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False hope: Effects of social class and health policy on oral health inequalities for migrant farmworker families

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ABSTRACT

Few studies have engaged issues of social class and access related to dental health care policy from an ethnographic perspective. The state of Florida in the US has one of the poorest records in the nation for providing dental care for low-income children, falling especially short for Medicaid-enrolled children. In this paper, we discuss unmet dental health needs of children in migrant farmworker families. Although one of the most marginalized populations, most are eligible for Medicaid and are thus covered for dental services. However, serious disparities have been linked to the lack of access through the public insurance system. This study was informed by participant observation at dental clinics and a Migrant Head Start Center and interviews with dental health providers ($n = 19$) and migrant farmworker parents ($n = 48$) during 2009. Our results indicate that some typical factors associated with poor oral health outcomes, such as low dental health literacy, may not apply disproportionately to this population. Instead, we argue that structural features and ineffective policies contribute to oral health care disparities. Dental Medicaid programs are chronically underfunded, resulting in low reimbursement rates, low provider participation, and a severe distribution shortage of dentists within poor communities. We characterize the situation for families in Florida as one of "false hope" because of the promise of services with neither adequate resources nor the urgency to provide them. The resulting system of charity care, which leads dentists to provide *pro bono* care instead of accepting Medicaid, serves to only further persistent inequalities. We provide several recommendations, including migrant-specific efforts such as programs for sealants and new mothers; improvements to the current system by removing obstacles for dentists to treat low-income children; and innovative models to provide comprehensive care and increase the number of providers.

Introduction

Social class and poverty are literally marked on children's teeth as a visible sign of inequality and suffering (Horton & Barker, 2010). Low-income children experience a disproportionate share of dental disease burden worldwide, and in the United States tooth decay has been characterized as a "silent epidemic" among poor and minority children (USDHHS, 2000). Health researchers have long privileged medical issues over dental, ignoring developmental and social consequences of poor dental care for children and its subsequent impact on working adults. Oral health is not accorded the same importance at the policy level as is general health (Fisher-Owens et al., 2008), although it is a much more sensitive measure of the overall strength of the health care safety net (Horton & Barker, 2010).

Social science perspectives on oral health are necessary to not only fill the gaps in our holistic understanding of community well-being, but also provide specific insights for the critical study of poverty and health disparities. Most studies have focused on operationalizing inadequately understood variables of socioeconomic status, race, and ethnicity, along with vague notions of "culture," rather than engaging with underlying issues of social class and structural access as they relate to health care policy. Despite the wealth of information that teeth can provide, there is a lack of research in both anthropology and sociology on oral health and oral health care (Exley, 2009; Graham, 2006; Horton & Barker, 2010).

This paper answers the call for more rigorous qualitative studies on oral health (Butani, Weintraub, & Barker, 2008), contributes to the sparse literature examining caregivers of Medicaid-insured children (Mofidi, Rozier, & King, 2002) and also includes the voices of dental providers. Two-thirds of US states fail to ensure that disadvantaged children receive the dental health care they need

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(Pew Center on the States, 2010), even though oral health complaints are a primary issue facing the public health system. Florida has one of the poorest records in the nation when it comes to providing dental care for low-income children, and in a recent report was awarded a grade of "F" for meeting only two of eight benchmarks (Pew Center on the States, 2010). The state falls especially short in providing care for Medicaid-enrolled children.

Here, we discuss the unmet dental health needs in one of the state's most marginalized populations, namely, children in migrant farmworker families. Farmworker children are precariously marginalized on numerous levels; however, as US citizens, most are eligible for Medicaid and are thus covered for basic dental services and preventive care. This means that the outright cost of services is not a primary barrier. However, serious disparities have been linked to the lack of access through the public insurance system, with less than one out of every five children enrolled in Medicaid using preventive services (Casamassimo, 2003; Mofidi et al., 2002). This paper explores some of the reasons for the persistence of these disparities. We characterize the situation for migrant farmworker families in Florida as one of "false hope," that is, the promise of services with neither adequate resources nor the urgency to provide them.

Background

Migration and health care access

Studies from across the United States have noted that children in migrant farmworker families are more likely than their counterparts to suffer from tooth decay (Call, Entwistle, & Swanson, 1987; Chaffin, Pai, & Bargamian, 2003; Lukes & Simon, 2006; Ramos-Gomez et al., 1999). Mexican-origin children have poorer levels of oral health than children from any other racial/ethnic group (USDHHS, 2000) and persistently lower dental care utilization rates, even after adjusting for age, income, education, and dental insurance coverage (Wall & Brown, 2004). Barriers to health care access for migrants in general have been well-documented in the literature and include immigration status, linguistic barriers, lack of insurance, lack of transportation, fear of deportation, and lack of familiarity with the U.S. health system and available services (Arcury & Quandt, 2007; Pew Hispanic Center, 2009). These barriers are not discrete factors, but rather occur as a "web of effects," making them more challenging than each individual barrier by itself (Heyman, Núñez, & Talavera, 2009).

Complementing existing research on ethnic disparities, the study of migrant farmworker health can highlight unique issues of social inequality in the global system. Labor migration is increasingly a low-cost, flexible, and vulnerable source of workers for many wealthier nations. At its most basic, the very decision to migrate reflects a marginalized position in the global economy, and migration constitutes the most profitable means of alienating labor since the costs of reproduction are carried by the countries of origin, while the countries of destination obtain all benefits of production (Genova, 2002). Access to care ultimately depends on migrants' class insertion into the host society (Portes & Rumbaut, 2001). "Class" here refers to major power relationships in the broad alignment of labor and capital in society (Wolf, 1990), rather than simply an indexical measure of material resources, as is the case for concepts like "socio-economic status." The impact of class on accessing health services extends beyond limited material resources to include broadly constructed power relationships. Migrants' constrained access to health care is related to class and social positioning, which is in turned linked to labor arrangements. Low wages and lack of employer-provided health insurance demonstrate ways in which labor relationships are a type of "structural power" that can serve to defend existing institutions. Health care systems are related, albeit somewhat less directly, to the overall production and reproduction of capitalist society in that they are determined by historical and political factors reflecting state intervention to control costs and organize methods of delivering care (Navarro, 1976). These methods of delivering care can reinforce class-based power differentials and include systematic processes of exclusion as well as differential political constructions of "deservingness" (Horton, 2004).

