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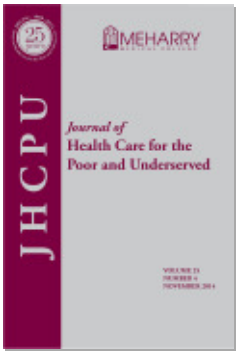


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ORIGINAL PAPER

# Barriers to Medicaid Participation among Florida Dentists

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*Abstract:* **Background**. Finding dentists who treat Medicaid-enrolled children is a struggle for many parents. The purpose of this study was to identify non-reimbursement factors that influence the decision by dentists about whether or not to participate in the Medicaid program in Florida. **Methods**. Data from a mailed survey was analyzed using a logistic regression model to test the association of Medicaid participation with the Perceived Barriers and Social Responsibility variables. **Results**. General and pediatric dentists (n=882) who identified themselves as either Medicaid (14%) or Non-Medicaid (86%) participants responded. Five items emerged as significant predictors of Medicaid participation, with a final concordance index of 0.905. Two previously unreported barriers to participation in Medicaid emerged: 1) dentists' perception of social stigma from other dentists for participating in Medicaid, and 2) the lack of specialists to whom Medicaid patients can be referred. **Conclusions**. This study provides new information about non-reimbursement barriers to Medicaid participation.

*Key words:* Barriers, Medicaid, dentists, social responsibility, oral health.

Parents of Medicaid-enrolled children nationwide report difficulty finding dentists who will provide treatment and also report a struggle getting appointments even if they identify a dentist who agrees to provide care.[1,2] Many dentists are reluctant to participate in Medicaid—and dentists who accept Medicaid may restrict the number of eligible children in their practice.[1,3] Nationally, fewer than one in four dentists see more than 100 Medicaid-eligible children in a year.[4] In response to an Association of State and Territorial Dental Directors (ASTDD) survey, the majority of states reported low participation among dentists in state Medicaid programs, with 25 of 39 states reporting

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fewer than half of the dentists providing any dental care to Medicaid patients in the prior year.[5] In Florida, only about 8% of licensed dentists participate in the Medicaid program[6] and a recent report shows two-thirds do not plan to do so in the future.[7]

On the utilization side, two-thirds of U.S. states fail to ensure that disadvantaged children receive the dental health care they need [8] even though oral health complaints are a primary issue facing the public health system. The situation has become worse in Florida, a state with one of the poorest records in the nation for providing dental care to low-income children. In a recent report by Pew Charitable Trust, Florida was awarded a grade of "F" for meeting only two of eight benchmarks.[8] While most states have increased the number of children enrolled in Medicaid and improved the utilization of Medicaid oral health services over the 2000–2010 decade,[9] enrollment and utilization has decreased in Florida.[10,11] One conclusion from these findings is that low participation of dentists in Medicaid goes hand in hand with low utilization of dental services by eligible patients.[3]

The American Dental Association (ADA) maintains that Medicaid rates do not "provide a valid reflection of market-based dental fees."[12 [p. 1]] While Medicaid reimbursement rates are generally low compared to private pay,[4] and many states do not fully reimburse for preventive services,[13] literature suggests that non-reimbursement related factors additionally play a role in dentists' participation in the Medicaid program.[2,14] Burdensome administrative requirements and people called "difficult" patients have often been cited as factors in low participation in Medicaid.[15,16] Other researchers have identified excessive paperwork, lack of case management to assist patients in keeping appointments, and poor oral health literacy among affected communities as issues leading to the reluctance of dentists to participate in Medicaid.[17,18] Furthermore, the U.S. Department of Health and Human Services[19] identifies cumbersome administrative procedures and extensive paperwork as a cause of low participation by dentists in the Medicaid program.

