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The North Carolina Medicaid Program: Participation and perceptions among practicing orthodontists

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Abstract

Introduction—Limited provider participation in the Medicaid program is a barrier to access to orthodontic care for Medicaid-eligible patients. The goals of this study were to determine the participation level of North Carolina (NC) orthodontists in the Medicaid program, to examine NC orthodontists' perceptions of the Medicaid program and its beneficiaries, and to determine whether there are differences between practitioners who do and do not accept Medicaid patients.

Methods—Questionnaires were mailed to all active orthodontists (n = 203) as reported in the NC State Dental Board of Licensing Section of the NC Health Professions Data System. Respondents were categorized as current Medicaid providers, past Medicaid providers, or orthodontists who have never accepted Medicaid.

Results—Forty of 166 respondents were current Medicaid providers, 33 were past providers, and 93 never accepted Medicaid patients. All 3 groups thought that low fee reimbursement is a major problem. Those who have never participated in the Medicaid program were more likely to perceive each barrier as a major problem. Past Medicaid providers saw broken appointments and tardiness to appointments as greater problems than current providers.

Conclusions—Perceptions of Medicaid patients and lack of knowledge appear to be major barriers to provider participation.

In 1965, Medicaid was created as Title XIX of the Social Security Act to provide public health insurance to certain low-income people.[1] In 1966, an American Dental Association task force specifically recommended that treatment services should include "treatment of malocclusion with priority provided for interceptive service and disfiguring or handicapping malocclusions."[2] An amendment passed in 1967 established the Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) program, mandating that dental care, including orthodontic treatment for handicapping malocclusion, be made available to Medicaid-eligible children less than 21 years of age.[3–5] A significant obstacle in achieving the legislative mandate of the EPSDT program has been limited participation by dentists.

Low participation by dentists in the Medicaid program has been linked to low reimbursement rates, excessive paperwork, need for prior authorization, denial of payment, restrictions in reimbursable services, payment delays, and broken appointments.[4–10] Capilouto[7] presented other possible dimensions for low provider participation related to peer and professional considerations— eg, the linkage of Medicaid providers with fraud and

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abuse in the media and the perception that Medicaid providers are held in lower esteem by peers.

In 2002 and 2003, an estimated 480,000 children in North Carolina (NC) were eligible for dental treatment under the Medicaid program. During the same time period, less than 0.5% of these children received orthodontic care (NC DHHS 2004, unpublished data), even though it has been estimated that 29% of adolescents and 14.2% of children have severe to very severe handicapping malocclusions.[11,12] The low percentage of Medicaid-eligible children who received orthodontic care in NC in 2003 appears to reflect the level of care in other states.[13] In Washington[13] and NC (NC DHHS 2003), only a few orthodontists (10 in each state) provided greater than 80% of the orthodontic treatment under the Medicaid program statewide, emphasizing the poor distribution of these patients among practitioners.

The survey of orthodontists in Washington by King et al[13] is the only published study that examined orthodontists' participation in, and attitudes toward, the Medicaid program. The objective of our investigation was to examine NC orthodontists' perceptions of issues related to Medicaid. Specifically, the goals of this study were to determine the level of participation of NC orthodontists in the Medicaid program. to examine NC orthodontists' perceptions of and attitudes toward the Medicaid program and its beneficiaries, and to determine whether there are differences between NC practitioners who do and do not accept Medicaid patients. A greater understanding of the barriers to orthodontists' participation will provide insight into what changes, whether in program policy or in orthodontists' attitudes, might be needed to improve access to orthodontic care for those who meet Medicaid criteria.

MATERIAL AND METHODS

A cross-sectional census study design was used to assess the level of participation of NC orthodontists in the Medicaid program and their perceptions of the Medicaid system and its clients. The survey instrument, approved by the Institutional Review Board at the University of North Carolina School of Dentistry, consisted of 28 items with Likert-scale responses for most questions.

The survey questions were derived from previously developed and tested instruments,[4,13] altered to meet our research aims. The questionnaire was pretested on full-time orthodontic faculty at the University of North Carolina; they were asked to provide open-ended comments about ease of completion, confusing items, and word changes. These persons were excluded from the final study sample.

The survey instrument was divided into 4 domains: patient population, practitioner demographics, practice characteristics, and Medicaid issues. Practice arrangement was categorized as solo practitioner or nonsolo practitioner for analytical purposes. Respondents were asked whether they currently accepted new Medicaid patients and, if yes, what percentage of the active patient population was Medicaid; whether all new Medicaid patients were accepted; and whether the amount of Medicaid revenue resulted in a net profit, breaking even, or a net loss. Respondents who did not currently accept new Medicaid patients were asked whether they had ever accepted Medicaid patients and, if so, in what year they stopped accepting Medicaid patients. Finally, 10 commonly cited problems with the Medicaid program and its patients that were identified as barriers to participation were given. The respondents were then asked to rate each issue as "not a problem," "a minor problem," "a major problem," or "don't know."

