are children ages 0–19.[3] It is therefore increasingly likely that those providing health care for children will see greater numbers of Latino children in their practices.

Although Latino children are a large, rapidly expanding population, little is known about the access barriers they face in our health care system. Because they are disproportionately more likely to be poor, uninsured, and to have parents with limited educational attainment,[5,6] Latino children are at great risk for poor health, increased morbidity, and underutilization of health services. It is important that we understand the access barriers to health care for Latino children to seek ways to avoid these largely preventable adverse outcomes. Previous reviews of access to health care for Latinos[7,8] examined barriers for the general Latino population of all ages and emphasized studies predominantly about adults. To date, there has

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been no published review focusing on access barriers to health care for Latino children. We, therefore, reviewed the literature to 1) define the specific barriers to health care access for Latino children that have been reported, 2) identify any research gaps and methodological problems encountered, and 3) highlight the clinical, health policy, and health services research implications of the identified access barriers.

Methods

Definitions

We use the term *Latino* to aggregately denote all persons living in the United States whose origins can be traced to the Spanish-speaking regions of Latin America, including the Caribbean, Mexico, Central America, and South America. Although *Hispanic* is still the official designation used by the federal government, we agree with others[4] that this term places narrow and undue emphasis on the European influence of Spanish colonialism. Latino is a more inclusive term.

The concepts of access to medical care proposed by Aday and Andersen[9] were used as an initial framework for the identification of access barriers. Enabling components define the resources patients or their communities may have available to facilitate (or in their absence, hinder) the use of services. In this study, the enabling factors we considered included health insurance status, family income, area of residence (central city, suburban, or nonmetropolitan), and region (Northeast, Midwest, South, or West). Predisposing components are variables that describe or influence the propensity of individuals to use services. Predisposing factors that we examined included parental educational attainment, parental beliefs, use of home remedies, parental sources of advice when their child is ill, folk medicine practices, immigration status, duration of residency in the United States, age, gender, family size, parents' marital status, and major Latino subpopulation (Mexican-American, Puerto Rican, or Cuban-American). Need components, which are primarily morbidity and health status measures, were not examined, because it is not always clear whether they are the products of access barriers, barriers in and of themselves, or a combination of both.

The characteristics of the health care delivery system that were examined as potential barriers included provider practices and behaviors, lack of a regular source of care, type of practice setting, and excessive waiting times. Additional potential barriers that were examined and do not easily fit into the single categories of the Aday and Andersen framework[9] include transportation problems , cultural issues, and language difficulties.

Literature Search

We used several MEDLINE search strategies to capture the greatest number of relevant studies. We combined *Hispanic* and *children* as key words in the initial search. We also performed two additional Boolean searches, first combining *Hispanic* and *access,* then combining *Hispanic, children,* and *access,* using key word and Medical Subject Heading (MESH) searches. Because the key word and MESH Boolean searches did not differ substantially, we present results only on the key word searches. The MEDLINE search was from 1966–February 1997.

Inclusion Criteria

Studies were included if they were original research articles that examined access barriers to health care (excluding dental care) for Latino children. We excluded studies for the following reasons: no Latino subjects, enrolled only adult subjects, included subjects of all ages without separate analysis of data on children, no investigation of access barriers to health care, or reported results from unpublished studies (eg, theses). We also excluded review articles and research published only in abstract form.

Analysis of Studies

We read the available abstracts of all studies identified in the MEDLINE searches. Those studies that met our inclusion criteria or lacked abstracts were read in their entirety (or until any of the above exclusion criteria were encountered). To minimize subjectivity in the identification of access barriers, each author independently read and identified barriers from the selected studies. Only those studies and barriers agreed on by both authors were included in this review.

Results

Literature Search

The MEDLINE search produced 497 citations, primarily from the *Hispanic* and *children* combination (398). There were no citations for any of the three searches during the earliest chronological interval (1966–1975), which could be related to the failure of states to collect data on parental ethnic origin until 1978.[10]

A total of 27 studies met the inclusion criteria for this review. Twelve (44%) of these studies used large, national, secondary data sets. Of the remaining 15 studies, most (60%) did not have relevant non-Latino comparison groups as part of the study design. No investigation focused primarily on access barriers to care as perceived by Latino parents. Studies that examined access barriers among the major Latino subpopulation groups (Mexican-Americans, mainland Puerto Ricans, and Cuban-Americans) were rare, and we encountered no study that specifically examined barriers among Dominican-Americans, the other major Latino subpopulation group.

Access barriers that were identified in the review of the literature are shown in Table 1, together with our assessment of the strength of the evidence in the

studies that each barrier is acting as an obstacle to access for Latino children. Of the 32 potential barriers that were identified, 21 were considered to have good evidence to support that they impeded access for Latino children. In the sections that follow, the individual barriers are discussed in detail.

