Should Fear of Malpractice Dissuade Dentists from Caring For Children?

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ABSTRACT

Purpose: Little information is available on malpractice related to dentistry for children. The purpose of this report was to examine characteristics of malpractice allegations related to dentistry for children from the National Practitioner Databank (NPDB) from February 1, 2004 to November 22, 2006.

Methods: The public use file of the NPDB was obtained and transformed into a searchable database and allegations involving children were sorted and characterized by payment size, reason, practitioner type, and location.

Results: During the roughly 34-month study period, 571,172 total cases were evaluated. 51,691 (9%) of these involved dentists; 367 reports were identified using age-based variable reporting. The majority of cases (275; 75%) involved 10- to 19-year-old children and 92 (25%) of the cases involved 0- to 9-year-old children. One case was an infant younger than one year old. No cases were found with the provider citation of dental resident. The geographic distribution of cases was consistent with relation to practitioner (dentist) density and mean age.

Conclusion: The allegation of malpractice related to dentistry for children is a very small portion of both dental and general health malpractice in the United States.

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In 2007, the Centers for Disease Control and Prevention reported an increase in dental caries among 2- to 5-year-old children in the United States. This defied the previous decade's trend of declining permanent dentition caries.[1] Until recently, the recommendation for the age of the first dental visit for children was 3 years. Today, medical and dental communities have united in recommending a first oral health visit by 1 year of age.[2] In spite of this recommendation, general dentists have shown a reluctance to see young children. Included in their refusals are: ignorance of the age 1 visit, practices geared to adults, not feeling adequately trained, and children being disruptive to their practices.[3,4]

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It is not clear whether concern about adequate training and disruption of practice mask fear of problems or complications leading to legal action. Pediatric dentistry literature has an elevated interest in legal issues, such as informed consent, due to a national increase in malpractice litigation in all health fields.[5] Recently, untoward events in pediatric oral sedation[6] and failure to treat have brought risks and their management to public and professional attention. Partially in response to these adverse outcomes, The American Academy of Pediatrics (AAP) and the American Academy of Pediatric Dentistry (**AAPD**) recently revised sedation guidelines.[7] Just prior to that, the AAPD revised its behavior guidelines, elimina-ting the legally controversial hand-over-mouth technique.[8] Recently, 2 deaths of children from complications of dental caries received widespread public and professional media attention.[9]

Little is known about the extent, pattern, and nature of malpractice in dental care of children. Prior to the creation of the National Practitioner Databank, a thorough picture of malpractice judgments and settlements involving dentistry

for children was difficult to construct. Much of the existing literature on the topic has mined adverse drug reports from the Food and Drug Administration, under the auspices of the Freedom of Information Act, to establish minimum safety standards for children undergoing sedation or general anesthesia.[10] A recent report by the ADA's Council on Members Insurance and Retirement Programs touches briefly on dental malpractice claims, including those related to pediatric dentistry, but the data represent limited responses from a limited number of willing malpractice carriers.[11]

This study's purpose was to characterize the nature of malpractice awards and settlements related to dentistry for 0- to 19-year-old children using variables from the National Practitioner Databank.

METHODS

DATA SOURCE

In 1986, the US Congress passed the Health Care Quality Improvement Act which authorized creation of the National Practitioner Databank (NPDB) by the US Department of Health and Human Services (DHHS).[12] Creation of the NPDB was predicated on preventing health care providers from moving from hospital to hospital or state to state to avoid ethical and financial repercussions of malpractice. The legislation that led to the NPDB was enacted because Congress "believed that the increasing occurrence of medical malpractice litigation and the need to improve the quality of medical care had become nationwide problems that warranted greater efforts than any individual state could undertake."[13] Hospitals, state licensing boards, professional societies, and other health care entities are required to disclose adverse actions to the NPDB.

As of November 1, 2006, a total of 571,172 reports had been filed, of which 9% (51,691) were related to adverse actions by dentists. Beginning February 1, 2004, the NPDB recorded the age of the patient involved in malpractice judgments and settlements[14] in its public-use data file, thus allowing for age-based analysis within recorded health care fields.