The survey was mailed to all active orthodontists practicing in NC as reported in the North Carolina State Dental Board of Licensing Section of the North Carolina Health Professions Data System. The sampling frame consisted of 215 orthodontists. Twelve of them were

ineligible: 1 was deceased, and 11 were not active practitioners. Thus, the effective sampling frame was 203. The survey methods outlined by Salant and Dillman[14] were used as a guide. A cover letter describing the study, the questionnaire, and a postage-paid return envelope was sent to each orthodontist. A follow- up letter, with a replacement questionnaire, was mailed about 2 to 3 weeks later to those who had not responded. A third letter, with another copy of the questionnaire, was sent to nonrespondents 2 to 3 weeks after the second letter. Data were collected between August and November 2005.

Respondents were categorized as current Medicaid providers, providers who had participated in Medicaid at 1 time but did not currently participate, and providers who had never participated in Medicaid. The responses of these 3 groups to all items were compared by using the exact Mantel-Haenszel chi-square test except for questions with continuous responses—eg, percentage of patients with insurance. For these items, the Mantel- Haenszel row-mean score statistic was used to compare the 3 groups. Respondents who specified "don't know" to the barrier to participation items were excluded to yield a comparison of providers in the 3 groups who expressed an opinion. The number of respondents differed from question to question because some did not answer every question. The level of significance was set at .05 for all analyses.

RESULTS

One hundred sixty-eight eligible orthodontists responded to the survey. Two responded with letters and were excluded from the data analysis, yielding an effective response rate of 166 of 203 (82%). Most respondents were male, white, solo practitioners who had been in practice for an average of 19.5 years.

Only 40 practitioners (24.1%) reported currently accepting new Medicaid patients, and over 80% of these did not accept all new Medicaid patients seeking treatment. New Medicaid patients were more likely to be accepted if referred. Sixteen providers (40%) would accept medically compromised new Medicaid patients. The median percentage of the active patient population covered by Medicaid in these 40 practices was 6%. Only 6 practitioners reported that Medicaid patients made up more than 20% of their practice. Five (12.5%) reported a net profit from these patients. Fifteen (37.5%) reported breaking even, and 20 (50.0%) reported a net loss. Medicaid providers were located in 25 of the 100 counties in NC (Fig). Based on population density and median family income for each county, there was no apparent trend that Medicaid providers were located in counties with lower population densities or lower median family incomes.[15]

One hundred twenty-six (75.9%) of the 166 respondents did not currently accept new Medicaid patients. Thirty-three (26.2%) of the nonparticipating orthodontists reported accepting Medicaid in the past but not currently; approximately half of them stopped accepting Medicaid patients in the last 6 years (2000 or later). The county affiliation of respondents who previously accepted Medicaid patients is shown in the Figure. Ninety-three of the 126 nonparticipating orthodontists (73.8%) reported never having accepted Medicaid.

There was no statistically significant difference in provider demographics or non-Medicaid related practice characteristics among the 3 groups (Table I). Medicaid providers did have a significantly higher percentage of referred patients with Medicaid than both groups of nonproviders ($P < .0001$). Current Medicaid providers, along with those who used to accept Medicaid, also had more Medicaid inquiries in a typical month than nonproviders who have never accepted Medicaid ($P = .001$).

Many nonproviders who have never accepted Medicaid responded with "don't know" to questions regarding reasons that orthodontists limit the number of Medicaid patients they

treat (Table II). Thus, for the items related to barriers to participation in Medicaid, these respondents were excluded from the analyses.

All 3 groups perceived low fee reimbursement to be a major problem with the Medicaid program (Table II). This was the only issue where the opinions of the 3 groups did not differ significantly. For the remaining issues related to program logistics or patient behaviors (Table II), current Medicaid providers, in general, perceived the issues to be no problem or a minor problem, whereas nonproviders (past and never) tended to report the issues to be minor or major problems. Interestingly, those who never accepted Medicaid and expressed an opinion were more likely to perceive the issues as major problems.