Insurance Barriers

Latinos were consistently found to be the most uninsured ethnic or racial group of children. In an analysis of data from the 1987 National Medical Expenditure Survey (NMES), Cornelius[11] found that 33% of Latino children were uninsured, compared with 14% of white and 22% of African-American children. These findings persisted even after adjustment for family income; uninsured rates were 49% for poor Latino children, compared with 38% in poor white and 30% in poor African-American children.[11] A more recent report,[12] using 1993 data from the US Bureau of the Census, found that 26% of Latino children were uninsured, compared with 10% of white and 14% of African-American children.

Because these studies of national insurance trends used large secondary data sets, it was not possible to obtain estimates of the prevalence of episodic insurance coverage. However, in a study of 817 inner-city Los Angeles Latino children (primarily Mexican-American), Halfon et al[6] found that 19% had been continually uninsured, whereas 21% had episodic Medicaid coverage. Halfon et al also found an association between lack of insurance coverage and having employed parents among Los Angeles Latino children, which was attributed to employment of Latino parents in economic sectors less likely to provide insurance, such as the service or textile industries.[6]

A greater likelihood of lacking insurance was also found in several special populations of Latino children. Among chronically ill children in general, 20% of Latinos were uninsured, compared with 10% of whites and 13% of African-Americans.[13] In a study of poor, inner-city Los Angeles Latino children with asthma,[14] 50% were uninsured, whereas 32% had Medicaid and 19% had private and other types of insurance. Two studies of adolescents in the National Health Interview Survey (NHIS)[15,16] found that Latinos had the highest uninsured levels of any adolescent ethnic or racial group. In the 1984 NHIS,[15] Latino adolescents were nearly three times more likely than white adolescents to be uninsured (30% for Latinos, 11% for whites, and 18% for African-Americans). Several years later, in the 1988 NHIS,[16] these findings persisted with little change; 28% of Latino adolescents were still uninsured, compared with 11% in white and 16% in African-American adolescents. Even after adjusting for a variety of factors (including family income), this increased risk for Latino adolescents of being uninsured remained.[15] Mexican ethnicity was found to be independently associated with an increased risk of being uninsured, whether subjects identified themselves as Mexican-American (odds ratio [OR]=2.5, 95% confidence interval [CI]=2.1-3.1) or Mexican-Mexicano (OR=6, 95% CI=4.2-8.7). However, this was not found to be the case for Puerto Ricans.[17] In a small sample (n=79) of children of migrant Mexican workers, Guendelman[18] reported that none of the parents of undocumented children paid for health care provider visits with insurance, whereas 61% of parents of documented children paid for these visits with insurance. Lack of insurance was a significant predictor of delayed diptheria-tetanus-pertussis (DTP) vaccinations in Mexican-American children; 56% of uninsured children were up-to-date with their DTP immunizations, compared with 64% in insured children.[19]

Financial Barriers

Latino children, along with African-American children, were significantly more likely to be poor than white children. In the 1979 NHIS,[20] Latino (27%) and African-American (40%) children were substantially more likely than white children (10%) to be living in families with annual family incomes below $7,000. In the 1987 NMES,[11] Latino (40%) and African-American (46%) children were at least three times more likely to be living in poverty than white children (12%). Among adolescents, Latinos (20%) and African-Americans (30%) were at least twice as likely as whites (7%) to live in families with annual incomes less than $10,000.[16] In two special populations, Latino children were even more likely than African-American children to be poor. In those with chronic illnesses, Latino (25%) and white (23%) children were more likely than African-American children (15%) to be living below the poverty level.[13] In a community survey of immunizations in poor, inner-city Los Angeles preschoolers, more Latinos (73%) than African-Americans (66%) had family incomes 133% below the poverty level.[21]

Latino parents in several studies cited financial problems as significant barriers to health care for their children. Among the parents of Latino children with asthma, the No. 1 reported barrier in the management of their child's condition was inability to afford medicines, cited by more than 61% of parents.[14] In another study of Latino children with asthma, the two most frequently cited barriers were payment for medicines (73%) and payment for visits to the doctor (58%).[22] Approximately 40% of Latino mothers surveyed in a pediatric emergency department (ED) said that cost was a major barrier to obtaining medical care.[23]

Barriers Related to Geography

Findings related to area of residence and region of residence did not yield consistent relationships. In the 1979 NHIS, Latino children were most likely to reside in the inner city (45%), followed by suburbs