It is possible that if non-reimbursement barriers are removed, dentists may be willing to participate in Medicaid. Hence, it is important to consider a variety of factors that may influence participation in Medicaid. In their survey of dentists in the State of Washington, Milgrom and Riedy[20] showed that dentists may be willing to participate in a Medicaid program if they are properly informed and if their concerns regarding administrative burdens imposed by Medicaid are adequately addressed. In Florida specifically, Venezie and colleagues found broken or canceled appointments by patients, slow or denied payments, and complicated Medicaid claims filing procedures were significant reasons Florida dentists did not participate in Medicaid programs.[21] Notably, this research team also reported that if fees were increased and the administrative burden lightened, the percentage of Florida dentists willing to participate would increase to 70%.[22] It should be noted, however, that the Venezie study is more than 17 years old and that current qualitative studies on dental Medicaid participation in Florida are needed.[14]

Other research indicates that diversity may also play a role in the decision to participate in Medicaid dental programs. Okunseri and colleagues found that characteristics of dental providers were predictive of participation in dental Medicaid.[23] In a report on dental practices and Medicaid in the state of Wisconsin, minority dentists were twice as likely as White dentists to accept Medicaid patients. Logan and colleagues

found that Blacks and Hispanic dentists were more likely to be Medicaid participants in Florida than other dentists.[7] The extant literature shows that overall having a lower proportion of minority dentists in a given locale seems to inhibit access to dental care for low-income populations.[24]

In a qualitative study of factors associated with care of the underserved by dentists in both the United States and Canada, Dharamsi and colleagues concluded the following themes influence a dentist's sense of social responsibility: economics, professionalism, individual choice, and politics.[25] While recognizing that economic imperatives cannot be discounted, some of the dentists participating in Dharamsi's study argued that professional autonomy entails discharge of social responsibility and questioned the excessive emphasis on economics by some of their colleagues.

The purpose of this study is to add to the literature by identifying non-reimbursement factors that influence dentists' decision on whether or not to participate in the Medicaid program in Florida.

## Methods

We selected two groups of dentists to participate in this study. First, we selected all pediatric dentists in Florida ($N = 217$) identified in the 2010 directory of the American Academy of Pediatric Dentistry. Second, based on prior work, we identified 2,692 general dentists who self-identified as treating children.[6] The list of general dentists who serve children was developed through a process that began with a database purchased from the ADA, and was finalized by making an initial call to the practice asking questions about the best mailing address for the practice as well as whether or not the dentist treats children. The original list included both ADA members and non-members. Email addresses were obtained from published directories, web searches, and by asking about dental practices over the phone. Using pre-existing regions (North, Central, and South) established by the Florida Agency for Health Care Administration (AHCA), we used the random number generator in Excel to randomly select 328 general dentists from each region.

**Questionnaire and response**. The survey was conducted in English. The rationale for using a single language was that practicing Florida dentists must speak English well enough to successfully pass the licensure exam. The questionnaire was timed to be no more than 20 minutes in length.[26,27] To insure clarity and readability, we pilot-tested the questionnaire on members of the Florida Dental Association (FDA), the Council on Dental Health, University of Florida Pediatric Dentistry faculty, and second year pediatric dental residents. The FDA leadership endorsed the survey and methodology and provided a letter of support to be mailed with the survey instrument. We mailed the initial survey via FedEx with a $10 token incentive to encourage response. Participants were also informed that the survey could be accessed via web interface. Data were collected between August 27th and November 3rd of 2010. The web and paper versions were developed together to be as parallel in visual design and behavior as possible. Survey items and methodology were approved by the University of Florida Institutional Review Board.

**Questionnaire development**. To examine factors influencing dentists' intentions to

participate in Medicaid, two scales were developed. The Perceived Barrier Scale used a 5-point Likert Scale, ranging from 1 "not important" to 5 "very important," with items drawn from prior research.[16,22,28] Dentists were asked how important each barrier (problem) was in deciding about participation in Medicaid. The Social Responsibility Scale used a 7-point Likert Scale, ranging from 1 "strongly disagree" to 7 "strongly agree," and included items drawn from work by Dharamsi,[25] such as economics, professionalism, and individual choice. [29] Formative evaluation of these two scales (Perceived Barriers and Social Responsibility) included reviews by multiple individuals and groups with content and wording changes based on those comments.