Oral health and social class

Social conditions in early life influence the later development of caries, and the risks related to poor dental health are accumulated during the life course (Peres et al., 2005; Willems, Vanobbergen, Martens, & Maeseneer, 2005). While dental disease is highly preventable, untreated it can result in lasting physical, psychological, and developmental damage and lead to poor school attendance, lost productivity, worsened job prospects, impaired nutrition, and sometimes even death.

Early childhood caries (ECC) is a particularly damaging form of decay that has a complex etiology linked to the provision of pacifying bottles of juice, milk, or formula, which allows the sugar contents to pool around the upper front teeth, mix with cariogenic bacteria, and give rise to rapidly progressing destruction (USDHHS 2000). The mechanism of interaction between socioeconomic status, stress, poor oral hygiene, and nutrition is evident, but remains largely unexplained (Willems et al., 2005). ECC has a relatively low prevalence and minimal morbidity among most populations of U.S., but epidemiological studies have long shown that Latino children suffer disproportionately, as do many American Indian and Alaskan Native communities in which the rate of ECC can be up to 400 percent higher than in other groups (ADA, 2009). ECC in particular offers the opportunity to understand the long-term interaction between biology and social conditions. Because of its rapid destructive qualities, the effects of ECC remain visible throughout the life course and shape children's physiology and physiognomy, marking their class status (Horton & Barker, 2010).

The literature on children's oral health has focused on two major variables, namely, family socioeconomic status (SES) and race/ethnicity. Studies have shown an inverse relationship between SES and oral health in children (Medina-Solís et al., 2006, 2008; Timiş & Dănilă, 2005). SES is associated with mediating factors that have a direct impact on dental health. The high cost of dental care and lack of dental insurance, coupled with limited income, directly impact the use of dental services (Gillcrist, Brumley, & Blackford, 2001). It is also less likely for children from lower SES backgrounds to receive preventive services such as sealants and/or fluoride supplements and varnishes, which protect teeth from decay. Both obesity and caries frequently occur in the same children, pointing to a common risk factor linked to low socioeconomic status (Marshall, Eichenberger-Gilmore, Broffitt, Warren, & Levy, 2007).

In addition, race or ethnicity is a risk factor for poor oral health worldwide, based on studies with minority populations (Locker, 2000; Pourat & Finocchio, 2010; Watt & Sheiham, 1999). This relationship stands even after adjusting for factors such as infant feeding practices and preventive oral health behavior (Willems et al., 2005). Within the Medicaid program, racial and ethnic differences are evident in time since last visit, to the detriment of Latino and African American children (Pourat & Finocchio, 2010). These studies, among others, suggest a similar pathway toward oral disease for groups experiencing social inequality, and allow us to see the distribution of disease as a biological expression of social relations (Krieger, 2001).

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Cultural beliefs and oral health

Existing research on oral health disparities too often places emphasis on individual-level factors and inadequately conceptualized and operationalized notions of culture, disregarding the complex realities of low-income populations and structural constraints on behavioral change (Riedy, Weinstein, Milgrom, & Bruss, 2001; Willems et al., 2005). Studies have focused on parental attitudes and practices, for instance, by examining feeding patterns and oral hygiene practices (Nurko, Aponte-Merced, Bradley, & Fox, 1998; Ramos-Gomez et al., 1999; Watson, Horowitz, Garcia, & Canto, 1999), parents' willingness to seek professional dental services (Huntington, Kim, & Hughes, 2002), or knowledge about effective preventive measures (Entwistle & Swanson, 1989; Watson et al., 1999). However, given the strong association between poor oral health and socioeconomic variables described above, much of this research on parental beliefs and behaviors and the programs they inform seems misplaced. Researchers have generally neglected to place immigrant parents' understandings of oral health and their practices, such as feeding habits, into the context of adjustment to a new environment in the United States. For example, families often make a nutritional transition from a relatively uncariogenic diet in their home country to one heavy in refined foods. In addition, the structure and schedule of farmwork, along with federal policies that promote affordability of infant formula, encourages immigrant mothers to shift from nursing to bottle feeding while leaving them unprepared for the oral health consequences (Horton & Barker, 2010).

A recent study of the dental literature (Butani et al., 2008) concluded that the emphasis on "culture" had led to frequently generalized, even stereotyped descriptions of population groups, a lack of conceptual clarity, and poorly explicated connections to ideas of culture. Especially in the literature on Latino populations, "cultural" beliefs are often invoked as root causes of oral health disparities. Since poor oral health, including chronic forms of decay such as ECC, is found disproportionately in ethnic minority groups, so the reasoning goes, common cultural beliefs must be influencing health behaviors and practices. As a result, individuals and families are reduced to a static set of characteristics based on ethnicity and oversimplified definitions of "culture," which often ignore the dynamic interplay between history and power as recognized in the anthropological concept of culture (Guarnaccia, 1996; Kleinman & Benson, 2006). Exaggerating the importance of culture hides broader structural determinants of health and obscures the pathogenic role of social inequality (Hirsch, 2003). The emphasis on cultural beliefs also suggests that concessions must be made to accommodate them; as a result, patients may receive *less* complete health information by providers because of assumptions about literacy levels and cultural worldview. This may also lead to the dismissal of lay logic, ridiculing of practices and de-legitimatization of popular treatments (Nations & Nuto, 2002).