(38%) and rural areas (16%). African-American children predominantly resided in the inner city (56%), followed by rural areas (23%) and the suburbs (21%). White children resided most often in the suburbs (44%) and rural areas (37%), followed by the inner city (18%).[20] However, in the 1987 NMES,[11] Latino children were found to reside most often in suburbs (47%), compared with the inner city (31%), while findings for the other groups were essentially equivalent to those in the NHIS study. These differences for Latinos may be real or may relate to methodological differences in data analysis, since the NMES study[11] grouped the 19 largest standard metropolitan statistical areas together for the inner-city category, but it was not stated how this category was formed in the NHIS study.[20] Mexican-American children residing in suburbs were significantly more likely to be up-to-date on DTP vaccinations (67%) than those residing in urban and rural areas (57%), but these results were not adjusted for family income and health insurance.[19]

Latino children with chronic illnesses residing in the South were more than five times as likely to be uninsured (32%) than those residing in the Midwest (3%) or Northeast (6%); those residing in the West also had relatively high levels of being uninsured (20%).[13]

Barriers Related to Parent Educational Attainment

Educational attainment was found to be consistently lowest for the parents of Latino children.[6,13,14,16,18,20,21,23-26] For example, in the 1979 NHIS, significantly more Latino children (37%) lived in families where the head of the household's highest level of education was elementary school or less, compared with African-American (22%) and white (9%) children.[20] Similar low levels of educational attainment were found for parents of uninsured Latino children with chronic illnesses,[13] as well as Mexican-American children in a variety of study settings, including children of migrant workers,[18] inner-city Los Angeles children,[6,14,21,23,24] infants in an Arizona managed care Medicaid program,[25] and children visiting a rural central California clinic.[26] Higher educational attainment was associated with significantly higher rates of being up-to-date for DTP immunizations in Mexican-American children, but these results were not adjusted for family income and health insurance status.[19]

Barriers Related to Parent Beliefs

Several studies reported parental health belief systems that could act as barriers to health care access.[21,23,24,27,28] Wood et al[21] noted that among inner-city minority families, Latino parents were much more likely (46%) than African-American parents (15%) to incorrectly believe that childhood immunizations prevent colds and/or diarrhea, and, in logistic regression models, this incorrect belief was signficantly associated with delayed immunization status at 3 months of age for Latino children. In a study of mostly Mexican-American mothers visiting a rural California clinic, the majority (80%) believed that an imbalance of hot and cold (sudden change of weather, walking with bare feet, consuming hot or cold food/beverages) caused coughs, and many believed a similar etiology was responsible for fever (43%) and rashes (34%).[26] Conjunctivitis was more commonly attributed to drafts and wind (53%) than to infectious etiologies (40%); other believed causes included watching television too closely, lack of sleep, and use of a heater. Diarrhea was more likely to be attributed to a combination of food not settling in the stomach, decomposed food, and dentition (76%) than to infection (42%).[26] In a study of mostly Mexican-American and

Table 1

Summary of Access Barriers to Health Care for Latino Children*

Barrier	Supportive Evidence
• Health insurance	
Absence	★★
Episodic	★
Low proportion of private insurance coverage	★★
Loss of employee-based coverage	★
• Poverty	★★
• Geography	
Area of residence (inner city/suburban/rural)	E
Region of residence	★
• Parent educational attainment	★★
• Parent beliefs	★
• Use of home remedies	★
• Source of parent advice on child's illness	★
• Folk medicine practices	E
• Immigration status	E
• Duration of parent residency in United States	0
• Child's age	0
• Child's gender	0
• Family size	E
• Parents' marital status (less than two parents living in household)	E
• Major Latino subpopulations	★
• Provider practices and behaviors	
Reduced screening	★
Missed vaccination opportunities	★
Decreased likelihood of receiving prescriptions	★★
Suboptimal management plans	★
Inadequate communication/patient education	★★
Negative attitudes of staff	★
• No regular source of care	★★
• Type of practice setting	E
• Excessive waiting times	★
• Transportation	★
• Acculturation	E
• Cultural differences	★
• Language problems	★

* identified in literature review

★★—evidence is strong, supported by multiple studies, usually with relevant control groups
★—evidence present but supported by single or small numbers of studies, with or without control groups
E—evidence is equivocal
0—no evidence

Central American caregivers visiting a Houston pediatric primary care clinic, Risser and Mazur[27] noted that 12% believed that their child's current illness was due to extreme contrasts in temperature, such as upper respiratory illnesses and asthma exacerbations being caused by stepping outside from an air-conditioned room. In a random sample of Mexican-American parents in the waiting room of a pediatric ED, 26% attributed their child's illness to imbalances of hot and cold due to a change in ambient temperature.[24] However, all of these studies were limited by the absence of non-Latino comparison groups.