After providing information about their practice and themselves, a brief description based on the Deamonte Driver story provided the context for answering items from the Perceived Barriers and Social Responsibility scales. [30,31] The Deamonte Driver account was based on the true account of a 12-year-old Medicaid recipient in Maryland who died in 2007 from a tooth infection after his mother and legal aid attorney were unable to find a dentist who would accept Medicaid and treat him.[31] The story of his death received state and national attention.[32] The issue prompted changes in both Maryland, where Deamonte Driver lived, and in federal legislation that focused on improving access to care for children.[30,33] However, the story also raised discussion and debate within the dental profession about societal and professional responsibilities to care for the poor and underserved and the role of social justice in professional responsibility.[34,35] Our goal was to focus the respondents' attention in such a way as to provide a platform from which the Perceived Barrier Scale and Social Responsibility Scale could reasonably be answered. This previously used method allowed us to test the putative contribution of views on professional and societal responsibilities to classify respondents into categories of participation and non-participation in Medicaid in Florida.[36]

**Variables of interest**. Medicaid participation was the dichotomous response variable of interest. Dentists were asked "What statement best describes your current feelings about Medicaid?" Respondents who chose "currently enrolled" were classified as Medicaid participants and "not enrolled" as Medicaid non-participants. Variables of interest included years in practice, gender of dentist, specialty (pediatric or general), region (South, Central, North), ethnicity (Hispanic or Non-Hispanic), and race. Race consisted of three identifiers: White, African American, and other. Dentists were considered "other" races if they selected Asian, Native Hawaiian or other Pacific Islander, American Indian or Alaska Native, or two or more races in the survey. Number of years in practice was a continuous variable calculated from the date of graduation from dental school and the date of this survey.

**Data analysis**. We used a survey sample weighted binary logistic regression model to assess the association of dentists' participation in Medicaid with the Perceived Barriers and Social Responsibility predictor variables, adjusting for years in practice, gender, specialty, region, ethnicity, and race. Comparisons were made based on odds ratios (OR). A significant OR greater than one means the odds of a dentist being a Medicaid participant is higher. Similarly, an OR of less than one means the odds of a dentist being a Medicaid participant is lower. We performed model selection following strategies described in Muller and Fetterman.[37] An exclusion p-value of .05 was used. All analyses were performed using SAS version 9.3 (SAS Institute, Cary, NC).

## Results

**Demographic characteristics**. The characteristics of the final sample of 882 dentists [Medicaid (14%) or Non-Medicaid participants (86%)] are shown in Table 1. To obtain this final sample, we sent out 984 surveys to general dentists (self-identified as seeing children) and received 748 completed surveys. We also sent out 217 surveys to pediatric dentists and received 169 completed responses. Thus, the response rate for general dentists who self-identified as seeing "children" was 76.0%, and the rate for pediatric dentists was 77.9%. Of the total 917 dentists (general and pediatric) who responded, 882 (73.4%) gave complete responses on Medicaid participation, the key variable in this report. There was no significant difference between general and pediatric dentists in the percentage with complete data on this variable.

Of the 882 dentists in the final sample, 164 were pediatric dentists and 718 were general dentists who treated children. As shown in Table 1, of those who self-identified as participants in Medicaid, 30.4% were pediatric dentists. Hispanics made up 32.0% of the Medicaid participant group compared to 17.9% of the non-participant group. African Americans made up 13.3% of the Medicaid participant group compared to 2.5% in the non-participant group.

## Table 1.

### CHARACTERISTICS OF RESPONDENTS WHO ARE CLASSIFIED AS PARTICIPANTS OR NON-PARTICIPANTS IN FLORIDA MEDICAID PROGRAM

| | Participants N=126 | Non-Participants N=756 |
|---|---|---|
| Average Years in Practice (SD) | 22.8 (13.0) | 24.9 (9.7) |
| Gender | | |
| Male | 63.4% | 79.7% |
| Female | 36.6% | 20.3% |
| Specialty | | |
| Pediatric | 30.4% | 4.7% |
| General | 69.6% | 95.3% |
| Region | | |
| North | 14.1% | 18.3% |
| Central | 31.0% | 36.1% |
| South | 54.9% | 45.6% |
| Ethnicity | | |
| Hispanic | 32.0% | 17.9% |
| Non-Hispanic | 68.0% | 82.1% |
| Race | | |
| White | 71.4% | 84.9% |
| African American | 13.3% | 2.5% |
| Other | 15.3% | 12.6% |

Table 2 shows the mean responses of the participants and non-participants on the key variables: Perceived Barriers and Social Responsibility. The survey sample weighted means are higher on all Perceived Barrier items for the group who self-identified as Non-Participants in Medicaid. The pattern for the survey sample weighted means on the Social Responsibility items was mixed.

