



Counting the Number of Children With Disabilities

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Abstract

Reporting that there are millions of children (and adults) with disabilities reduces these individuals to just numbers—not actual people. The use of mega numbers and national averages obscures the major disparities that exist in the proportion of children with special needs in different areas of the country. In an effort to personalize these national numbers and bring about increased attention to the 2.6 million children (5-15 years of age) with disabilities, a review of the proportion of noninstitutionalized children with disabilities is reported by a series of geopolitical jurisdictions. The profession is challenged to increase care to children with disabilities—children who may be members of families being treated in many dental practices. (*Pediatr Dent.* 2004;26:49-52)

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“...people are less likely to save children as a group than they are to save a particular child.”¹

The 2000 US Census reported that there were 49.7 million people in the country age 5 and over with a disability (almost 1 in 5 residents), including 2.6 million children between 5 and 15 years of age. There are more than 1.6 million children with mental disabilities and more than a half a million children with 2 or more disabilities.² Unfortunately the use of all-inclusive “mega numbers” makes it difficult for most of us to comprehend their true meaning and somehow place them in a proper perspective. We tend to generalize and minimize such numbers, unable to grasp the impact of any particular events on individuals and their families. Hence, the fact that there are millions of children (as well as adults) with disabilities reduces these individuals to just numbers—not actual people.³

Similarly, the use of national averages overlooks the major disparities that exist in the proportion of children (and adults) with disabilities in different states and locations within states. For example, almost a quarter of the residents (age 5 and over) in Arkansas, Kentucky, Mississippi, and West Virginia had a disability. By contrast, approximately 15% of the residents of Alaska, Minnesota, and Utah had a disability.⁴ The need exists to somehow personalize these

numbers and percentages if we are to bring about increased attention to youngsters with special needs.

A review of the 2002 *Kids Count Census Data Online* produced by the Annie E. Casey Foundation provides a record of the varied proportions of noninstitutionalized children (5-15 years) with disabilities in various geopolitical units.⁵ (The Annie E. Casey Foundation is a private charitable organization dedicated to helping build better futures for disadvantaged children in the United States.)⁵ The combination of a “localized” listing array of children with disabilities, with emphasis on the major differences between locales, should be far more meaningful than the single statement, that there were more than 2.6 million children with disabilities in the United States in 2000.

State level

The number of children with disabilities ranged from almost 5,000 children in Wyoming and the District of Columbia to more than a quarter of a million children in California. The wide range in the number of children with disabilities is primarily a reflection of the vast differences in overall state populations. However, this should not overshadow the reality that there are marked differences in the proportion of children with disabilities in the varying states.

Table 1. Highest and Lowest Ranking of Proportion of Noninstitutionalized Children (5-15 Years) With Disabilities by the 243 Largest Cities: 2000⁵

National rank* (%)	City	Proportion of children (%)	No. of children
1	Evansville, Ind	11.2	1,893
2	Syracuse, NY	10.6	2,423
3	Springfield, Mass	10.4	2,878
4	Lansing, Mich	10.0	1,931
5	Rochester, NY	9.8	3,849
238	Huntington Beach, Calif	3.4	902
238	Naperville, Ill	3.4	895
241	Pembroke Pines, Fla	3.3	725
242	Daly City, Calif	2.7	390
243	Glendale, Calif	2.6	709

*Rank 1 is the highest in proportion.

The proportion of children with disabilities ranged from highs of 7% or more in Arkansas, Louisiana, Maine, and West Virginia, to less than 5% in California, Hawaii, Nevada, and South Dakota.⁵

Metropolitan areas

The wide variations in the number of children with disabilities (a function of overall population differences) should not obscure the almost three-fold difference between the highest and lowest proportions of children with disabilities in the various metropolitan areas. The proportion ranged from more than 9% in Elmira and Jamestown, NY, and more than 10% in Lewiston-Auburn, Me, to less than 4% in State College, Pa, and in Orange County and San Jose, Calif.⁵

Largest cities

In 4 cities (Evansville, Ind, Lansing, Mich, Springfield, Mass, and Syracuse NY), 10% or more of children had one or more disabilities (more than 3 times the rate for Daly City, Calif, and Glendale, Calif; 2.7% and 2.6%, respectively). Nine of the 12 cities with the lowest proportion of children with disabilities were in California (Table 1).

Counties

At the county level, the proportion of children with disabilities ranged from almost 15% for Clifton Forge County, Va, to no reports of children with disabilities in 5 counties (Borden and Loving, Tex, Lexington, Va, San Juan, Colo, and Slope, ND).