Use of Home Remedies as a Barrier

Our review identified Latino parents' preferences for use of home remedies and over-the-counter (OTC) medications that potentially might present barriers to access, because use of such therapies can delay or complicate conventional medical care. Home remedies were used by 81% of parents in one clinic,[26] most frequently for burns (51%), cough (41%), rashes (41%), conjunctivitis (33%), diarrhea (31%), and vomiting (31%). For these various conditions, contacting a medical provider was the most frequent first management step only for vomiting. Treatment of illnesses with a combination of home remedies and OTC preparations occurred most often in fever (58%), diarrhea (25%), and cough (18%). With fever, use of this combination of therapies was more common than contacting a medical provider first, which only 11% of parents preferred to do. Unusual home remedies that were documented included, for fever—applying roasted tomatoes to the chest and feet or giving an enema of salt and oil, for conjunctivitis—instilling drops of chamomile, breast milk, or lemon in the eyes or washing the face with warm urine, and for minor wounds—applying lemon juice, spider webs, or a mixture of bleach and baking soda.[26] A limitation of this study was that parents were not asked their views on the effectiveness of home remedies and OTC products in comparison to biomedical therapies.

Barriers Related to Folk Medicine Practices

Folk medicine practices may also lead to delay or complication of conventional medical care. Five studies reported folk medicine practices that can affect health care access.[18,24,26,27,29] *Empacho* is a Latino folk illness believed to affect the gastrointestinal tract, in which something (usually food or saliva) gets stuck inside the stomach because of a dietary indiscretion (such as eating in excess or at the wrong time or eating the wrong food).[29] Symptoms include vomiting, diarrhea, anorexia, bloating, fever, and chills, and a *santiguadora* (a special folk healer in the Puerto Rican community) may be consulted for treatment instead of a physician.[29] Among inner-city Puerto Rican families receiving care at a Hartford clinic, Pachter et al[29] found that 90% of parents knew what *empacho* was, and 64% said that a child in their household had had it. Of the 43 parents who reported that their child had experienced *empacho*, 77% took their child to a *santiguadora* for treatment, 58% used home remedies, but only 37% visited a physician. Visiting a physician was the initial choice for only 9% of parents, and of those who made an initial physician visit, 85% sought another form of treatment afterward, primarily (82%) a *santiguadora.*

Although the above study[29] illustrates the potential for folk illnesses to act as barriers to health care access, other investigations indicate disagreement about the effect of folk practices. Among children of Mexican migrant workers, no parent reported taking their child to a *curandero* (folk healer) while in the United States.[18] In Mexican-American parents in Texas, most parents reported that their children experienced an episode of the four most common Latino folk disorders, but few took the child to *curanderos* for treatment.[27] *Empacho* had been experienced by 64% of parents in this study, and 22% had taken their child to a *curandero* for treatment. *Mal ojo,* or evil eye, occurs when a person with "strong eyes" looks at a child, resulting in symptoms such as crying, fever, diarrhea, and vomiting; 70% of parents said they had experience with this disorder, but only 11% took their child to a *curandero. Mollera caida,* or fallen fontanelle, is believed to occur when the breast or bottle is removed too rapidly; 52% of parents were familiar with it, but no data were available on the prevalence of *curandero* use. *Susto* results from a frightening experience that is believed to cause the soul to leave the body, and symptoms can include anorexia, listlessness, and insomnia; 37% of parents had experience with it, and 10% had seen a *curandero* for a cure.

Despite the prevalence of folk beliefs, 39% of parents in one study said that medical providers' medicines were the most effective therapies for most illnesses, whereas 31% said that a *curandero's* medicine was more helpful for folk illnesses.[27] Mikhail[26] noted that only 17% of Mexican-American mothers in a rural clinic reported taking their child to a *curandero*, but some of the visits were for non-folk illnesses, including tonsillitis, cough, sprains, and constipation. No statistical differences between users and non-users of *curanderos* were found in the study when a variety of sociodemographic variables were analyzed. Among Mexican-American parents who brought their children to a Los Angeles pediatric ED, 30% of children who had been given therapies by their parents had received a folk remedy, usually an herbal preparation prescribed by a family member.[24] Belief in folk illnesses did not correlate with any sociodemographic variable examined. A noteworthy finding was that 42% of parents believed that conventional physicians could cure *empacho,* and 25% believed they could cure *susto, mal ojo,* and *mollera caida.* In addition, only 4% of parents be-

lieved that a folk illness was the cause of the presenting problem, and no parent reported visiting a *curandero* for the current complaint.[24]