Analyses were conducted to compare current Medicaid providers with those who used to accept Medicaid to see what might have caused the latter group to stop participating. These 2 groups did not differ in any demographic characteristic ($P > .59$). The only practice characteristic (Table I) that differed between the 2 groups was the average percentage of referred patients covered by Medicaid ($P < .0001$). The 2 groups did not differ in their opinions of the logistics of the Medicaid program ($P > .06$) but did differ in their perceptions of Medicaid patients. More past Medicaid providers perceived patient behaviors to be a problem than did current providers (Table II): broken appointments ($P = .001$), tardiness for appointments ($P = .001$), last-minute cancellations ($P = .05$), and uncooperative behavior ($P = .07$).

DISCUSSION

Level of practitioner participation

Only 61 NC orthodontists participated in the Medicaid program in fiscal year 2003 (NC DHHS 2004, unpublished data) and most of them treated only a few patients. In 2004, 5670 orthodontic cases were submitted for prior authorization, with 64.9% (n = 3680) approved. In 2005, 7924 cases (a 40% increase from the last year) were submitted, and 63.7% (n = 5044) were approved. With less than 25% of practicing orthodontists currently accepting new Medicaid patients, compounded by the low percentage of patients in their practices with Medicaid coverage (median, 6%), we confirmed that low levels of participation by orthodontists and small percentages of Medicaid patients in each practice prevent meeting the goals of the Early and Periodic Screening, Diagnosis, and Treatment program.

In an environment of increasing numbers of Medicaid- eligible patients, barriers to care prevent those of low socioeconomic status from accessing orthodontic treatment and realizing the psychosocial and oral health advantages from improved appearance and oral function. [16,17] Low levels of practitioner participation have also plagued the success of the Medicaid program in other fields of dentistry and medicine nationwide. Since the 1970s, physician participation in Medicaid programs has been declining nationally.[18,19] Reasons for this decline include inadequate reimbursement, excessive paperwork/administrative burdens, payment delays, litigation concerns, and patient abuses of the program.[19–21] The blame for low participation in dentistry has also been similar.[4–10]

Practitioner and practice characteristics

Practitioner and practice characteristics do not appear to influence whether an orthodontist in NC participates in the Medicaid program. This is unlike the findings from other areas of medicine and dentistry suggesting that age, number of years in practice, perceptions of how busy the practice is, practice arrangement, and average fees can affect a practitioner's decision to accept Medicaid.[4,5,10,22] The effect of practice location, shown to possibly influence Medicaid participation levels, was not evaluated in depth in this study.[5,13,22] However, the Medicaid providers who responded to the survey were located in only 25 of

the 100 counties in NC, with the northeastern part of the state having the least access to an orthodontist who accepts Medicaid (Fig). Interestingly, the county with the most current Medicaid providers has the highest population density and the second highest median family income of all NC counties. Thus, there is probably more to the decision to participate in the Medicaid program than practice location: either these practitioners are located where Medicaid-eligible people live, or Medicaid patients are being referred to orthodontists who are known to accept them.

Orthodontists in Washington who accepted Medicaid patients provided more discounted fees, received more inquiries from Medicaid patients, and were more likely to feel overworked.[13] In NC, however, the 3 groups of providers did not differ significantly in the average percentages of patients for whom no fee or a discounted fee was quoted. A possible explanation is that nonproviders might be giving back to the community by quoting no fee or a discounted fee to a few Medicaid patients rather than dealing with the "hassle" of the Medicaid system.[6] A few respondents who reported not accepting Medicaid payment, even those who reported never accepting Medicaid, did report that a small percentage of their patient population was on Medicaid. Those who previously accepted Medicaid might have Medicaid patients who were not yet finished with treatment, or the provider might not officially participate in the Medicaid program but accept a few referrals or medically compromised patients and offer a discounted fee or no fee.

Perceptions of the Medicaid program and patients

If practitioner and practice characteristics are not related to participation by NC orthodontists in the Medicaid program, what could influence an orthodontist's decision to participate? All 3 groups believed that the low fee reimbursement was a major problem with the Medicaid program (Table II). This finding is congruent with previous studies.[4–10,13,19,21] With reimbursement rates of only 55% to 65% of the customary fee, and coverage limited to severe "handicapping" malocclusions that would most likely require more resources, it is not surprising that this has an effect on orthodontists' level of participation. Even so, low fee reimbursement and minimal opportunity for profiting financially did not appear to deter those who currently accept Medicaid from treating these patients. This supports the theory that factors affecting providers' participation in the Medicaid program are more complex than dissatisfaction with low reimbursement fees.[8,10,22,23]

Most of the orthodontists who had never accepted Medicaid responded with "don't know" to the questions related to the logistics of the Medicaid system (Table II). This lack of opinion might reflect lack of knowledge about actual procedures and implementation of Medicaid coverage. Margolis et al[22] found that pediatricians who knew less about the Medicaid program tended to restrict patient access. Educating practitioners in the logistics of the Medicaid program could help to dispel some of these negative perceptions.