In recent years, more rigorous qualitative studies examining cultural influences on oral health have been made available (e.g., Barker & Horton, 2008; Hilton, Stephen, Barker, & Weintraub, 2007; Horton & Barker, 2008). Additionally, drawing upon research on the developmental origins of health and disease and anthropological studies of embodiment (Krieger, 2001), medical anthropologists have explored farmworkers' "stigmatized biologies" as they interact with health policy (Horton & Barker, 2010). Immigrant caregivers face unique socioeconomic circumstances upon arriving to the US that work together with specific public insurance policies to promote the long-term, physical embodiment of class inequality. Our paper builds upon these insights and frames the issue from the perspective of critical medical anthropology, which incorporates broader political economic factors relating to class and differential access to resources into the study of health and health care.

Methods

Setting

This study was conducted in rural Central Florida, a region heavily reliant upon recent, Mexican-origin migrant labor for its strawberry, tomato, and citrus industries. Since the 1990s, these laborers have increasingly replaced African Americans and rural whites in farmwork. Data on the status of farmworker health in the eastern US, which lacks historically large rural Latino populations, are limited and focus on a few states (e.g., North Carolina) (Arcury, Wiggins, & Quandt, 2009).

Like all states, Florida is under a federal mandate to provide dental public health insurance to low-income children, including US-born children of farmworkers, via Medicaid and/or other state-level programs. However, statistics indicate a very low utilization rate. The percent of Medicaid-enrolled children in the state of Florida who receive dental care is 23.8%, compared with the national average of 38.1% (Pew Center on the States, 2010). In our research area (2008 county population estimate: 1,180,784), only 19.4% of Medicaid-enrolled children have received any form of dental care.

Methods in this project

While some qualitative studies on oral health issues are available, most have utilized focus group methods over face-to-face, individual interviews, and very little ethnographic work is represented overall (Butani et al., 2008). Ethnographic research, which focuses on a smaller number of people over an extended period of time, can shed light on the complex interaction between broader structural forces and individual lives, aiding in the understanding of how these larger political economic forces shape health-care seeking. These methods may illuminate how even well-intended health care policy can exacerbate inequalities that pose significant threats to the health of the poor and disempowered. They can also reveal dentist–patient communication clashes and explore lay perspectives of oral health that shape responses to health policy (Nations & Nuto, 2002).

This study was informed by participant observation at dental clinics and a Migrant Head Start Center during the first half of 2009. Data are drawn from interviews with two sets of participants. The first group ($n = 19$) consisted of dental health providers, including ten dentists (five in private practice, four public health dentists, and one recent arrival who was not currently licensed/practicing in this state), four non-dental directors of clinics or associated non-profit programs (including three federally qualified health centers), four dental assistants identified as key liaisons and/or interpreters for this population, and one pediatric physician. These interviews were conducted in English by two members of the research team, audio recorded and subsequently transcribed. Provider interviews ranged from 45 min to 2 h, and no incentive was offered for participants in this group. Using a semi-structured interview format, providers were asked about a) types of services provided and referral patterns; b) population served and major oral health complaints treated; and c) perceived facilitators and obstacles to treatment and preventive care for this population.

The second group ($n = 48$) consisted of migrant farmworker parents located in Central Florida at the time of the interview. We interviewed 48 individuals representing 40 families; in eight cases, both parents participated. The farmworker families interviewed in this study were all Mexican in origin. Most were young and highly mobile two-parent households that had recently migrated. In this region, families harvest primarily strawberry crops during the winter season before migrating north to Michigan, North Carolina, or Ohio. Seventy seven percent of the sample ($n = 37$) was female and 23% ($n = 11$) male. Families were recruited through one of two

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settings: 1) a Migrant Head Start Center that provides education and social services for pre-school migrant children and their families and 2) a non-profit migrant clinic located nearby. The eligibility criteria included that they be parents of young children, at least 18 years of age, and fluent in either Spanish or English. These interviews ranged from 30 min to 1.5 h, with the majority of lasting 30–35 min. Parent interviews were conducted in Spanish, which was the primary native language for all participants although several mentioned that they also spoke Otomí or Mixtec. Two members of the research team conducted the parent interviews (one native Spanish speaker and the other bilingual). A $20 retail gift card incentive was given to all 40 families. Using semi-structured interview guides, we queried parents about a) household composition and migration history; b) current dental care practices (i.e., how do they care for children's teeth), c) previous dental care history for each household member (when they last visited a dentist and for which types of complaints; dental service use in the country of origin), d) barriers and facilitators for accessing care, including a set of hypothetical scenarios (e.g., "If you had to take one of your children to the dentist this week, where would you go?"), and e) a set of questions designed to gauge general knowledge, attitudes, and behaviors regarding oral health.

Interviews were audio-recorded and subsequently transcribed by two trained graduate assistants. All Spanish-language transcripts were also translated into English; a smaller sample of these (10%, or 4 transcripts) were back-translated into Spanish to ensure validity. The resulting transcriptions were coded using ATLAS.ti. In the first phase of coding, deductive codes were drawn from the interview guide and research questions. In the second phase, inductive codes were created and applied to identify additional patterns that emerged from the data (Patton & Patton, 2002). The data were summarized through descriptive summaries and data display matrices. Provider and parent transcripts were coded and analyzed separately, and then compared for common themes. Representative quotes were selected to illustrate key findings. The study received approval from the Institutional Review Board at the University of South Florida.

Results

Dental health literacy

Because of the emphasis on individual beliefs and behaviors, many existing efforts to improve migrant children's health strive to increase dental health literacy (or "dental IQ," as many providers called it) through education programs and products. Indeed, many providers we interviewed stated that level of education and parental habits impeded good oral health. For example, one stated:

> "When we tell them to have their children brush twice a day, they are sometimes surprised, have a real incredulous look on their face. They think two times a day is too much, they are not aware. Or sometimes a family has only one toothbrush for everyone that they have to pass around. And there are often intergenerational issues. The parents and grandparents don't have good teeth, good oral habits, and so they are not passing that on."