Congressional districts

“Lobbying is a competitive effort to reach legislators who are attempting to balance the demands of individuals, organized

Table 2. Highest and Lowest Ranking of Proportion of Noninstitutionalized Children (5-15 Years) With Disabilities by Congressional Districts: 2000⁵

National rank (%)	Congressional district	Proportion of children (%)	No. of children
1	16 th , NY	10.2	14,598
2	5 th , Ky	8.6	8,877
3	3 rd , WV	8.4	6,904
4	28 th , NY	8.3	9,074
5	4 th , WI	8.2	6,619
431	15 th , Calif	3.7	3,541
431	48 th , Calif	3.7	3,491
431	9 th , NY	3.7	3,156
431	29 th , Calif	3.7	3,409
435	4 th , NY	3.6	3,687
436	12 th , Calif	3.3	4,144

*Rank 1 is the highest in proportion.

groups, political parties, and the complex economic realities of our times. In such an environment, any effort that can personalize the needs of a large special group among the constituents of the home district...enhances the potential for success.”³

It is not insignificant that more than 2.6 million children in our nation have disabilities. Rather is it more meaningful to a member of the House of Representatives that there are a specific number of children with special needs in their home district. For example, the number of children with disabilities ranged from 14,600 children in the 16th New York Congressional District to more than 2,500 children in the eighth California Congressional District and more than 2,300 children in the 14th New York Congressional District.

It is equally important for a legislator to be made aware of the wide variations in the proportion of children with disabilities in their district and that of their colleagues. For example:

1. The proportion of children with disabilities ranged from 10% in the 16th New York Congressional District to 3% in the 12th California Congressional District (more than a three-fold difference).
2. Seven of the 9 Congressional Districts with the lowest proportion of children with disabilities were in California (Table 2).

The challenge

Intensive efforts have been (and will continue to be) carried out to establish the causal relationships between the marked variations in the distribution of children with disabilities and the combining and compounding effects of environmental, economic, social, cultural, familial, and related factors—as well as the limited availability of health services.

No matter the cause, we must not lose sight of the fact that many of these children reside in each of our communities. In addition, many of these children are members of families being treated in many dental practices. Yet the reality is that there are numerous barriers associated with the delivery of oral health services to youngsters with special needs. These include:

1. Limited educational opportunities in most dental schools to prepare practitioners for the care of these children.⁶ The need for increased educational experiences was emphasized in the report from the 2001 Surgeon General's Conference on Health Disparities and Mental Retardation.⁷ Results from a recent study of dental student experience and attitudes towards individuals with mental retardation indicated that "75% (of the students) reported they had little to no preparation in providing care."⁸
2. Increased time requirements to provide preventive and restorative services.
3. Inadequate third party reimbursement.⁹ For example, a General Accounting Office study of Medicaid dentistry (a primary program for the compensation of services for youngsters with disabilities) reported that, in 39 states and the District of Columbia, fewer than one half of the dentists saw at least 1 Medicaid patient in 1999.¹⁰ Compared to the American Dental Association's average reported charges for services, 37 of the 39 states paid much lower fees for Medicaid dental services.¹¹ The reality is that only 1 in 5 Medicaid eligible children receive any preventive dental services by age 20.¹²

The results from a recent study of pediatric dentists in Texas repeats these obstacles but further amplifies the difficulties faced by families in their attempt to secure needed dental services for their children with disabilities. In addition to "insufficient financial reimbursement," the most frequently reported reason for not treating children with special needs was "not many special needs patients in my geographic area."¹³

Nevertheless, findings from the 2000 census emphasize the fact that children with disabilities reside in virtually every community; and these youngsters are in need of oral health services. The challenge is how to develop needed services.

Some approaches

1. Improve the clinical and didactic preparation of practitioners for the care of patients with disabilities. To this end, the Special Smiles program of Special Olympics initiated efforts before the Commission on Dental Accreditation to institute requirements for schools of dentistry and dental hygiene to provide increased educational experiences in the care of patients with disabilities.
2. A change in attitudes is needed. Results from the recent study of dental student attitudes suggest that the lack of dental school experience in the care of individu-

als with special needs may well create limited confidence and willingness to provide needed care for this population in their future private practices. Responses imply that the more experience dental students have with special needs individuals, the more positive their attitudes are towards individuals with mental retardation.⁸

3. Lobbying for change works. For example:
 - a. In 1997, responding to pressure from lawyers and advocates for children with disabilities, the Clinton Administration was forced to re-examine and modify Social Security's efforts to deny disability benefits to 60,000 children.¹⁴
 - b. In some states with managed care arrangements for Medicaid dentistry (eg, Arizona and Tennessee), there have been particular difficulties in attracting dentists to provide services for individuals with disabilities due to inadequate reimbursement. By contrast, in Oregon, "the reimbursement (rates) for people with disabilities is 10 times the base rate, serving as an incentive to attract practitioners."¹⁵
 - c. Care of children with disabilities is a shared responsibility. One should not anticipate that pediatric dentists in private practice can provide the needed services for all children with disabilities. But a cooperative effort between general practitioners and pediatric dentists can meet the needs of these youngsters—many of whom are children in families that already are patients being treated in dental practices. For example, in Texas, if each private practitioner carried his or her fair share, there would be less than 2 dozen youngsters with disabilities per dentist in the state.¹⁶ In New York and Massachusetts, there would be about a dozen children with disabilities per dentist.¹⁷⁻¹⁸

There are no single or simple answers to such a complex challenge. But the fact is that children with disabilities are in need of dental services. And this is one of the primary reasons to become a pediatric dentist.

