

## Access to Dental Care for Young Children in North Carolina: History and Current Status of Workforce Issues

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Dental caries is considered the most prevalent childhood illness with a prevalence of over 44%, surpassing asthma (11%). Among preschool children, dental caries is considered a major health problem, and this issue has recently come under scrutiny by policy makers, physicians, investigators, and public health officials. This played a central role in the fact that the year 2000 Surgeon General's Workshop and Conference was dedicated to children's oral health issues.

The access to dental care for children in North Carolina mirrors the national picture or is worse. The circumstances in North Carolina are complicated by workforce issues as well as the fact that a substantial number of children are eligible for Medicaid or are uninsured. The purpose of this commentary is to review factors impacting access to dental care for children with a special emphasis on young, preschool children. We also review recent efforts to address the issues and point out several challenges on the horizon.

The Third National Health and Nutrition Examination Survey (1988-1991) found that nearly 80% of two-to-five-year-old children below the poverty level have experienced caries.<sup>1,2</sup> The United States Surgeon General's Conference in 2000 underscored the scope of the nationwide problem of access to dental care for children, especially low-income and minority families, and those with special healthcare needs. Reasons cited include the lack of dental professionals trained to see special populations and/or accepting Medicaid clients. Children lose an estimated 52 million hours a year from school due to dental pain and related care.<sup>3</sup>

In response to a perceived developing national workforce concern, the American Academy of Pediatric Dentistry (AAPD) formed a "Task Force on Work Force Issues" in 1998 that published a white paper summarizing its deliberations.<sup>4</sup> The Task Force noted that since the late 1980s, there has been a growing shortage of pediatric dentists in many geographic locations of the United States. These concerns were substantiated

with data; by 1998, the number of trained pediatric dentists in private practice, public institutions, and dental education had declined to 3,600 from approximately 3,900 in 1990. The Task Force concluded that the root cause of the shortage was because the number of pediatric dentistry training positions and graduates was not adequate to offset deaths and retirements.

The dearth of training positions in the specialty was the subject of an American Dental Education Association's (ADEA) request to Congress and is described in their "Primary Care in General and Pediatric Dentistry Programs FY 2000 Appropriations Request" to increase the funds to support additional Title VII grants. This request noted that "the United States is not training enough pediatric dental healthcare providers to meet the increasing need for pediatric oral health services."<sup>5</sup>

While accurate projections of workforce issues in a dynamic society are difficult, Waldman<sup>6</sup> projected a need for an additional 3,000 pediatric dentists to meet the dental care needs of the children in the United States by the year 2020. A National Symposium of Pediatric Dental Educators and AAPD leaders examined the specialty workforce issues in 1998 and set a goal to increase training positions by ten per year from 2000-2010. To accomplish this goal, the AAPD urged existing residency programs to look for creative ways to increase their training numbers. The AAPD also focused its advocacy efforts toward increasing Title VII funding for program expansion and new program start-ups and encouraging hospitals and dental schools to apply for these grants. These efforts have been successful: the number of first-year trainee positions grew from 181 in 1997 to 278 in 2005.<sup>7</sup> This increase of over 30% was achieved through the establishment of seven new residency programs and wide-spread program expansion across the United States.

While national workforce data have made a dramatic swing since 1998, some concerns remain. The AAPD estimates that approximately one-third of dental care to children is provided by pediatric dentists, noting that specialists deliver a disproportion-

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ately higher amount of oral healthcare for Medicaid and medically compromised children. Currently the number of children in the United States is increasing, and the ratio of dentists-to-population is decreasing, a circumstance that has potential to further overload the demand on pediatric specialists.

## Access Issues for Children in North Carolina

Improved access to dental care for children in North Carolina was the top priority of the North Carolina Academy of Pediatric Dentistry throughout the decade of the 1990s. Their efforts were focused on improving dentists' participation in Medicaid by attempting to increase procedure reimbursement rates. In 1999 the North Carolina Institute of Medicine (IOM) Task Force on Dental Care Access issued a report to the North Carolina General Assembly and to the Secretary of the North Carolina Department of Health and Human Services identifying inadequate access to dental care as being commonplace among children of families living in poverty.<sup>8</sup> This problem is especially notable among children birth through five years of age. Approximately 25% of all children entering kindergarten each year in North Carolina have untreated dental decay.<sup>7,8</sup> And, among parents who feel that their children have unmet healthcare needs, 57% report the unmet need is for dental care, a percentage almost two-times greater than that reported for medical care.<sup>8</sup>