In the parent interviews, however, there was little evidence of low dental health literacy, especially in regards to daily care such as brushing. To assess preliminary ideas regarding dental health literacy, we asked a series of open-ended questions, including "How do you take care of the children's teeth?" and "When should a child visit a dentist for the first time?" When asked how they care for their children's teeth, almost all (95.8%; $n = 46$) responded that they enforce toothbrushing at home. Twenty-one (43.8%) specified brushing twice a day, four said three times a day or after every meal, two specified in the morning and one at night. Parents also mentioned that they avoided giving their children baby bottles, soda, juice, sweets, and spicy foods.

When asked an open-ended question regarding when children should visit the dentist for the first time, the most frequent answer ($n = 16$) was at 3 years of age, followed by "when they get their first teeth" ($n = 8$) and at one year of age ($n = 7$). Other responses included at two years old ($n = 4$), four years old ($n = 1$), and five years old ($n = 2$) and "when have all their teeth" ($n = 2$).

In this sample, parents rated their own oral health status lower than their children's. Parents were asked to subjectively rate the condition of their own and each of their children's teeth, using a five-point Likert scale (5 = excellent, 4 = very good, 3 = good, 2 = so–so, or 1 = poor). The average score for the children was 3.31 ("good"), while the average score for parents was 2.27 ("so–so").

"We put up with the pain, but a child can't": access to services for parents

We found supporting evidence that adult farmworkers do not seek dental care regularly (Entwistle & Swanson, 1989; Lukes & Miller, 2002; Lukes & Simon, 2005) and that children were the most likely of any family member to receive dental services (Quandt, Clark, Rao, & Arcury, 2007). While access was difficult for parents in our study, unlike children they felt obligated to endure pain. As one mother told us, "For the adults, we put up with the pain, but a child can't, and they cry and cry and cry."

Eighteen parents had been to a dentist while living in Florida, and ten had visited dentists in other states (Michigan, in most instances), where they had access to charity services such as mobile dental vans run by faith-based organizations. Furthermore, because Medicaid covers dental services during pregnancy, about a third of all women interviewed had last seen a dentist as part of their prenatal care. Afterwards, however, there were no more low-cost services available to them. As a result, many stated that, "When I am pregnant I get the care, when I am not, it is too expensive." Some 41.6% percent of parents ($n = 20$) who had seen a dentist had last done so in Mexico. As one father said,

> "I went in Mexico, but it's a little more accessible, right? The medicine in Mexico is cheaper, much cheaper, but to earn money is more difficult."

Overall, the greatest barrier for parents was cost, and many expressed frustration regarding their lack of disposable income for dental treatment when they were in pain. One mother explained it in the following way, contextualizing not only her family's other expenses but her resentment at being exploited as a worker:

> "How am I supposed to pay the dentist if I get paid so little in the field? What do you want me to do? In the field they hurt you, humiliate you. Every Friday I pay rent. The more you earn the more they take. They are scamming. Why are they taking so much? They charge you rent, Medicaid, and when they pay us, they don't tell us how many boxes [of strawberries] they received. We harvest all the boxes, and they rip us off. They treat us like donkeys, worse than animals."

In addition to income levels, many farmworkers noted that if they go to a dentist during office hours, they will lose a full day's wages, resulting in loss of income for the family. Furthermore, the effects of a highly mobile lifestyle impacted parents' ability to access care.

> "We migrants don't go to the doctor until we're bad. What's most important is that we work and work and work, so we deny ourselves care, and it's because it's the culture, right? We don't take care of ourselves, let alone our teeth. That's a part of our

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body that we don't take care of. Well, care is very expensive. We live in the fields, right? One year we're here, then we go to another field."

Seasonality and work schedules presented significant barriers, since migrants are only in Central Florida for a few months. This means that any dental problems identified in one visit are not always treated before families travel north. In other cases, problems are attended once they arrive to their new location, but this requires new examinations and results in a lack of continuity of care. Most parents cited wait times between one to three months at the local health center that provides dental care on a sliding fee scale.

"It takes about a month for me to get an appointment. I did not do it right when we got here, and when I finally said I'll go to the dentist, well, I had little time left. In a month we are going to North Carolina."

Language issues were not generally viewed as a barrier, even for migrants who spoke Mixtec. As one provider noted, "everyone has a friend or a relative helping them." Some migrant aid organizations provide interpreters, and many dental offices in the region have bilingual staff. Similarly, transportation was cited as a barrier by few participants.

Access for children with medicaid

In contrast to their parents, children who are born in the US qualify for Medicaid benefits, which include basic dental services. This removes the issue of cost for services, although as we illustrate below, access remains an issue. Many of the families we spoke to were of mixed legal status, so that often the parents were unauthorized to live in the US while their children were citizens. In other cases, some children were unauthorized while their siblings were citizens. For example, one mother told us that, "The girl is six years old but was born in Mexico. She doesn't have [Medicaid] insurance. The three boys do, because they were born here."

There is a clear lack of providers who accept children (especially younger children) covered by Medicaid. Federally Qualified Health Centers (FQHCs) are the primary providers of dental care to Medicaid-insured children across the U.S.; however, those in our study area did not employ a pediatric dentist nor were they equipped to provide sedation for children. As a result, many cases were referred to pediatric dentists in private practice. Staff from the Migrant Head Start Center told us that every one of the 65 farmworker children in their care either had Medicaid or could be covered through the Center's resources. Financial coverage was not an issue, they claimed, and interpreters or transportation could be easily arranged. The problem, they said, is that there are simply no dentists to take these children.