DATA MANIPULATION

Dental reports in the NPDB involving 0- to 19-year-old children use 51 variables in NPDB public-use file reporting. The purpose of this is to provide a picture of errors and adverse actions that have been reported as well as the corresponding scope of judgments, settlements, and payments. The variables we selected for use in this study were: age of patient involved, geographic distribution of allegations, cited type of allegation, and time from graduation of dentist to filing of complaint.

The first step in our methodology was to obtain values from the NPDB public use file, which was accomplished in November, 2006. Reports from February 1, 2004 through November 22, 2006 were utilized, as only these most recent ones were required to cite patient age, a variable by which reports could be grouped. The report obtained from the NPDB was recoded and converted to a data file using a custom screen (Microsoft Access, v. 5.1 Microsoft Corp, Bellevue, Wash) database (The Orion Project, Newark, Ohio) to perform statistical analysis on those data pertinent to the study aims. Payments listed in the NPDB public-use file are coded in ranges. Payments of $100 or less are coded as $50, payments from $101 to $500 are coded as $300, and so on. Payments between $100,001 and $1,000,000 are coded as the midpoint of $10,000 increments.[15] Patient age is coded as follows: -1=fetus, 0=younger than 1 year old, 1=1-9 years old, and 10=10-19 years old. Reports against dentists are assigned a unique provider code (30) to distinguish them from other health care professionals. Care provided by residents is coded as (35) to distinguish it from that provided by practitioners.

Using these variables, payment and settlement information was culled from the reconstructed database related to dentistry for children. The following variables were also examined: year of graduation of the dentist; primary allegation; specific claim; whether the patient was an inpatient or outpatient; and whether the provider was a resident. In addition, the reports were then cross-referenced with the AAPD district structure[16] to obtain a geographical distribution of cases regarding regional provider density.

RESULTS

A total of 51,691 dental cases were reported in the NPDB public-use file between 1991 and 2006. This figure represents 9% of the total reports within the NPDB for all medical and dental actions during that period. For the purposes of this study, only dental reports between February 1, 2004 and November 22, 2006—of which 367 were 0- to 19-year-old children—were considered. Using the aforementioned variables in groups, we culled payments and settlements from the reconstructed database, resulting in 367 dental cases in which the patient was an infant, child, or adolescent. Of these 367 dental reports involving pediatric cases, 25% (91) involved 1- to 9-year-old patients and 75% (275) involved 10- to 19-year-old patients. Most reports involving pediatric cases included outpatient care (315/86%), but a small portion came from inpatient allegations of malpractice (19/5%). The remaining 9% were classified as unknown.

Figure 1 shows the distribution of NPDB reports by year of practitioner graduation from dental school. The NPDB reports these in 10-year graduation cohorts, such as 1940-1949 and 1950-1959.

The allegations were also divided into subgroups based on the type of allegation or reason, represented in Figure 2. The NPDB offers 9 major reasons for malpractice, including: treatment-related; monitoring-related; medication-related; anesthesia-related; diagnosis-related; and surgery-related.

The vast majority (72%) of these were treatment-related allegations. There were only 9 (2%) instances of the first specific malpractice claim being related to informed consent.