Many would argue that North Carolina has a statewide dental workforce shortage, magnified by a workforce maldistribution. The fact is North Carolina ranks 47th nationally in the supply of dentists.<sup>9</sup> Four of its 100 counties have no dentists in practice, and 79 counties qualify as federally recognized dental professional shortage areas.<sup>10</sup>

The dental access problem for young children in North Carolina is compounded by two factors; (1) low dentist participation in the Medicaid program and (2) the paucity of practicing dentists. In 1998, there were only 47 actively practicing pediatric dentists in North Carolina.

## North Carolina IOM's Recommendation Aimed at the Specialist Workforce

Recommendation #13 in the North Carolina IOM Report addressed the issue of training more specialists. It recommended that the number of training positions in the pediatric dentistry residency program at the University of North Carolina at Chapel Hill (UNC-Chapel Hill) School of Dentistry be increased and also recommended that consideration be given to the establishment of additional pediatric dentistry residency programs at other sites.<sup>8</sup>

## What about the Addition of New Residency Training Programs?

Following the publication of its report, the North Carolina IOM hosted a meeting of dental directors from East Carolina University, Wake Forest University School of Medicine and the Carolinas Healthcare System [Carolinas Medical Center (CMC)]. Wake Forest University considered initiating a program, but did not go forward. Recently CMC has expressed an intention to develop a program.

## The Residency Training Program at UNC-Chapel Hill

The UNC-Chapel Hill School of Dentistry Department of Pediatric Dentistry has been the only residency program in pediatric dentistry in North Carolina since 1955. From 1955-1985, the program was 24 months in length. During this time frame, up to three students/year (a program total of six trainees) were accepted annually, depending on department resources. By 1986, the program had 66 alumni, two-thirds of whom were practicing in North Carolina.

The program length was extended to 36 months in 1986, but the class size was reduced to two residents per year (a program total of six trainees) because resources could not be

stretched to support more than a total of six residents. In 1992, the program was awarded a five-year grant from the federal Maternal and Child Health Bureau and recognized as one of three Centers for Excellence in Pediatric Dentistry in the United States. Prior to this time the program

never had stable funding, but was supported by a hodge-podge of creative financing mechanisms with reliance on the UNC-Chapel Hill School of Dentistry, the UNC Hospitals, and private resources, which could only sustain very low resident stipends.

The Maternal and Child Health Bureau support has served as a recruitment magnet for exceptional residents. Since 1992, many of these individuals have had the background and sophistication to support their training using a variety of governmental grants. This permitted program expansion of one additional resident per year in most years since 1992 and under this scenario, an extra 11 residents have been trained. Since the advent of the 36-month program, the retention of graduates in North Carolina has been 75%, and this does not include several who left the state for academic appointments.

In 2003, the UNC-Chapel Hill School of Dentistry Department of Pediatric Dentistry was awarded a competitive three-year non-renewable Title VII grant from the federal Health Resources and Services Administration (HRSA), Bureau of Health Professions to increase the number of pediatric dentistry

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residency positions by one per year for 2003-2006. As noted previously, these grants are intended to be seed money to initiate new residency programs or increase the number or positions in existing programs.

To summarize, at present there are nine residents (three per year) in training at the UNC-Chapel Hill School of Dentistry, but this number will dwindle to six (two per year) in 2008 unless additional funding is identified and secured to sustain the increase.

Another strategy put in place at the UNC-Chapel Hill School of Dentistry has been to strongly encourage and assist their dental students to complete pediatric residency training outside North Carolina and urge them to return to the state to practice. This strategy has also seen success in the past decade.

As a result of recent cumulative efforts to increase the number of pediatric specialists practicing in the state, the number of private practitioners increased from 47 in 1998 to 92 in 2004, a 96% increase. Notably, five of the pediatric dentists are engaged in community dental clinics within health departments or in Medicaid clinics.<sup>11</sup> While the number of pediatric dentists practicing in North Carolina and the number being trained may be sufficient at present, there is continued concern about the aging of the pediatric workforce and the future increase in the number of children in the state. These trends could have a negative impact on access to dental care.