**Logistic regression model**. Results from the logistic regression analysis are summarized in Table 3. Pediatric dentists were more likely to participate in Medicaid than general dentists (OR=9.70; 95% CI=5.81, 16.2). African American dentists, were more likely to participate in Medicaid than "Other" and White dentists (OR=0.22; 95% CI=0.07, 0.72; OR=0.15; 95% CI=0.05, 0.43, respectively). Hispanic dentists in South Florida were more likely to participate in Medicaid than non-Hispanic dentists in South Florida (OR=4.48; 95% CI=1.97, 10.2).

Controlling for years in practice, gender, specialty, region, ethnicity, and race, five out of the ten items from the Perceived Barriers Scale (five-point importance scale, higher scores mean greater importance) were significant predictors of Medicaid participation (Table 3). On items from the Perceived Barriers Scale, Medicaid participants were more likely to give a higher rating of importance for Difficulty in finding specialists who accept Medicaid (B10) than non-participants (OR=1.84; 95% CI=1.37, 2.47). In contrast, non-participants in Medicaid were more likely than participants to give a higher rating of importance for the following four Perceived Barrier items: Complicated paperwork (B3; OR=0.58; 95% CI=0.45, 0.75); Frequent changes in regulation (B4; OR=0.72; 95% CI=0.56, 0.94); Slow reimbursement (B6; OR=0.60; 95% CI=0.47, 0.75); and Fingerprinting requirement (B9; OR=0.77; 95% CI=0.64, 0.93).

Three of the 17 Social Responsibility Scale items (seven-point agreement scale, higher scores mean greater agreement) were significant predictors of Medicaid participation (Table 3). Medicaid participants were more likely than non-participants to give a higher rating of agreement with these three items: *Other dentists will think less of me if they know I see Medicaid patients* (R4; OR=1.30; 95% CI=1.12, 1.50); *The traditional model of dental private practice adequately addresses the oral health needs of underserved patients* (R6; OR=1.35; 95% CI=1.14, 1.59); and *If I become a Medicaid participant, I could help prevent tragedies like the death of Deamonte Driver* (R7; OR=1.21; 95% CI=1.07, 1.37).

The concordance index of the final logistic model is 0.905. This index gives an estimation of the model's sensitivity for predicting our outcome.[38] Therefore, our model correctly predicted whether a dentist was a Medicaid participant 90.5% of the time.

## Discussion

The key findings from this study are that non-reimbursement items significantly influence the willingness of dentists to participate or not in the Medicaid dental program and the final model significantly predicted whether a dentist is a Medicaid participant 90.5% of the time. We found two previously unreported barriers: 1) perceived social stigma of being a Medicaid participant; and 2) the lack of specialists who are Medicaid participants to whom patients can be referred.

To the best of our knowledge this is the first study to show that dental Medicaid participants felt that other dentists think less of them because they are Medicaid