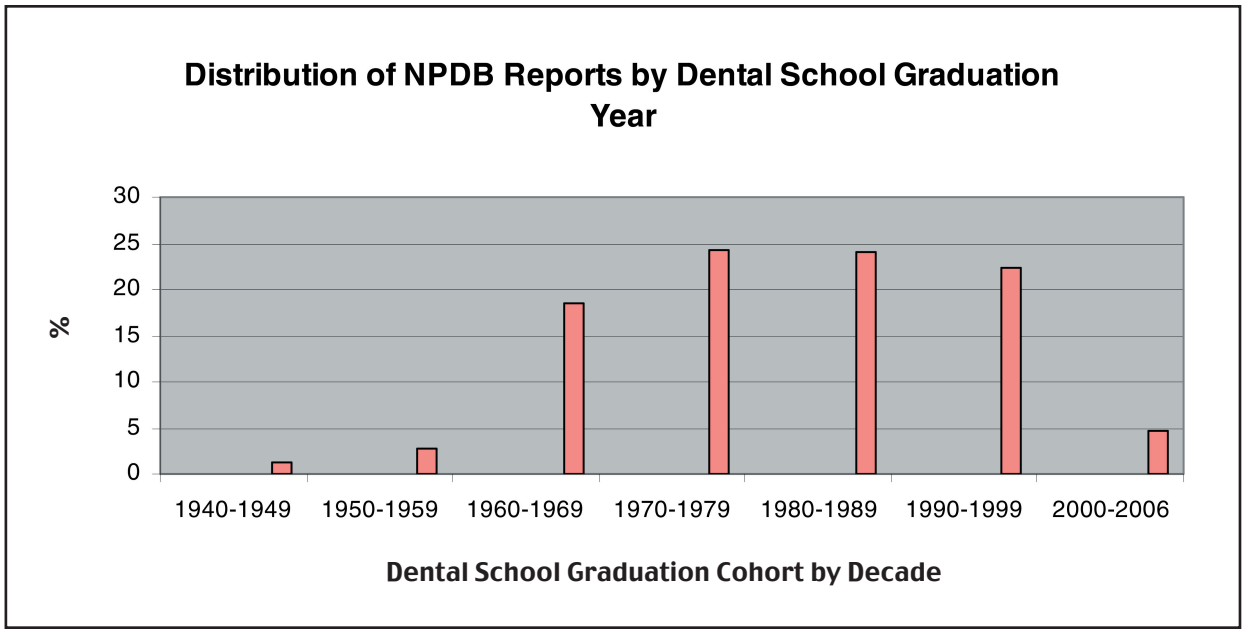

Figure 1. Distribution of National Practitioner Data Bank reports by dental school graduation year (derived from Valachovic R, Weaver R, et al 2001).

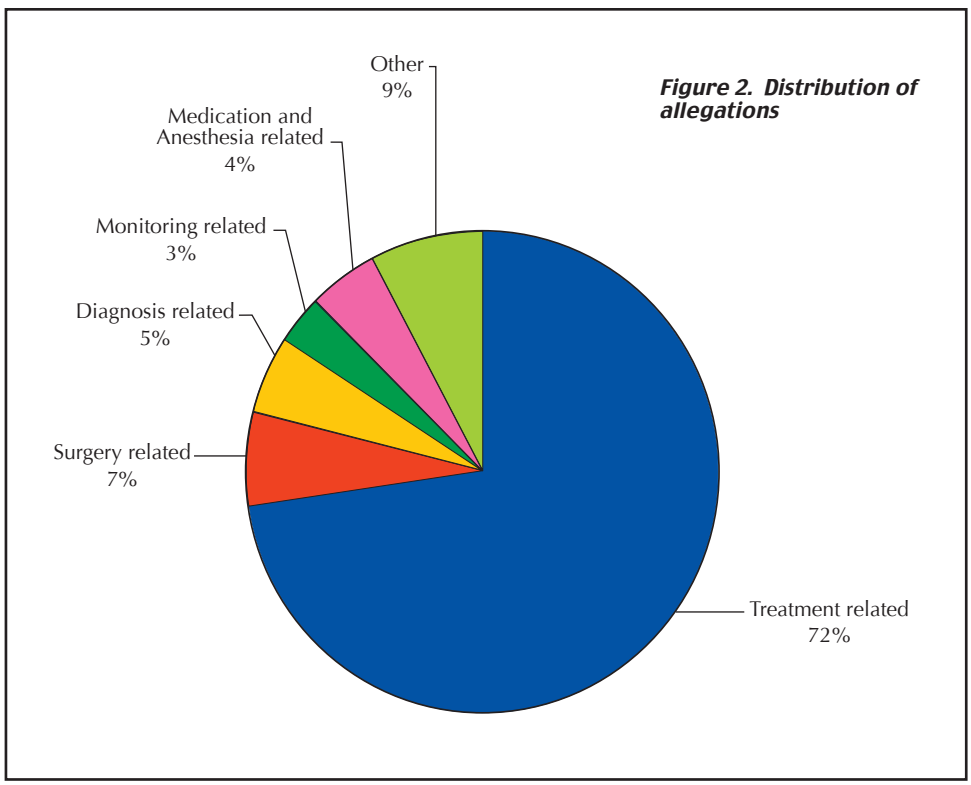

Figure 2. Distribution of allegations

Malpractice payment reports allow for 2 "reason" codes for each case. Two reason codes were cited in only 23 (6%) reported cases. Table 1 illustrates the breakdown of allegations for the 0- to 9-year-old and 10- to 19-year-old age groups to examine any variation of allegation by age cohort.