Barriers Related to Sources of Parent Advice

Unexpected parental sources of advice for childhood illness, which may impede health care access, were noted in two studies.[22,26] In a rural clinic serving primarily Mexican-American children, the initial source of advice for mothers was nonmedical in the majority (68%) of cases and included relatives or friends (29%); the parent's mother, mother-in-law, or grandmother (21%); and the child's father (17%).[26] No mention was made of whether mothers found the advice helpful or acted on it. In Mexican-American children with asthma, 33% of parents received advice about asthma from nonmedical contacts, usually a relative or friend, but only 31% of these parents found this advice to be helpful.[22]

Barriers Related to Immigration Status and Duration of Residency in the United States

Only two studies have examined immigration status as a possible access barrier.[6,18] Among sick children whose parents were migrant Mexican workers, all authorized residents made visits to providers, while only 67% of unauthorized residents made sick visits.[18] In addition, 61% of visits by children who were authorized residents were paid for by insurance, but children who were unauthorized citizens had their visits paid for primarily in cash (82%); no visits were paid for by insurance. This study was limited by its small sample size (n=79), lack of statistical evaluation, and the brevity of the average duration of time spent in the United States (mean=10 months) before return to Mexico.

In the Halfon et al[6] investigation of inner-city Mexican-American children, children of citizens had better access to health care, including more outpatient visits, greater likelihood of receiving well-child care in a private office or HMO, greater continuity of care, were less likely to put off visits for financial reason, and were more likely to have continuous Medicaid coverage. However, in logistic regression models that adjusted for a variety of factors, immigration status was not significantly associated with either continuous Medicaid coverage or continuity of care.[6]

The duration of parents' residence in the United States did not seem to act as a barrier to access for Latino children. The only available studies on this topic are of Mexican-American children living in California. Halfon et al[6] found that children of parents who had lived for fewer years in the United States were significantly more likely to be uninsured or to have episodic Medicaid and less likely to have private insurance or continuous Medicaid coverage. In logistic regression models adjusting for a variety of factors, however, length of residence was not significantly associated with continuous Medicaid coverage.[6] Mikhail[26] also noted that duration of residence in the United States was not signficantly associated with use of home remedies, folk healers, or any particular source of advice for their child's illness. Sandler et al[24] did not observe any association between parental duration of residence and either knowledge of or belief in folk illnesses.

Barriers Related to Age, Gender, Family Size, and Family Structure

Differences in age-group distributions among different ethnic and racial groups were not noted,[11,20] and age generally did not act as a barrier to access for Latino children.[20,21,23] Similarly, gender was not found to be an important access barrier.[19,21]

Family size in Latinos was found to be significantly larger than in whites,[20,25] and larger family size can be a barrier to access for children in general.[20] However, Guendleman and Schwalbe[20] noted that family size was a significant predictor of entry into health care and number of physician contacts for Latino children, but the same held true for African-American and white children. Overall, family size does not appear to act independently as a barrier for Latino children.[19,21,26]

Latino families were generally less likely to be intact than white families and more likely to be intact than African-American families.[11,16,20,21,25] Whether family structure and parents' marital status affected access to care for Latino children varied according to the study and outcome.[6,13,20,26] In one study of chronically ill children, Latinos were the only group for which being uninsured was more likely in families with two parents in the household (21%) than in those with one or none in the household (18%), but the statistical evaluation and sample sizes were not reported.[13] In the 1979 NHIS, multivariate analysis showed that Latino children living in a household with two parents made significantly fewer visits to a physician in the past year, compared with those in households with less than two parents.[20] In inner-city Mexican-American children, however, logistic regression revealed that continuity of care was significantly greater in households with two parents.[6]

Barriers Related to Latino Subpopulations

There were few studies of access that compared the three main Latino subpopulations (Mexican-Americans, mainland Puerto Ricans, and Cuban-Americans), and those studies were limited to recent publications (1986 to the present). No study included Dominican-Americans in subpopulation comparisons, although they are an increasingly large, rapidly growing segment of the Latino population, particularly in the Northeast. In a study of the 1979 NHIS, published in 1986, multivariate analysis revealed that Puerto Rican children were most likely and Cuban children

least likely to have made any contact with a physician in the past year, although descriptive statistics and rates were not available.[20] Major independent predictors of contact with a physician in the past year included, for Puerto Rican children—younger age, single parent households, and smaller families; for Mexican children—younger age, Medicaid coverage, and smaller families; and for Cuban children—urban residence, suboptimal health status, and younger age.[20] That study also indicated that Puerto Rican children made the most doctor visits in the past year and Mexican children the least, but descriptive statistics and rates were not reported.[20]

Holl et al[17] noted that Mexican, but not Puerto Rican, ethnicity was independently associated with a higher risk of being uninsured. Among chronically ill children, Puerto Ricans were significantly more likely (79%) to have consulted a physican within the past year than were Mexican-Americans, but more Mexican-Americans (19%) than Puerto Ricans (5%) needed a medical referral within a month, although sample sizes were limited in this study.[10] In a study of children in a Los Angeles ED,[23] the authors found that Central American parents reported encountering significantly more barriers to health care for their children (mean=5.5) than Mexican parents (mean= 3.6), but Mexican parents were more likely to use the ED as the regular source of care for their child (41%) than were Central American parents (24%).