## Table 2.

### SURVEY SAMPLE WEIGHTED MEAN (SD) RESPONSES OF PARTICIPANTS AND NON-PARTICIPANTS ON SELECTED SCALES

| Perceived Barriers (B) and Social Responsibility (R) Scales[a] | Participants N=126 | Non-Participants N=756 |
|---|---|---|
| B1: Hassles in enrollment paperwork | 3.59 (1.60) | 4.49 (0.89) |
| B2: Need for prior approval | 3.76 (1.60) | 4.46 (0.87) |
| B3: Complicated paperwork | 3.66 (1.66) | 4.67 (0.72) |
| B4: Frequent changes in regulations | 3.85 (1.38) | 4.52 (0.86) |
| B5: Denial of payment | 4.41 (0.97) | 4.80 (0.54) |
| B6: Slow reimbursement | 3.87 (1.48) | 4.64 (0.73) |
| B7: On-and-off eligibility of patients | 4.25 (1.29) | 4.55 (0.85) |
| B8: Patient characteristics | 4.12 (1.29) | 4.40 (0.92) |
| B9: Fingerprinting requirement | 2.47 (1.90) | 3.39 (1.61) |
| B10: Difficulty in finding specialists who accept Medicaid | 4.54 (0.89) | 4.47 (0.81) |
| R1: My self-pay patients would not like being in a waiting room with Medicaid patients. | 3.72 (2.28) | 3.81 (1.80) |
| R2: Developing new workforce models such as a pediatric oral health therapist is a good way for dentistry to fulfill its professional obligation to care for the oral health of all children. | 3.23 (2.47) | 3.50 (1.97) |
| R3: Providing dental care to the needy is my ethical and professional obligation. | 5.35 (2.09) | 4.82 (1.76) |
| R4: Other dentists will think less of me if they know I see Medicaid patients. | 2.52 (1.79) | 2.27 (1.57) |
| R5: I would never turn any patient away regardless of their background or socioeconomic status. | 5.68 (2.36) | 5.69 (1.71) |
| R6: The traditional model of dental private practice adequately addresses the oral health needs of underserved patients. | 3.56 (1.76) | 3.16 (1.58) |
| R7: If I become a Medicaid provider, I could help prevent tragedies like the death of Deamonte Driver. | 5.11 (2.20) | 3.95 (2.10) |
| R8: Medicaid enrolled children are more likely to be noncompliant than other patients in my practice. | 4.96 (2.10) | 4.78 (1.76) |
| R9: Medicaid patients frequently cancel appointments. | 5.68 (1.98) | 5.26 (1.61) |
| R10: We live in a free-market economy, so I am not obliged to provide dental care to the poor. | 3.11 (2.34) | 3.49 (1.99) |
| R11: Many parents with children on Medicaid make the wrong choices about the oral health needs of their children. | 5.17 (2.06) | 5.11 (1.53) |
| R12: Access to general health care is a right of all people. | 5.10 (2.42) | 4.54 (2.07) |
| R13: Access to oral health care is a right of all people. | 4.97 (2.53) | 4.51 (2.06) |

(*Continued on p. 161*)

## Table 2. (*continued*)

| Perceived Barriers (B) and Social Responsibility (R) Scales[a] | Participants N=126 | Non-Participants N=756 |
|---|---|---|
| R14: I lack the cultural sensitivity to treat minority patients. | 1.48 (1.21) | 1.66 (1.22) |
| R15: I cannot financially afford to treat Medicaid patients. | 4.02 (2.38) | 5.28 (1.83) |
| R16: I needed better education in dental school to prepare me to address oral health disparities in poor and minority patients. | 2.11 (1.82) | 2.32 (1.61) |
| R17: The dental needs of Medicaid patients are more difficult to treat than other patients in my office. | 3.60 (2.31) | 3.59 (1.86) |

Note:
[a]Perceived Barriers ranged from 1 to 5, with 1 = "Not Important" and 5 = "Very Important." Social Responsibility ranged from 1 to 7, with 1 = "Strongly Disagree" and 7 = "Strongly Agree."

participants. Thus, even for those enrolled as providers, the social stigma associated with providing care for Medicaid recipients was seen as a barrier. This point poignantly illustrates the dilemma that dentists may experience between providing care to the underserved and being a respected colleague within the profession. A strong statement, based on ethical principles, endorsing Medicaid participation by organized dentistry and local and governmental officials, might positively influence dentists who would like to participate in Medicaid and are not currently doing so.

Another item not previously reported (Perceived Barriers Scale) was difficulty in finding a specialist. To address the care for Medicaid-eligible children (especially special needs children), specialists such as orthodontists or oral surgeons may be needed.[39] It is reasonable that only those dentists operating as Medicaid participants would know of this problem and could report this as a significant barrier. To retain current Medicaid providers, broader efforts to enroll additional specialists should be undertaken. A hotline to identify specialists who accept Medicaid children may immediately help address this barrier.