A review of providers indicated that while there were 11 pediatric dentists enrolled as Medicaid providers in the county, only five were listed as active providers and in reality, only one was accepting new patients. This effectively meant that only one pediatric dentist was serving an area of over one million people, with more than 140,000 children in the county on Medicaid. Many of the participants we interviewed pulled out the same list of dentists. One provider told us,

"We have this list of dentists that we give parents. It supposedly has all the dentists who accept Medicaid, but it is always changing. Sometimes they have a waiting list of several months, even six months. I have had families who really, really try hard to get their children in somewhere. They come back to me and say, 'I've tried everyone on the list. I've called ten, twelve dentists, and no one will take my daughter.' It's very frustrating for them. They really try to get help for their children."

Many dentists will not accept children because they may be more difficult to work with and often require sedation for treatments, which not all offices are equipped to provide. Participants also cited the lack of pediatric dentists being trained in dental schools, noting that cosmetic procedures for adults are more profitable. Finally, dentists are rarely motivated to practice in rural areas. One dentist told us,

"I do believe there is an access to care issue. You go up to [rural town], in the middle of nowhere, there's not a lot. I'll be very honest, no one wants to live there and there's not a huge influx of dentists that want to be in that community. The major places are Miami, Orlando, Tampa, and Jacksonville. That's it. Nobody wants to go practice in the middle of nowhere, where there's no mall. They tell you your last year in dental school, 'Pick your job by where you want to live.'"

"False hope": policy and the promise of dental care

The primary concern for the private dentists in our sample was Medicaid reimbursement rates, by which they receive only about 30% of their usual customary fee. While the situation is similar to many other states, Florida's reimbursement rates are the lowest and, in the words of one practitioner, the "last time rates were changed was when Ronald Reagan was in office – remember him?" Another noted that, "every Medicaid patient is costing a private practitioner money to sit in the chair." As a result, many private dentists devise strategies to deal with the issue, such as capping the amount of Medicaid patients they accept or economizing their time and resources. One pediatric dentist in private practice told us that she used to accept Medicaid patients, but that it was "too much paperwork," resulted in a high numbers of no-shows for her office, and that the system treated providers with great suspicion regarding fraudulent claims.

In 2009, the Florida Academy of Pediatric Dentists, the Florida Dental Association, the Florida Pediatric Society and a group of parents sued the state over Medicaid reimbursement issues. The suit also complained about the insufficient number of dental and medical providers as linked to the state's extremely low reimbursement rate. This attracted heavy media attention, especially since similar issues were at play in the national debate over health care reform. One dentist summarized her feelings on the lawsuit in the following way:

"Right now we have a lawsuit against the state. If the government doesn't want to give dental [benefits] at all, that's their prerogative. You don't have to give insurance. But our problem is, the government is saying 'you have this insurance, here is your card,' and there aren't enough providers. That's what we have an issue with, giving someone false hope in the expectation that they have care when they don't. I would much rather them say 'the care is limited to these five procedures and this is all you get, but you always get these five procedures,' than saying 'you get all of these procedures, and by the way, no one will provide them for you, and we're not going to do anything about it.'"

Despite these negative feelings towards the system, many of the dentists – employed in both public and private practices – expressed that they were highly motivated to work with underserved populations, often describing it as a "calling." However, reimbursement remained an issue, as seen in the following quote:

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> "These are my people. These are the ones that I want to deal with. If I had my way, that's all I would do. I would be happy if I never saw another normal bratty 8-year old. I could deal with that. I could just see the migrants, the patients that just have no other place to go. That's my place. Of course, you can't live on that."

The perils of charity care

As a result of the ongoing issues related to Medicaid, a trend towards charity care has emerged. In many areas of the US, volunteer dentists, dental assistants, and hygienists offer their services to treat low-income populations, for example one day a month or several times a year. In the words of one dentist:

> "The amount of *pro bono* work in the state is unreal. A lot of dentists would say, 'I'd rather do it for free than accept Medicaid'…It becomes very frustrating. So you're accepting a crappy fee, seeing patients who don't show up or show up late. And then the system doesn't appreciate you either. So you just think, the heck with it, forget it, I'm not going to do it. A lot of dentists say they'd rather do it for free, and give the state the liability than accept the [Medicaid] fee. But we can't do everybody *pro bono*."

Reliance on charity care is problematic for a number of other reasons as well. First, and most notably for this population, it still excludes children with Medicaid coverage. Those covered by public insurances are ineligible for free services, since they can (allegedly) access treatment elsewhere. This is one of the state's requirements when providing sovereign immunity for volunteer dentists, which affords them protection from lawsuits (that is, the state of Florida assumes responsibility for any liability).

In addition, short-term efforts to screen children through mobile dental units have been met with opposition, with critics noting that programs appear and screen children on a one-time basis, but are unable to treat them in the case of serious dental problems. As one participant, who had previously assisted with mobile dental clinics, said, "Once [we've] educated them, raised their level of consciousness about certain needs, if there is no way that they can access care, then I consider that ethically inappropriate." Some FQHCs have now recently arranged mobile units in order to reach rural farmworker children, and these are able to file claims on behalf of Medicaid patients. This ties children to a "dental home" and additional treatment can be accessed rather seamlessly at the FQHC clinic. However, some participants worried that strictly mobile offices without the link to a dental home run the risk of "using up" children's annual Medicaid exam allowance, so that they are not covered when they present at a (different) office for treatment, since each dentist must perform their own examination before engaging in restorative treatment. They feared that, in this way, mobile units may end up profiting off of exams for farmworker children by submitting claims to Medicaid, while not having the on-site resources to perform treatments. Such inconsistent and erratic dental care is detrimental to the long-term health of migrant children and reinforces the unequal access and rewards of the larger system.