Barriers Related to Health Care Provider Practices and Behaviors

The practices and behaviors of health care providers can act as barriers to care for Latino children. These barriers included reduced screening by health care providers, missed vaccination opportunities, decreased likelihood of receiving prescriptions, inferior management plans, suboptimal communication and patient education, and negative attitudes.

In a study of vision screening in 102 pediatric practices around the country, Wasserman et al[30] found that Latino children were screened significantly ($P<.001$) less frequently than any other ethnic or racial group; screening occurred in 56% of Latino children, compared with 66% in white, 63% in African-American, and 71% in Asian children. Missed vaccination opportunities were cited by Wood et al[21] as a major cause for the low immunization rates in inner-city Latinos (42% up-to-date at age 2).

Two studies indicated that Latino children receive proportionally fewer prescriptions than children in other groups.[31,32] Data from the 1987 NMES[31] revealed that only 53% of Latino children ages 6–17 received prescription medications, significantly less than the 66% of white children who received prescriptions during the calendar year. These findings were particularly noteworthy because Latino children in this study were much more likely to be in fair or poor health. In a multiple regression model adjusting for a variety of relevant variables, Latino children ages 6–17 still had a significantly lower probability than white children of receiving a prescription medication.[31] Among preschool children discharged from the hospital with asthma, Finkelstein et al[32] found that Latino (OR=14.6, 95% CI=1.5–140) and African-American (OR=4.5, 95% CI=1.1–18.5) children were significantly more likely than white children to not receive a prescription for a nebulizer for home use (among patients not using inhaled medications before the admission), after adjusting for clinical confounders. After additional adjustment for primary care practice type, Latino children were found to be at even greater risk than both white and African-American children of not getting a prescription for a home nebulizer (OR=16.6, 95% CI=1.4–204).

As an example of suboptimal management plans, among children visiting an inner-city ED for asthma exacerbations, Latinos (and African-Americans) were much more likely than whites to have come to the ED (rather than to a continuity practice) as part of their routine management plan for asthma (OR=2.6, 95% CI=1.1–6.2), even after adjustment for relevant clinical confounders.[28] In another study, the majority of Latino children with moderately severe asthma had no specific treatment plan.[14]

Several examples were noted of barriers to care resulting from inadequate communication and poor patient education. Wood et al,[22] in an investigation of Latino children with asthma of moderate severity, observed that only 79% of Latino parents and 55% of their children could correctly name the child's medication, only 69% and 65% (respectively) identified the correct dose, and just 59% and 51% (respectively) identified the correct dose frequency. In another study of Latino children with asthma of moderate severity, Lewis et al[14] found that in those who used a ß-agonist inhaler as their major home intervention, none of the children knew how and when to use it, and none used a spacer or holding chamber device. Latino asthmatic children were significantly more likely than their white and African-Americans counterparts to have taken no inhaled ß-agonist before hospitalization (OR=6.3, 95% CI=2.1–19.3), and Latino asthmatic children were much more likely than white asthmatic children to have taken no anti-inflammatory medications (inhaled corticosteroids or cromolyn sodium) before hospitalization.[32] Additional analysis indicated that these differences were associated with Latinos' greater use of hospital-based clinics and neighborhood health centers and less use of private practices.

Negative attitudes of health care providers were identified as an access barrier in two studies. More than 31% of mothers of Latino asthmatic children cited the attitudes of physicans and/or nurses as a major barrier to managing their child's condition.[14] Among Latino mothers surveyed in the waiting room

of a pediatric ED, 31% said that lack of confidence in the health care staff was a major barrier to obtaining care for their child in the past year.[23]

Lack of a Regular Source of Care as a Barrier

Lack of a regular source of care was a consistent finding for Latino children. In the 1987 NMES, Cornelius[11] found that Latino and African-American children were substantially more likely than white children to lack a regular source of care, regardless of the type of insurance coverage. For example, for children with private insurance coverage, 17% of Latino children lacked a regular source of care, compared with 8% in white and 15% in African-American children. Among adolescents in the 1988 NHIS, Latinos (22%) were not only more likely to lack a regular source of routine care when compared with African-Americans (13%) and whites (11%), but they were also most likely to lack a regular source of care when sick (19% versus 11% versus 7%, respectively).[16] A greater likelihood of lacking a regular source of care was confirmed in a variety of settings, including children with chronic illness,[33] asthma,[22] and in those visiting a pediatric ED.[23] Lack of a regular source of care was a significant predictor of delayed DTP immunizations in Mexican-American children.[19]