Dental schools may also help address the lack of dental specialists who participate in Medicaid by providing relevant foundation knowledge for all trainees within the predoctoral dental training program. That is, the predoctoral curriculum of each dental school should contain a track that focuses on the care of children and the economics and operation of dental clinics in areas of highest need. Armed with this type of foundation knowledge from their predoctoral training, dental specialists may be more willing to navigate the Medicaid reimbursement system and to be a partner in optimizing oral health for children enrolled in Medicaid.

As anticipated, those dentists who endorsed a belief that being a Medicaid provider could have prevented tragedies like the death of Deamonte Driver self-identified as Medicaid participants. On the other hand, Medicaid participants also endorsed a belief that the traditional private practice model does address the needs of underserved

## Table 3.

### PARAMETER ESTIMATES FOR PERCEIVED BARRIERS (B), SOCIAL RESPONSIBILITY, AND DEMOGRAPHIC PREDICTORS OF WHETHER DENTISTS PARTICIPATE IN MEDICAID

| | Estimate Of B | SE | OR (95% CI) | p |
|---|---|---|---|---|
| Model: Dentist participation in Medicaid | | | | |
| Years in Practice | 0.05 | 0.16 | 1.05 (0.77, 1.44) | .767 |
| Gender (male ref=female) | –0.26 | 0.34 | 0.77 (0.39, 1.52) | .453 |
| Specialty (pediatric ref=general) | 2.27 | 0.26 | 9.70 (5.81, 16.2) | <.001 |
| Region (Central ref=South) | –0.21 | 0.35 | 0.81 (0.41, 1.62) | .558 |
| Region (North ref=South) | –0.20 | 0.34 | 0.82 (0.42, 1.60) | .564 |
| Ethnicity (Hispanic ref=Non-Hispanic) | 1.50 | 0.42 | 4.48 (1.97, 10.2) | <.001 |
| Race (other ref=African American) | –1.53 | 0.61 | 0.22 (0.07, 0.72) | .012 |
| Race (White ref=African American) | –1.89 | 0.54 | 0.15 (0.05, 0.43) | <.001 |
| Region x Ethnicity (ref=Non-Hispanic) | | | | .033 |
| Hispanic in South | 1.50 | 0.42 | 4.48 (1.97, 10.2) | <.001 |
| Hispanic in Central | –0.19 | 0.84 | 0.83 (0.16, 4.34) | .826 |
| Hispanic in North | –0.95 | 1.11 | 0.39 (0.04, 3.43) | .395 |
| B3: Complicated paperwork | –0.54 | 0.13 | 0.58 (0.45, 0.75) | <.001 |
| B4: Frequent changes in regulations | –0.32 | 0.13 | 0.72 (0.56, 0.94) | .015 |
| B6: Slow reimbursement | –0.52 | 0.12 | 0.60 (0.47, 0.75) | <.001 |
| B9: Fingerprinting requirement | –0.26 | 0.09 | 0.77 (0.64, 0.93) | .007 |
| B10: Difficulty in finding specialists who accept Medicaid | 0.61 | 0.15 | 1.84 (1.37, 2.47) | <.001 |
| R4: Other dentists will think less of me if they know I see Medicaid patients. | 0.26 | 0.07 | 1.30 (1.12, 1.50) | <.001 |
| R6: The traditional model of dental private practice adequately addresses the oral health needs of underserved patients. | 0.30 | 0.08 | 1.35 (1.14, 1.59) | <.001 |
| R7: If I become a Medicaid provider, I could help prevent tragedies like the death of Deamonte Driver. | 0.19 | 0.06 | 1.21 (1.07, 1.37) | .003 |

Note
CI = Confidence Interval
SE=Standard Error
OR=Odds Ratio

patients. This outcome was somewhat surprising and seems to suggest that Medicaid providers think if everyone did their part with participation in Medicaid, the existing private practice model is adequate. Perhaps if barriers were addressed and more dentists participated, the existing model could work, but until these barriers are resolved, too few Medicaid-eligible children are routinely able to access dental care.