Table 2 presents data with respect to geographic distribution of practitioners according to AAPD districts.[16] A chi-square analysis revealed no statistically significant difference between the number of professionally active dentists in each AAPD district and the number of NPDB complaints. There were no reports listing dental residents noted. Only one report dealt with an infant.

DISCUSSION

The NPDB was seen by many in health care at its creation as the next step in curtailing the independence of health care providers. The NPDB has, however, provided information on the patterns of practitioner performance and shed light on medical errors in a way previously unavailable. Queries to the NPDB are now a common part of health practitioner credentialing and will likely become a fixed piece of accountability for health care providers as time goes on in the United States.[17]

Perhaps the most salient finding in this study was the low occurrence of dental malpractice related to children. This low finding is consistent with the findings of Kain et al, who noted that children were the focus of 14% of NPDB listings in their study of medical care.[14] The even lower percentage of pediatric dentistry-related occurrences may relate to the low-risk nature of dental care in general and the typical procedures rendered to most children.

Table 1. Distribution of Claims By Malpractice Allegation

Value and label		Ages 0-9	Ages 10-19
1	diagnosis related	2	14
10	anesthesia related	5	5
20	surgery related	5	29
30	medication related	5	3
40	IV and blood product related	-	-
50	obstetrics related	-	-
60	treatment related	59	193
70	monitoring related	2	8
80	equipment/product related	2	5
90	other/miscellaneous	12	17
100	behavioral health related	-	1
Totals		**92**	**275**

Table 2. National Practitioner Data Bank (NPDB) Reports by American Academy of Pediatric Dentistry (AAPD) Geographic Districts

AAPD district	Professionally active dentists	NPDB reports	Reported payments
1	24,996	78	$3,673,500
2	19,670	30	$2,017,250
3	29,605	53	$5,549,800
4	32,339	35	$1,552,800
5	22,105	52	$2,899,600
6	35,846	101	$6,247,250
Totals	164,561	349	$21,940,200

The 367 pediatric dental cases represented a total payment value of approximately $23,111,450, or $62,974 per case (range=$1,500-$995,000), which may be a conservative figure, due to the coding practices of the NPDB detailed in the methods section. For example, a payment coded as $750 may, in fact, represent an actual payment as high as $1,000. The overwhelming majority of pediatric dental cases were resolved in the form of settlements (355/97%), with only 6 being resolved via judgment and 6 with unreported resolutions. The ADA's Council on Members Insurance and Retirement Programs (CMIRP) survey of malpractice reported that the highest incurred loss in 2003 was only $30,128, with a weighted average of $14,458. The difference between these data and those of the NPDB is att ributed to inclusion of claims for which no payment is made in the ADA's estimate.

Most actions were found among dentists who graduated between 1970 and 1979. According to a 2001 American Dental Education Association (ADEA) report, the number of graduating dentists was at its highest between 1976 and 1983, peaking in 1983 (5,756 graduates),[18] which may account for this distribution. Nothing in the data analysis suggests an age-related trend, apart from aforementioned relation to numbers of dentists in practice.

The NPDB allows for identification of the type of provider and includes residents, although further subdivision into the type of dental resident is not possible. In the course of this evaluation, no reports or judgments against dental residents were noted. We also did report that one malpractice payment involved a very young child classified as an infant (younger than 1 year old).

It is also important to note that only a small percentage of cases relate to anesthesia, sedation, and monitoring, with the overwhelming majority of cases being treatment-related (Figure 2). Contrary to popular belief, few cases represent the most highly publicized areas of concern, which are sedation and general anesthesia. [10]

The geographic distribution of reports by AAPD district mirrors the trend in the overall number of professionally active dentists, according to a 2001 ADA report.[19] AAPD district VI (the Pacific coast, Mountain states, Alaska, and Hawaii) is not only the single largest district in terms of size (11 states), but it has over 35,000 professionally active dentists. According to the NPDB, this district was the source of 101 reports of pediatric dentistry malpractice, at an estimated total payment of $6,247,250. District VI also was the origin of the single highest payment regarding pediatric dentistry ($995,000). It is difficult to conclude much from this grouping of allegations by AAPD district. While the southern states contain more professionally active dentists (49,160), they are spread out over 4 AAPD districts. In addition, certain AAPD districts (specifically I, II, IV, and V) contain members from Mexico, Canada, the Armed Services Dental Corps, and other foreign countries. The NPDB does not report these by the same designation, and, therefore, some reports were not included in the tabulation.