Type of Practice Setting as a Barrier

There was uniform agreement across studies that Latino children receive care most often in public settings (hospital clinics, neighborhood health centers, and EDs) and least often in HMOs and private practices, but the effect of these findings on access is conflicting. For example, in the 1987 NMES, among uninsured children, Latinos (29%) were more likely than African-Americans (23%) and whites (10%) to be seen at a hospital clinic or ED for routine care, but the order was reversed for receiving routine care in a physician's office or HMO (60% versus 62% versus 84%, respectively). Similar results were observed in Latino adolescents[16] and Latino children who were chronically ill,[33] from the inner city,[21] and making a visit to an ED,[23] whether examining routine or sick care. Although Halfon et al[6] found that receiving routine care in private settings was associated with a beneficial effect, namely greater continuity of care, Wood et al[21] noted a negative effect, with a decreased likelihood of being up-to-date on vaccinations at 24 months of age.

Excessive Wait as a Barrier

Latino mothers in an ED study[23] named excessive waiting time in the clinic (cited by 56%) as the No. 1 barrier to care for their child in the past year. At their child's usual source of care site, Latino parents almost always reported the highest percentages of waiting times more than 30 minutes, and differences were greatest among those with private insurance, with 23% waiting for more than 30 minutes, compared with 14% of African-Americans and 13% of whites.[11] Excessive waiting time until the next available appointment for their child was also cited as a barrier by 50% of Latino mothers in a pediatric ED waiting room.[23] In a study of Arizona families on Medicaid, 24% of Latino and 20% of white mothers mentioned excessive waiting time at the office or clinic as one of the major barriers to care for their children, but more white (30%) than Latino (27%) mothers said that waiting too long to get an appointment was a major barrier.[25]

Transportation as a Barrier

Transportation was examined infrequently as an access barrier, but when investigated, it was an obstacle for a substantial proportion of parents. In a study of families covered by Medicaid,[25] Latino mothers cited transportation to routine well-child visits as the second greatest barrier to care and reported it more often (26%) than their white counterparts (18%). Among mothers of Latino children with asthma, more than 35% reported that transportation problems affected the management of their child's illnesses. The problems included lack of an automobile and inadequate public transportation.[14] Transportation was also cited as a barrier by 35% of mothers in another study of Latino children with asthma.[22]

Barriers Related to Acculturation and Culture

Barriers related to cultural aspects of care have not been extensively investigated for Latino children. For Latino mothers covered by Medicaid, the degree of acculturation was not a significant independent predictor of the number of infant visits.[25] Mikhail[26] found that neither perceived ethnic identity nor country of birth were related to use or nonuse of home remedies or folk healers. Mikhail did find that mothers who perceived themselves as more American and those who were born in the United States more often sought advice about their child's illness from their own mother, mother-in-law, or grandmothers, whereas those who perceived themselves as more Mexican or were born in Mexico more frequently sought advice from physicians, relatives, and friends. Among Latino mothers interviewed in a pediatric ED, more than 31% said that lack of Latino staff was a major barrier to obtaining health care for their child in the past year.[23]

Language as a Barrier

Several studies reported that language problems act as a potent access barrier, but there was one notable exception. Among inner-city Los Angeles Latino children, parental language had no association with either having continuous Medicaid coverage for the child or on continuity of pediatric care, despite adjustment for pertinent confounders.[6] However, in a study of Latino children in Arizona, after adustment for pertinent confounders, parental Spanish language preference was a significant predictor that the child was less likely to have a usual source of care and was

less likely to have made a medical visit in the past year, in comparison to children of Latino parents preferring English and to children of white parents.[34] Among mothers in a pediatric ED, 35% cited the staff not speaking Spanish as a major barrier to obtaining health care for the child in the past year.[23] For the mothers of asthmatic Latino children, more than 26% reported that language difficulties in talking to physicians was a major barrier to managing their child's illness.[14]

Discussion and Implications

One of the most important findings to emerge from this review is the potential for parental belief systems to act as an important access barrier for Latino children. Latino mothers often choose nonmedical contacts (family and friends) as their initial source of advice when their child is ill, rather than physicians and nurses, and the first step in management frequently is use of home remedies, instead of contacting a physician.[26] Depending on the community, folk medicine also may be an important component of Latino parents' management and use of health services for their child, potentially leading to fewer visits with physicians and nurses and less satisfaction with care and adherence to therapy. Although frequent use of nonmedical sources of advice, home remedies, and folk medicine practices can act as potent barriers to access, the clinician caring for Latino children can adopt practices that may help reduce or eliminate these potential obstacles. Patient education, coupled with acceptance of nonharmful alternative therapies, are potential strategies that could enhance the likelihood that Latino parents would initiate and maintain contact with physicians and nurses.