"...the true measure of a society lies in the way it treats its older, handicapped, and disadvantaged citizens. If this is true, the US society still has a way to go."⁵

References

1. Goode E. Some deaths resonate, others pass unnoticed. *New York Times*. February 4, 2003, sect F:1.
2. Census Bureau. 2000 Census. Available at <http://www.census.gov>. Accessed February 2003.
3. Waldman HB, Perlman SP. Lobbying for children with special needs. *EP Mag*. 2003;33:62-66.
4. Census Bureau. Disability and the 2002 Census (Press release). Available at <http://www.census.gov/hhes/www/disable/disabcps.html>. Accessed February 2003.
5. The Annie E. Casey Foundation. Kids Count 2000 Census data online. Available at www.aecf.org/kidscount/census. Accessed February 2003.

6. Fenton SJ. People with disabilities need more than lip service (editorial). *Spec Care Dentist*. 1999;19:198-199.
7. *Closing the Gap: a National Blueprint to Improve the Health of Persons with Mental Retardation: Report of the Surgeon General's Conference on Health Disparities and Mental Retardation*. Rockville, Md: Department of Health and Human Services; 2001.
8. Wolff AJ, Waldman HB, Milan M, Perlman SP. Dental student experience and attitudes towards individuals with mental retardation. *J Am Dent Assoc*. In press.
9. Waldman HB, Perlman SP. Why is providing dental care to people with mental retardation and other disabilities such a low priority? *Public Health Rep*. 2002;117:435-439.
10. General Accounting Office. *Oral health: Factors contributing to use of dental services by low-income populations*. Washington, DC: General Accounting Office; September 2000. GAO/HEH-00-149.
11. Survey Center. *1998 Survey of Dental Practice*. Chicago: American Dental Association; 1999.
12. Brown JG. *Children's dental service under Medicaid: access and utilization*. San Francisco: Department of Health and Human Services, Office of the Inspector General; 1996. Report No. OEI-09-93-00240.
13. Milano M, Seybold SV. Dental care for special needs patients: A survey of Texas pediatric dentists. *J Dent Child*. 2002;69:212-215.
14. Pear R. Fearing errors, U.S. will review cutoff in aid to disabled youths. *New York Times*. Dec 18, 1997; sect A:1,21.
15. Dougherty N, Romer M, Birenbaum A. Protecting dental services for people with development disabilities. *N Y State Dent J*. 1998;63:12-14.
16. Waldman HB, Perlman SP. Almost 200,000 children with disabilities in Texas. *Tex Dent J*. In press.
17. Waldman HB. 181,450 children with disabilities in New York State. *N Y State Dent J*. 2003;68:35-37.
18. Waldman HB, Perlman SP, Goldstein, SL. 58,228 children with disabilities in Massachusetts. *J Mass Dent Soc*. 2003;52:16-18.
19. Strom T. Access: Meeting the needs of special patients. *J Am Dent Assoc*. 1988;116:319-327.

ABSTRACT OF THE SCIENTIFIC LITERATURE



EFFECT OF INTERNAL BLEACHING AGENTS ON DENTINAL PERMEABILITY

The aim of this in vitro study was to assess the dentinal permeability of pulpless teeth after internal bleaching with 3 different agents. Twenty-four maxillary central incisors were randomly assigned to the following groups: (1) nonbleached control; (2) 37% carbamide peroxide; (3) sodium perborate/20% hydrogen peroxide paste; (4) 27% carbamide peroxide. Root canal procedure and intracoronal bleaching procedures were carried out in a standardized fashion. The teeth were soaked in 10% copper solution and 1% rubianic acid alcohol solution, and dentinal permeability was measured by the penetration of copper ions into dentinal tubules. Results showed a statistically significant difference among the studied bleaching agents, with the best performance in increasing dentinal permeability provided by the 37% carbamide peroxide, followed by the sodium perborate/20% hydrogen peroxide paste. The 27% carbamide peroxide group was not statistically different from the control group. Among the tested intracoronal bleaching agents, 37% carbamide peroxide presented an optimized overall performance in increasing dentinal permeability.

Comments: The author cautioned that increased penetration into the dentinal tubules may lead to increased external root resorption. HA

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Carrasco LD, Fröner IC, Corona SAM, Pécora JD. Effect of internal bleaching agents on dentinal permeability of non-vital teeth: Quantitative assessment. *Dent Traumatol*. 2003;19:85-89.

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