## The North Carolina Dental Medicaid Challenge

Many factors influence the low use of dental services among North Carolina Medicaid recipients. Low dentist participation in the Medicaid program remains an issue. North Carolina has one of the lowest rates of actively participating dentists in the country. Recommendations #1, 2 and 3 of the North Carolina IOM Report addressed issues that would encourage increased dentist participation.<sup>8</sup>

In 2000, a class action law suit (*Antrican vs. Burton*) was

brought by a group of parents against the North Carolina Medicaid Program alleging inadequate access to dental care for their Medicaid-covered children. Settled in 2003, this litigation resulted in reimbursement rate increases for 27 selected dental procedures. This action led to additional dentists agreeing to become Medicaid participants (see Table 1).

Unfortunately, however, the settlement did not include an inflation adjustment clause. Most experts agree that reimbursement levels should reflect the 75th percentile of market-based fees (fees equal to or greater than those of 75% of dentists in the state) to encourage dentist participation.

Although the absolute number of dentists participating in Medicaid increased 4% from 2001 to 2004, the percentage of practicing private dentists who participate in Medicaid remained constant or declined slightly over the same period (49% to 47%).<sup>11</sup>

## What Does the Future Hold for Our State?

American Dental Association President-Elect, Robert M. Brandjord, has noted that access to care is the umbrella for the major issues facing dentistry. He stated also that the challenge to dentistry was to motivate the political will of state legislatures and Congress to properly fund access to dental care.<sup>12</sup> A lack of political will in our state would appear to be demonstrated in two recent illustrations:

- Acting on the recommendation of the North Carolina IOM Task Force, during the 1999 General Assembly session, Senators Howard Lee and Beverly Purdue introduced North Carolina Senate Bill 752 to appropriate funds to add three UNC-Chapel Hill School of Dentistry pediatric dentistry residents (one per year) at a sustained state funding level of \$100,000 per year. This bill was not passed, and securing funding to support an increased number of training positions in pediatric dentistry at UNC-Chapel Hill remains elusive. Considering its current heavy dependency on federal support through the Maternal and Child Health Bureau

**Table 1.**  
**Number and Percentage of Private Dentists Participating in the Medicaid Program**

	2001	2002	2003	2004
Total number of private dentists who practice in NC (not including public health dentists)*	3,280	3,381	3,414	3,621
Number of private dentists who "actively" treat Medicaid enrollees**	644	670	712	855
Population of North Carolina***	8,198,173	8,311,778	8,421,050	8,541,263
Number of Medicaid enrolled children under 21 years of age*	536,795	580,990	616,874	643,922
Dentist-to-Medicaid ratio	1:833	1:867	1:846	1:753

\* Source: Cecil G. Sheps Center for Health Services Research. North Carolina Health Professions Data System with data derived from the North Carolina Board of Dental Examiners. Chapel Hill, NC: Cecil G. Sheps Center for Health Services Research, University of North Carolina.

\*\* Source: Data provided by North Carolina Division of Medical Assistance. The 1999 IOM Task Force on Dental Care Access Report defined "active participation" in the Medicaid program as those dentists who received more than \$10,000 in Medicaid reimbursements in a fiscal year.

\*\*\* North Carolina State Demographics online at: <http://demog.state.nc.us/>

grant, the program is at high risk of being forced to reduce the number of training positions to even lower levels as federal funding sources evaporate, a prospect with a high likelihood in the future.


- Recently, the General Assembly (Session Law 2005-276) passed a budget that puts all children five years of age or younger covered by North Carolina Health Choice program into the Medicaid program effective January 1, 2006.<sup>13</sup> Medicaid reimbursements for dental procedures are significantly less than North Carolina Health Choice. Younger children have had the most difficulty in establishing a dental home in the past. This legislation has the potential to aggravate the access to dental care issue for affected children.

## Summary

The 2000 North Carolina IOM report contained 23 recommendations. To date 16 have been fully or partially implemented. This represents progress, but accomplishing full compliance remains a goal. Absent new training programs in our state, as current federal training grants phase-out, identifying financial support to continue training an adequate number of pediatric dentists for North Carolina will be a challenge. **NCMedJ**

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