Discussion

Our data suggest that some of the "usual suspects" associated with poor oral health outcomes, such as language barriers and low dental health literacy, may not apply disproportionately to this population. While limited English proficiency is frequently cited as a barrier to dental care in the US (Flores & Tomany-Korman, 2008), our research suggests that it does not seem to be the case for this population. This is due to the sizeable Latino population in the region, which increases the likelihood that dental clinic staff (especially dental assistants) will be Spanish speaking, as well as fairly accessible interpretation services. When it comes to oral health literacy, our results suggest a consistent underestimation of this population's knowledge levels. For instance, when comparing our data to the guidelines of the American Dental Association and the American Academy of Pediatric Dentistry, all but two of the 48 parents responded that they enforced toothbrushing at home and noted other preventive practices, such as avoiding sweets for their children. The guidelines recommend seeing a dentist when the first tooth erupts, or by age one at the latest. Almost of third of parents' responses (31.2%) fit within these guidelines, while the majority ($n = 20$, or 41.7%) said that children should have their first dental visit by age three, which is consistent with practices in the general U.S. population (Gallup & Robinson, 2002). For children living in socioeconomically deprived areas, mean age for the first visit may be as late as 4 years (Malik-Kotru, Kirchner, & Kisby, 2009). This suggest a disconnect between parents' responses and providers' view of farmworker parents as uniquely unaware of good dental hygiene and preventive practices. While parents may be reporting socially desirable answers, and we were unable to observe or measure actual dental care practices in the household, it seems clear that educational messages are being heard to some degree. However, it is the translation of those messages into practice that is problematic, and best illustrated through the access barriers we have highlighted here.

Critical analysis of historically deep systems of inequality, and the place of migration within these systems, can highlight the resulting constraints on oral health. Thus, rather than being simply a "farmworker issue," the barriers to dental care we have discussed are experienced in similar ways by other non-Latino and non-migrant families. All low-income families face the same problem of limited Medicaid acceptance, and many of the other constraints discussed here also apply for the working class, such as problems in accessing appointments due to parents working multiple jobs or frequently changing residences. On their end, providers experience this as broken appointments and patients' inability to follow through with recommended restorative procedures. We became convinced during the course of this study of the analytical importance of social class and poverty, rather than issues of culture and a lack of "dental IQ".

Thus, we argue that the issue is greater than just a lack of education or even the usual barriers to accessing services, such as cost, language, or transportation. Ineffective health policy has resulted in a lack of sufficient providers for children's dental needs. While legislators count on policy to yield action, and assume that coverage solves the access issue, this paper has traced the ineffectiveness of such policies. Just as rights are meaningless unless they are enforced, our study indicates that coverage is meaningless if there are no providers. The rationale of the market ultimately counteracts such policy initiatives, since dentists have little incentive to accept Medicaid patients. While there is the appearance of expanded coverage to a large disadvantaged population, there has been little action to ensure the provider infrastructure is adequate to cope with the policy.

Reliance upon temporary stopgap measures, such as free mobile clinics staffed by volunteers, is not the answer. The medical – and dental – health care systems in the US have long been characterized by persistent inequalities, and in recent years there has been widespread acceptance of stopgap charity programs as a necessary feature of that system. These are part of the historical tensions between "the impulses of exclusion and generosity," which, although seemingly paradoxical, together "drive the engine of American health care" (Hoffman, 2006:237–8). The reliance upon such volunteer-based charity services is a clear indicator of a move

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away from notions of entitlement and effective public policy, ultimately facilitating the growth of long-term conditions of poverty (Poppendieck, 1999). As a neoliberal governing strategy, the support of volunteerism, including its characterization as an obligation of proper citizenship on the part of health care providers, masks the withdrawal or lack of resources in poor communities (Hyatt, 2001). In the case presented here, dentists are led to provide *pro bono* care to those ineligible for Medicaid instead of accepting Medicaid, since the irony of charity care programs is that they do not permit treatment of those deemed to "already have insurance." This serves to only further persistent inequalities.

The desire to serve underprivileged populations should not be dismissed but rather channeled more effectively. Private practice dentists in our study emphasized their willingness to volunteer with charity clinics serving low-income populations (in some cases, apparently to avoid having to accept Medicaid patients) and many had even traveled abroad to serve patients in disadvantaged regions of the world. Because a significant portion of private practice dentists feel a professional obligation or personal "calling" to treat the underserved, it is vital to remove any perceived obstacles in order to harness their efforts.

Limitations

This study should be viewed as a starting point for further investigations and has several limitations. A random sampling strategy could not be employed because the size of the Mexican-origin farmworker population in Central Florida is not known. As a primarily qualitative study, generalizability was not our goal, but rather to capture some major issues related to access to dental health care for children of farmworker families. This study likely underestimates the impact of structural factors affecting access, since it draws from families currently linked to services through a Migrant-Head Start Center and a faith-based migrant health clinic. For instance, each child who enters a Head Start pre-school is required to have a dental screening, and the school will usually assist with locating and even paying for treatment, if necessary. Because this study relied upon a patron population in a particular setting, it may not reflect the full range of potential issues and barriers. Finally, while our results suggest a persistent underestimation regarding levels of oral health literacy for this population, this study did not set out to specifically measure literacy. Our observations are based on participant responses within a broader semi-structured qualitative interview. Future assessments of oral health literacy will require a larger sample size and an instrument that has been tested for reliability and validity in this population. Recent studies indicate that current tools, such as the Rapid Estimate of Adult Literacy in Dentistry (REALD) or its shortened version, REALD-30, display shortcomings when used in marginalized populations (Parker & Jamieson, 2010). In general, future research should strive to fill the gap in the field of oral health literacy amongst disadvantaged groups.

Policy implications

The data from this project underscore larger systemic issues, as evident in the lack of services even for those who have coverage through Medicaid. These barriers reach beyond farmworker children and apply to the general population as well. They are the result of chronic underfunding of the dental components in Medicaid and State Child Health Insurance Program (S-CHIP) and state programs' failure to deliver care to the majority of eligible children, despite federal mandates that Medicaid cover basic preventive and restorative services. The identification of dental care needs without resources to provide adequate care has been called the "ultimate 'Catch-22' of managed neglect (Russell, 2008:126)." This study supports recent proposals for solutions including the increase in reimbursement rates as an incentive for dentists to treat low-income children, along with creative models to increase the number of dental providers, and programs for sealants (Pew Center on the States, 2010). However, while each of these is necessary, they are insufficient on their own.