Some of the other non-reimbursement factors that significantly influence dentists' willingness to participate or not participate in the Medicaid dental program in Florida are administrative, personal characteristics of the dentist, and the type of dental practice. This finding is consistent with previous reports (e.g., dental specialty and race of the dentist).[7,23]

Non-providers were more likely to agree that complicated paperwork, changes in regulations, slow reimbursement, and fingerprinting requirements were greater barriers in the Medicaid program than issues related to the disposition of dentists themselves. Since Medicaid providers did not identify these items as barriers as strongly, this suggests that Florida Medicaid agencies (e.g., AHCA) should consider conducting workshops or town hall meetings with dentists to document improvements in procedures. It may be beneficial to specifically address each barrier and describe how Medicaid processes work today as opposed to how they operated in the past. As claims are prepared and submitted, an active hotline for support of dentists may encourage greater enrollment.

Overall, the analysis showed that administrative barriers are present (e.g., paperwork, slow and inadequate reimbursement, etc.), but that some barriers that were previously reported may have been mitigated, or at least that participants saw the barriers as less important. These included such items as difficulty with enrollment paperwork, need for prior approval, denial of payment, on-and-off eligibility of patients, and patient characteristics. We acknowledge, however, that mitigation of these "problems" is but one interpretation. It is possible that the problems still exist but are less influential in decisions about Medicaid participation.

Two Social Responsibility Scale items that were not significant predictors require comment. These include items related to characteristics of Medicaid-eligible children and families characterized as "difficult patients," as often cited as reasons for non-participation by dentists.[40,41] In this study we did not find that association. This lack of difference is encouraging and is further supported by the lack of difference between Medicaid providers and non-providers on whether "they would ever turn any patient away regardless of their background or socioeconomic status." Although dentists have been criticized for an unwillingness to participate in Medicaid, the lack of difference on this item suggests that non-Medicaid providers may be providing pro bono care for the needy outside the usual practice paradigm.[42,43] On the other hand, patients often report it is hard to find dentists who provide pro bono care. Castaneda and colleagues worry that the system of dentists providing charity care rather than accepting Medicaid only perpetuates persistent oral health inequalities.[14]

Our findings clearly suggest that there is a need to more broadly address the barriers to Medicaid participation in ways that reduce the administrative bureaucracy and formalize the avenues to dental access for patients. To expect patients to find a dentist who will provide pro bono care strips the patients of dignity and is an unreasonable burden on a child patient and his or her caregiver. On the other hand, expecting dentists to fit pro bono care into their usual practice paradigm dramatically limits the overall availability of care. Moreover, it shifts the burden of caring for the underserved to the paying patients; there is agreement in many circles that philanthropic care should not substitute for an efficient healthcare system.[44] Health Services Research investigators

should conduct field studies further examining this last point by asking whether philanthropic care narrows or widens oral health disparities and to determine what the specific factors are that produce such outcomes.

Of particular relevance is the new information provided by the Social Responsibility Scale which shows that dentists who are Medicaid providers perceive a social stigma associated with their participation, an issue not reported by those who are not Medicaid providers. This outcome may or may not be unique to dental providers, and exploration of a similar association among other health care providers and their Medicaid participation status is strongly suggested.

The findings from this study should be interpreted in the context of its limitations. First of all, the sample is made up of dentists practicing in Florida only. In addition, the data were collected in 2010, making the findings nearly four years old at the time of our anaysis. It is possible that studying only Florida dentists and then only during that time period may limit the generalizability of the results to other parts of the United States. However, we think this is unlikely given the diversity of the population in Florida and the size of the state overall. That being said, there is high probability that attitudes among dentists in Florida during the specific time period are representative of those in most regions of the country currently. Nonetheless readers should interpret the results in light of these temporal and geographic limitations.

Second, we acknowledge that this is the first study using the Perceived Barriers and Social Responsibility Scales, and replication of our findings with this scale is warranted. The strength of our results, however, suggests that this scale is capturing an important dimension that deserves further study. Finally, we acknowledge that we do not have data on how active these Medicaid providers are [the number of Medicaid eligible children seen in the last year] limiting our ability to generalize our results to all Medicaid providers.

**Conclusions.** Although non-reimbursement barriers exist for dentists' participation in Medicaid, none are insurmountable. Through a concerted effort of organized dentistry, federal and state medical agencies, local and state legislative action, health services research, and dental education, these barriers could be overcome. It is a moral imperative that more Medicaid-eligible children are "cared for" with an eye toward the betterment of their long term health.[45]

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