This study did not directly answer the question of whether fear or concern of malpractice related to children dissuades dentists from seeing them. A paucity of legal actions, however, as evidenced from the public file of the NPDB, was demonstrated. Recent reports on the training of general dentists in pediatric dentistry suggest potential problems, but these are not manifested in the data presented in this report. This information may also prove useful to dentists who treat children by helping to characterize those procedures and areas of practice more likely to have an associated action.

CONCLUSION

Reports to the NPDB related to dentistry are a very small portion of overall reports on health care in general, and reports on dental care for children constitute less than 1% of dental cases in the time period studied.

REFERENCES

1. National Center for Health Statistics. *Health, United States, 2006.* Hyattsville, Md: Centers for Disease Control; 2006
2. Hale KJ. American Academy of Pediatrics Section on Dentistry. Oral health risk assessment timing and establishment of the dental home. Pediatrics 2003; 111:1113-6.
3. McQuistan MR, Kuthy RA, Damiano PC, Ward MM. General dentists' referral of children younger than age 3 to pediatric dentists. Pediatr Dent 2005;27:277-83.
4. Seale NS, Casamassimo PS. Access to dental care for children in the United States: A survey of general practitioners. J Am Dent Assoc 2003;134:1630-40.
5. St. Clair T. Informed consent in pediatric dentistry: A comprehensive review. Pediatr Dent 1995;17:90-6.
6. My Web Times. Available at: "www.mywebtimes.com". Accessed January 8, 2007.
7. American Academy of Pediatric Dentistry. Reference Manual 2006-07. Pediatr Dent 2006;28:115-32.
8. AAPD. Reference Manual 2006-07. Pediatr Dent 2006;28:97-106.
9. American Dental Association. Statement on death of Diamonte Driver. Available at: "www.ada.org". Accessed May 14, 2007.
10. Cote CJ, Notterman DA, et al. Adverse sedation events in pediatrics: A critical incident analysis of contributing factors. Pediatrics 2000;105:805-14.
11. Council on Members Insurance and Retirement Programs. *CMIRP Malpractice Survey.* Chicago, Ill: ADA; 2005.
12. Health Care Quality Improvement Act of 1986, as amended 42 USC 11101 01/26/98. Pub. L. 99-660, title IV, Sec. 402, Nov. 14, 1986, 100 Stat. 3784
13. National Practitioner Data Bank. Available at: "www.npdb-hipdb.hrsa.gov/npdb.html". Accessed December 29, 2006.
14. Kain Z, Caldwell-Andrews A. What pediatricians should know about child-related malpractice payments in the United States. Pediatrics 2006;118;464-8.
15. NPDB. Public use data file ; accessed 06/30/06.
16. AAPD. Available at: "www.aapd.org". Accessed December 20, 2006.
17. Shulman J, Sutherland J Reports to the national practitioner data bank involving dentists, 1990-2004. J Am Dent Assoc 2006;137:523-8.
18. Valachovic R, Weaver R, et al. Trends in dentistry and dental education. J Dent Educ 2001;1:539-61.
19. ADA Survey Center. *Distribution of Dentists in the United States by Region and State 1998.* 1999 U.S Bureau of the Census. Statistical Abstract of the United States. Chicago, Ill: ADA; 2001.
20. Seale NS, Casamassimo PS. Pediatric dentistry predoctoral education in the United States: Its impact on access to dental care. J Dent Educ 2003;67:23-30.
21. Wood J, Barbieri DM, Rutkauskas JS, Seewoester S. American Academy of Pediatric Dentistry survey of US pediatric dentistry faculty members. Pediatr Dent 2006;28:537-42.