An unexpected and troublesome finding was that provider practices and behaviors could act as significant access barriers for Latino children. Studies showed that provider-related barriers for Latino children included reduced screening, missed vaccination opportunities, decreased likelihood of receiving prescriptions, suboptimal management plans, inadequate communication and patient education, and perceptions of negative attitudes. Possible explanations for these findings include language problems, cultural differences, and racial bias. We did not encounter studies that addressed the causes for these phenomena, and additional research is clearly needed.

Contradictory findings were noted regarding the existence of barriers related to immigration status, culture, and language differences, although not enough studies have specifically addressed these issues. A methodological limitation of work that investigated language barriers must be noted. Language preference, or the respondent's choice of the language for the oral or written interview, was the only measure used.[6,34] A more detailed scale of the respondent's self-rated ability to speak English, for example, has not been employed but perhaps would be more relevant. Our review of the literature indicates that more study is needed of the effects of immigration status, culture, and language on access to care and health in Latino populations.

Recommendations for Clinicians

Latino children are disproportionately poor and uninsured. Those who care for Latino children should seek ways to reduce the economic burden of health care for the families of these children. Given that Latino parents frequently report difficulty paying for visits and medications, solutions that would enhance access to care for their children might include providing more free care, advocating for greater Medicaid eligibility and employer-based insurance coverage, using free medication samples, and allowing installment plan payments.

Alternative belief systems, consulting nonmedical sources of advice, use of home remedies, and folk medicine practices are not uncommon in the Latino community and may at times impede access to health care. Clinicians caring for Latino children can reduce access barriers associated with these alternative approaches through acceptance and respect, which can be demonstrated through discussion of and even integration of nonharmful, alternative practices to treatment plans, while simultaneously taking extra time to educate parents about conventional management of common childhood illnesses.

A number of access barriers for Latino children are due to the practices and behaviors of providers, so the responsibility to remove such barriers rests with clinicians. Communication problems, due to language and cultural differences, may be the cause of many or all of the identified problems, including reduced screening, missed vaccination opportunities, decreased likelihood of receving prescriptions, suboptimal management plans, inadequate patient education, and perceived negative attitutudes of the staff. Improved communication can be achieved by taking additional time to explain to Latino parents the causes, treatment, and management plans of their child's illness; recruiting bilingual and Latino staff; and increasing the Spanish-speaking ability of current personnel.

Transportation problems and excessive waits during visits and until the next appointment are often reported as obstacles by the parents of Latino children. Providers might consider assessing ways to improve transportation and reduce waiting times in clinics where Latino parents mention these obstacles.

Health Policy Implications

The results of this review indicate that Latino children may be at risk for adverse health consequences if proposed anti-immigrant legislation and Medicaid cutbacks are instituted. Studies consistently show that Latino children already have the highest proportion without health insurance coverage of any ethnic or racial group in this country,[11-18] and recent data demonstrate that they are at greatest risk of losing em-

ployer-based health insurance. Health insurance coverage for Latino children is associated with more physician visits, greater continuity of care, and fewer deferrals of care for financial reasons.[6] Under such initiatives as Proposition 187 in California, and legislation proposed by Congress, Medicaid eligibility will be eliminated for noncitizens, resulting in at least hundreds of thousands of noncitizen children losing their health insurance and endangering the coverage of the substantial numbers of citizen children of noncitizen parents.[6] On the other hand, Medicaid expansion has been shown to result in considerable increases in Medicaid coverage (by 45%) and reductions of the uninsured (12%) among Latino children.[12]

Providing insurance coverage and a regular source of care for all Latino children would consitute a major accomplishment, but the results of this study suggest that several major barriers would still impede access to health care. Nonfinancial barriers, such as parent belief systems, provider practices and behaviors, cultural differences, and language problems, can act individually and in concert to thwart access to care for Latino children. Health insurance and a regular source of care did not ensure adequate use of child health services by Mexican-American Medicaid enrollees, findings that were attributed to nonfinancial access barriers.[25] Among Native American children with universal coverage and access, persistent preventable morbidity and suboptimal use of services have been observed, which were also probably due to nonfinancial barriers.[35] More work needs to be done on identifying the role of nonfinancial barriers to access and developing effective interventions to overcome these barriers.

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