Targeted interventions and programmatic efforts

While we have returned to class-based issues of exclusion throughout this discussion, migration-related factors still produce specific barriers and some solutions are uniquely effective for this population. For example, the use of sealants (thin coatings applied to the chewing surfaces of the back teeth to protect them from decay) may be a particularly effective component of prevention for migrant children since their mobile lifestyle often impedes continuity of care. This practice been recommended for over twenty years (e.g., Call et al., 1987) and should receive even greater attention. Furthermore, this study supports programmatic efforts targeting new mothers. Dental Medicaid coverage for adults in Florida is limited to emergency services rendered to alleviate pain or infection (e.g., extractions), and the parents in our sample were generally not eligible for Medicaid because of their citizenship status. However, most of the women in our sample received coverage and dental care during their pregnancies, which was critical for their own wellbeing as well as learning about available services for their children. Studies have indicated that new mothers are particularly receptive to information about dental care for their children (Harrison & Wong, 2003; Riedy et al., 2001). Expanding access to treatment for parents will also positively impact the health of their children. Finally, caries is ultimately a contagious infection in which bacterial overload in the mouths of parents that lack access to oral health care can easily be transmitted to their children. This factor points to the serious limitations and effects of public health care policies that separate "citizens" from "noncitizens."

Improving the current system

Inadequate access to care has plagued the Medicaid dental program in virtually every state. Dentists have consistently cited three reasons for their lack of participation: 1) reimbursement rates far below their usual and customary fees; 2) administrative difficulties; and 3) various undesirable patient behaviors, such as an excessive number of broken appointments (Borchgrevink, Snyder, & Gehshan, 2008; Eklund, Pittman, & Clark, 2003; Nainar & Tinanoff, 1997). Low Medicaid reimbursement rates are, indeed, central to this issue. The share of dentists' median retail fees reimbursed by Medicaid in the state of Florida is currently 30.5%, compared with 60.5% nationwide average (Pew Center on the States, 2010). As a result, private dentists devise strategies, such as refusing to accept new patients, capping the amount of Medicaid patients they will treat, or economizing on time, services, and resources. This situation has created a two-tiered dental health care system (Horton & Barker, 2010).

Efforts to increase access by raising Medicaid reimbursement rates for dentists have had mixed results. Most studies indicate that raising reimbursement levels increases participation (Eklund et al., 2003; Hughes, Damiano, Kanellis, Kuthy, & Slayton, 2005). One survey of six states concluded that provider participation increased by at least one-third, and sometimes more than doubled, following rate increases; this was accompanied by a rise in the number of patients treated (Borchgrevink et al., 2008). However, other studies indicate that raises in reimbursement rates were "only marginally effective" in increasing access (Mayer, Stearns, Norton, & Rozier, 2000). While increasing financial incentives are necessary and should remain a priority, they are not sufficient on their own and can only be part of the solution, especially given limited and shrinking

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state budgets. Streamlining the claims administration process has also been shown to improve participation (Eklund et al., 2003; Hughes et al., 2005). Some have argued that dentists are more receptive to the structure of the State Children's Health Insurance Program (S-CHIP), in which claims and inquiries are processed similarly to private insurance, compared with the traditional fee-for-service structure of Medicaid (Brickhouse, Rozier, & Slade, 2006). Some have gone so far as to argue that dental disparities will continue as long as Medicaid is the primary payment system for the poor (Casamassimo, 2003).

A further problem we have highlighted here is the distribution of dentists within some regions and communities, mirroring the situation in other states (Horton & Barker, 2010; Kelly, Binkley, Neace, & Gale, 2005; Mofidi et al., 2002). Florida currently faces a severe workforce shortage and requires at least 750 new dentists to provide care to unserved areas (Pew Center on the States, 2010). There are simply an inadequate number of pediatric dentists to meet the needs of children, and the majority of general practice dentists have limited skills or willingness to treat young children (Krol, 2004; McQuistan, Kuthy, & Damiano, 2005; Russell, 2008; Valachovic, 2002). In recent years, pediatricians have been encouraged to play a more significant role in the oral health of children and the American Academy of Pediatrics has proposed that oral health prevention can begin in the physician's office. However, the level of training and amount of office time available may not be adequate to provide quality oral health care, and physicians also report frustrating difficulties when attempting to refer children due to the systemic lack of pediatric dentists (Krol, 2004).

Thus, another long-term solution should include the training of more dentists and auxiliary professionals with incentives to serve low-income populations. However, the dental profession itself plays a role in perpetuating inequalities by exerting control through strong state- and national-level professional organizations, which have the membership strength and funding for highly effective lobbying practices that are able to influence policy and, thus, access to care. Supply is limited in several ways, including restrictions on the number of dental schools, dental students, and practicing dentists. The licensing system, in particular, has profound implications for low-income children. Various state laws restrict the delivery of preventive oral health care to dentists or restrict the scope of practice of dental hygienists, thereby limiting the number of individuals who can provide such services (Nolan et al., 2003). By limiting supply, such practices are able to maintain demand, power, and income. However, this does not mean that change is implausible. For example, while there are only two schools of dentistry in the state of Florida, several proposals for additional schools are currently receiving serious consideration.

The existing system of Federally Qualified Health Centers (FQHCs) cannot adequately meet the dental needs of target populations, including farmworkers (Arcury et al., 2009; Lukes & Simon, 2006). FQHCs face problems with recruitment and retention of dentists, often because they are limited in the full scope of treatment opportunities consistent with their training (Russell, 2008). However, the current situation would benefit from an expansion of FQHCs in shortage areas and staffed with public health dentists, for whom there are often less restrictive licensing requirements than for private practice dentists. However, turf battles between low-cost, non-profit, public oral health care providers and private practitioners are still evident, as a recent legal battle involving the University of Alabama at Birmingham's School of Dentistry illustrates. Pressure by alumni prompted the school to end its relationship with a group of non-profit dental clinics that is the largest single provider of Medicaid dental services in the state; as a result, the non-profit clinics filed a Federal Trade Commission investigation and the Alabama Dental Association countered with a civil suit alleging unfair trade practices (Sarrell Regional Dental Center v Alabama Dental Association, 2010).