Substantially fewer (less than 40%) of those who had never accepted Medicaid responded with "don't know" to the patient-related issues (Table II). Of those who gave an opinion, over 80% cited the issues related to disruption of practice efficiency (no show/cancellation/tardiness) as major problems. Providers who stopped accepting Medicaid did not significantly differ from current providers in their perception of the problems related to the Medicaid program but did differ in their perception of the problem level associated with patient-related behaviors. Past providers thought that broken appointments (44% current vs 81% past) and tardiness (31% vs 69%) were major problems; this might have influenced their decision to discontinue accepting new Medicaid patients. Mirabelli et al[24] reported that, although Medicaid patients had more broken appointments and poorer oral hygiene, compliance did not appear to affect the final treatment result. A more comprehensive study comparing Medicaid patients with non-Medicaid patients in terms of cooperation would be

beneficial to verify whether commonly held perceptions of Medicaid patients are valid. Incorporating Medicaid patients into residency clinics to give residents hands-on experience with the logistics of the system might give them a more realistic view of the Medicaid program and its patients. Residency training programs can also foster a higher level of altruism and a sense of social responsibility through education about public health principles.

CONCLUSIONS

In this study, we examined participation and perceptions of the Medicaid program among practicing orthodontists in NC. Therefore, broad generalizations of the findings should be made with caution; however, under the conditions of this study, we conclude the following.

1. Approximately three-quarters of the orthodontists in NC reported that they do not currently accept or have never accepted Medicaid patients.
2. There appear to be no demographic or practice pattern differences among current Medicaid providers, nonproviders who used to accept Medicaid, and nonproviders who never accepted Medicaid.
3. Low fee reimbursement is perceived by all provider groups as a major problem with the Medicaid program.
4. Perceived problems with patient-related issues were more frequently cited by those who never accepted or are not currently accepting Medicaid patients.

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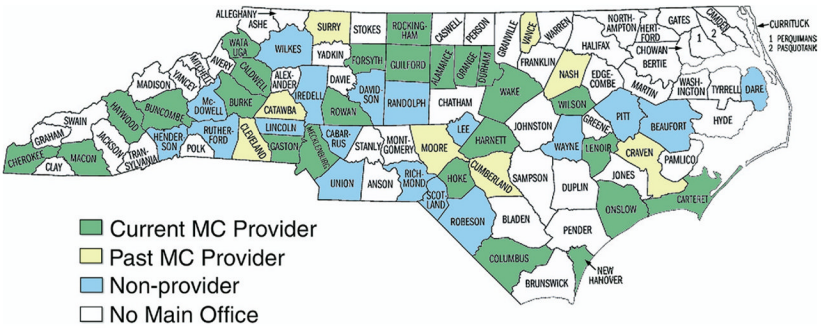

Fig.

County affiliations for respondents. “No Main Office” indicates counties lacking an orthodontist with a main office, as reported by North Carolina Health Professions Data System.

Table I

Descriptive statistics for the percentage of patients in each practice who met specific criteria as reported by all practitioners and those in each provider category

	All providers		Medicaid providers		Accepted Medicaid at1 time		Never accepted Medicaid		
	n	**Median (q1-q3)**	**n**	**Median (q1-q3)**	**n**	**Median (q1-q3)**	**n**	**Median (q1-q3)**	***P* value**
New full-treatment cases started in 2004	136	202 (150–300)	34	212.5 (150–350)	28	205 (150–300)	74	202 (150–300)	.95
Method of payment									
% private insurance	160	50 (38.5–65)	38	44 (30–62)	33	55 (40–70)	89	50 (40–65)	.13
% Medicaid	130	0 (0–5)	38	6 (3–10)	23	0 (0–2)	69	0 (0–0)	—
% no insurance	161	50 (30–60)	38	45.5 (27–55)	33	42 (30–59)	90	50 (30–60)	.39
% other funding	81	0 (0–1)	19	0 (0–2)	12	0 (0–0)	50	0 (0–2)	—
Percentage of referred patients that have Medicaid	165	2.0 (0–5)	40	10.0 (3.5–20)	32	1.0 (0–5)	93	0.0 (0–2)	<0001
Percentage of new cases with no fee	83	1.0 (1–2)	20	1.0 (1–2)	15	1.0 (0–2)	48	1.0 (1–2)	.29
Percentage of new cases with discounted fee	102	3.0 (2–5)	28	3.0 (2–10)	22	2.0 (1–10)	52	2.5 (1–5)	.61
Number of Medicaid inquiries in typical month	154	5 (2–10)	37	10 (3–20)	30	10 (3–20)	87	4 (1–10)	.001
		n (%)		*n (%)*		*n (%)*		*n (%)*	
Practice arrangement									
Solo		121 (73.33)		30 (75.00)		25 (78.13)		66 (70.97)	.60
Nonsolo		44 (26.67)		10 (25.00)		7 (21.88)		27 (29.03)	
Busyness									
Too busy		21 (12.88)		8 (20.51)		3 (9.38)		10 (10.87)	.60
Comfortable load		98 (60.12)		20 (51.28)		20 (62.50)		58 (63.04)	
Not busy enough		44 (26.99)		11 (28.21)		9 (28.13)		24 (26.09)	
Average fee									
$5000 or less		101 (61.59)		28 (70.00)		22 (68.75)		51 (55.43)	.09
>$5000		63 (38.41)		12 (30.00)		10 (31.25)		41 (44.57)	
Quoted no fee or reduced fee?									
No		56 (34.78)		10 (25.64)		10 (31.25)		36 (40.00)	.12
Yes		105 (65.22)		29 (74.36)		22 (68.75)		54 (60.00)	

q1-q3, Twenty-fifth and 75th percentiles for numbers of cases or percentages of cases who met each criteria.

Table II

Perceived problems with Medicaid

C, current Medicaid provider; A, accepted Medicaid at 1 time; N, never accepted Medicaid	Don't know* (n)	Not problem n (%)	Minor problem n (%)	Major problem n (%)	*P* value
Fee reimbursement too low (n = 164)					
C	0	0 (0)	8 (20.00)	32 (80.00)	1.0
A	0	0 (0)	7 (21.21)	26 (78.79)	
N	14	3 (3.90)	9 (11.69)	65 (84.42)	
Difficulty collecting from Medicaid (n = 161)					
C	0	14 (35.00)	17 (42.50)	9 (22.50)	.0003
A	3	7 (24.14)	12 (41.38)	10 (34.48)	
N	57	2 (6.25)	11 (34.38)	19 (59.38)	
Loss of coverage during treatment (n = 59)					
C	4	14 (40.00)	14 (40.00)	7 (20.00)	<.0001
A	4	11 (39.29)	8 (28.57)	9 (32.14)	
N	51	3 (8.11)	5 (13.51)	29 (78.38)	
Need for prior authorization (n = 161)					
C	0	10 (25.00)	19 (47.50)	11 (27.50)	.001
A	0	5 (15.15)	11 (33.33)	17 (51.52)	
N	24	4 (6.25)	24 (37.50)	36 (56.25)	
Difficulty getting billing questions answered (n = 161)					
C	2	9 (23.68)	21 (55.26)	8 (21.05)	<.0001
A	5	6 (21.43)	12 (42.86)	10 (35.71)	
N	62	0 (0)	7 (26.92)	19 (73.08)	
Delays in receiving payment (n = 158)					
C	1	10 (27.03)	20 (54.05)	7 (18.92)	.0001
A	5	7 (25.00)	13 (46.43)	8 (28.57)	
N	62	1 (4.00)	6 (24.00)	18 (72.00)	
Unruly/uncooperative behavior (n = 160)					
C	0	11 (28.95)	17 (44.74)	10 (26.32)	<.0001
A	1	4 (12.5)	14 (43.75)	14 (43.75)	
N	34	2 (3.64)	17 (30.91)	36 (65.45)	

C, current Medicaid provider; A, accepted Medicaid at 1 time; N, never accepted Medicaid	Don't know* (n)	Not problem n (%)	Minor problem n (%)	Major problem n (%)	*P* value
Patients fail to show for appointments (n = 161)					
C	0	3 (7.69)	19 (48.72)	17 (43.59)	<.0001
A	1	0 (0)	6 (18.75)	26 (81.25)	
N	21	2 (2.94)	6 (8.82)	60 (88.24)	
Patients often late (n = 161)					
C	0	7 (17.95)	20 (51.28)	12 (30.77)	<.0001
A	1	1 (3.13)	9 (28.13)	22 (68.75)	
N	23	1 (1.52)	8 (12.12)	57 (86.36)	
Patients cancel at last minute (n = 161)					
C	0	8 (20.51)	22 (56.41)	9 (23.08)	<.0001
A	2	3 (9.68)	14 (45.16)	14 (45.16)	
N	29	1 (1.67)	11 (18.33)	48 (80.00)	

*Respondents who did not answer question or responded "don't know" were recoded to missing and not included in calculations.

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