Addressing the underrepresentation of Latinos in the dentistry profession must continue to be a priority. Despite commitment by the American Dental Education Association (ADEA) since 1996 to expand the diversity of dental education, the Latino dentist shortage is now critical and getting worse (Hayes-Bautista et al., 2007). Latinos remain disproportionately underrepresented in the higher levels of the educational pipeline, despite a rapidly growing percentage of the total population. The overall result is decreased access for many communities, since Latino dentists are more likely to located in a heavily Latino areas as well as speak Spanish than their non-Latino counterparts. Thus, continued recruitment and retention of more underrepresented minority students will result in a larger dental workforce with intentions to serve minority communities (Andersen et al., 2010).

Creative models to improve access through partnerships and mid-level providers

Since improvements to the Medicaid system and a more diverse and well-distributed population of dentists are unlikely to be the only answers, especially in the immediate time frame, a number of creative solutions are worth exploring. In a variety of locations, innovative partnership models have emerged that offer basic oral health services in connection with community-based primary care services to ensure comprehensive health care for underserved populations (Beetstra et al., 2008; Formicola et al., 2004). Their successes have been based on involving the community in planning and implementation, building upon the existing health safety net to link primary care with dental services, and changing policy to support the financing and delivery of dental care.

In Washington State, a community partnership program called the Access to Baby and Child Dentistry, or ABCD, has been successful in enhancing dentist participation and increasing utilization of preventive measures. A variant of the model implemented in one county was managed by the local dental society, allowing the dental community to assume greater responsibility and leadership and resulting in a doubling of the number of Medicaid-enrolled children treated on a regular basis (Nagahama, Fuhriman, Moore, & Milgrom, 2002).

While successful for decades in other parts of the world, in the past several years innovative midlevel workforce models are emerging in the United States. These include the advanced dental hygiene practitioner, the community dental health coordinator, and the dental health aide therapist (McKinnon, Luke, Bresch, Moss, & Valachovic, 2007). For example, one program utilizes dental health aide therapists (DHATs) to extend oral health services to remote Alaska Native villages. Treatments provided by DHATs were found to as successful as those provided by dentists (Bolin, 2008). While there is little doubt that such models can be effective, they are politically problematic (Benjamin, 2009; Smith, 2007). The issue of midlevel dental providers remains a contentious one that – while strongly supported by the dental public health arm of the profession and groups such as the American Public Health Association – has polarized the dental community and resulted to some degree in "stagnation and an image of perpetrated self interest (Russell, 2008:125)." The debate around the use of DHATs has included heavy opposition and calls for efforts only by "highly skilled and experienced dentists" (Sekiguchi, Guay, Brown, & Spangler, 2005), while proponents have charged the American Dental Association with "a long record of preventing anyone except dentists from providing treatment, even to the underserved (Allukian, Bird, & Evans, 2005: 1880)."

These models and resulting discussions signal a historical shift in the dental profession that is similar to the debate around e.g.,

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nurse practitioners in the medical field decades ago. In both instances, professional controls and a desire for self-preservation are in conflict with the needs of increasingly underserved populations. A more collaborative position is needed, along with proper design, evaluation, and implementation of new innovations. Voices from the field of dental public health have urged practitioners to embrace and lead this transformation by enabling their colleagues and the public to "better understand why and how a flexible and adaptable multi-layered dental workforce can be tailored to meet increasing population demand for dental services (Russell, 2008)."

Conclusion

Our results indicate that some typical factors associated with poor oral health outcomes, such as low dental health literacy, may not apply disproportionately to this population. Instead, we argue that structural features and ineffective policies contribute to oral health care disparities. Dental Medicaid programs are chronically underfunded, resulting in low reimbursement rates, low provider participation, and a severe distribution shortage of dentists within poor communities. We characterize the situation for families in Florida as one of "false hope" because of the promise of services with neither adequate resources nor the urgency to provide them. The resulting system of charity care, which leads dentists to provide *pro bono* care instead of accepting Medicaid, serves to only further persistent inequalities.

Social science research can contribute to the understanding of oral health disparities on two levels. First, social class must be added into the discussion, rather than limiting analyses to ethnicity, socioeconomic variables, and culture. This allows the understanding of historically deep systems of inequality and resulting structural constraints on health. In the case presented here, migrant farmwork highlights the interplay between labor and marginalization in the global system. The barriers present in the everyday lives of migrant farmworkers as laborers – and consumers of health care – include constraints on time and high levels of mobility. This is one tangible effect of deep class structures that impact the specific abilities to access health care through a "web of effects" linked to migrant status. At the same time, while migration lifestyle is a factor, these same barriers are experienced by all low-income families, making class a salient category for analysis. Furthermore, the unique interplay between biology and structural access embodied by children's dental conditions can provide specific insights for the critical study of health disparities.

Second, because oral health is perhaps the most sensitive measure of a well-functioning health care safety net, the analysis of policy is integral to our understanding. Most migrant farmworker children are covered for basic dental services and preventive care, despite their marginalization. This points to underlying structural constraints that we have highlighted here, namely, the underfunding of the dental components of public insurance programs, severe distribution shortage of dentists within some communities, and hesitancy to engage potentially highly effective new models of dental care. These problems, coupled with widespread acceptance of charity care as a stopgap measure, underlie the two-tier dental health system in the United States. The oral health epidemic in poor and marginalized communities calls for serious and innovative solutions.

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