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Intentional Injury Management and Prevention in Pediatric Practice: Results From 1998 and 2003 American Academy of Pediatrics Periodic Surveys

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Intentional Injury Management and Prevention in Pediatric Practice: Results From 1998 and 2003 American Academy of Pediatrics Periodic Surveys

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ABSTRACT. *Objective.* **Intentional injuries are significant causes of pediatric morbidity and mortality in the United States. A 1998 American Academy of Pediatrics (AAP) survey identified child abuse, domestic violence, and community violence as concerns for pediatricians, although the majority of pediatricians also reported feeling unprepared to manage these issues. A second AAP survey in 2003 analyzed trends in pediatrician experience and attitudes related to these issues.**

Methods. **Surveys were sent to national random samples of AAP members in 1998 (n = 1629) and 2003 (n = 1603); response rates were 62% and 53%, respectively. Surveys measured pediatrician experience in the past 12 months in managing injuries caused by child abuse, domestic violence, and community violence. Attitudes regarding available resources and adequacy of training about intentional injury management were also collected. Trends between surveys were analyzed using χ^2 analysis.**

Results. **The proportion of pediatricians who reported treatment of intentional injuries increased between surveys. The percentage of pediatricians who indicated that screening for domestic violence and community violence risk should be included in routine health visits increased from 66% to 72% and 71% to 77%, respectively. Confidence in ability to identify and manage injuries that were caused by domestic violence and community violence increased but remained low, whereas the proportion of pediatricians who expressed confidence in ability to identify child abuse decreased (65% vs 60%).**

Conclusions. **Despite overall improvement in acceptance of intentional injury prevention in routine care as well as confidence in intentional injury management, pediatrician confidence to identify and manage intentional injuries remains low.** ***Pediatrics*** **2005;116:996–1000;** ***pediatrics, health services research, intentional injury, violence prevention, child abuse, office screening, violence screening.***

ABBREVIATION. AAP, American Academy of Pediatrics.

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Intentional injuries, defined by the Centers for Disease Control and Prevention as injuries that are caused by community violence, domestic violence, and child abuse, have gained recognition during the past decade as major causes of pediatric morbidity and mortality in the United States.[1–3] At the same time, pediatricians have been increasingly called on to expand their role in the prevention of intentional injuries.[4–9] In 1998, the American Academy of Pediatrics (AAP) conducted a survey of its members that examined the attitudes and experiences of pediatricians with regard to management of intentional injuries.[10] This survey demonstrated that most pediatricians encountered the effects of intentional injuries in their practices and that they identified community violence, domestic violence, and child abuse as major concerns for pediatricians. However, the survey also demonstrated that a large proportion of pediatricians felt unprepared to manage intentional injuries in their clinical practices or to provide advice on prevention strategies.

Since that survey was conducted in 1998, a number of policy initiatives that are intended to support an expanded role for pediatricians in the prevention of all types of intentional injury have been released.[11,12] In 1999, to address growing public concern, the AAP issued a policy statement providing guidelines for the management of youth violence. These guidelines recommended that community violence screening and counseling be included as a routine component of pediatric health visits.[7] This statement also described youth violence as one of the leading causes of preventable disability and death for American youths, particularly minority youths, and provided general guidance for office counseling related to youth violence. Moreover, the most recent AAP guidelines for health supervision now include violence prevention topics.[13]

The widespread prevalence and destructive influences of witnessing domestic violence on child development have been known for decades.[14,15] However, pediatricians frequently underestimate the prevalence of domestic violence in their own practice.[16] A number of studies have shown that screening for domestic violence in the pediatric office is practical, that mothers favor this screening, and that many mothers will reveal domestic violence when screened in the office setting.[17,18] Recognizing the magnitude of the problem, the AAP Committee on Child Abuse and Neglect recommended that family pediatricians inquire about family violence and in-

tervene on behalf of battered spouses.[19] A coalition of professional organizations, led by the California-based Family Violence Prevention Fund, has produced and disseminated guidelines for domestic violence screening in pediatric clinical practice.[14] In addition, the American Medical Association has made the prevention of family violence a top priority[15] and developed a training and implementation guide for youth violence prevention.[20]

Child abuse has long been recognized as an important area of pediatrics. Although laws in all 50 states require that pediatricians report all cases of suspected abuse and neglect, recent data have suggested that not all suspected abuse is reported.[21,22] Physicians who have received education about child abuse are more likely to report all suspected maltreatment.[21] Accreditation guidelines now require the incorporation of child abuse education in pediatric residency training.[23]

How have these initiatives and the national discussions that they represent been reflected in the attitudes and experiences of practicing pediatricians? In 2003, the AAP conducted a new Periodic Survey of Fellows (#55) to record current experience and comfort among pediatricians related to the management of intentional injury.[24] To allow comparison and identification of trends, the survey used similar questions to those included in periodic survey #38 conducted in 1998.[10] This report provides an examination of the evolving perspective of front-line health care providers by providing a comparison of results from these surveys. This analysis provides important insights into the ongoing development of intervention programs to increase the effectiveness of pediatricians in the prevention and management of intentional injuries.

METHODS

Survey Methods

The AAP conducted 2 surveys of its members, in 1998 and 2003, to measure trends in experience and attitudes by pediatricians with respect to intentional injury management in clinical practice. Survey format and selected questions were shared between instruments to allow comparison.

Periodic Survey #55 was a self-administered questionnaire that was sent to 1603 randomly sampled, nonretired US members of the AAP from October 2002 through May 2003. Periodic surveys are conducted 4 times a year on topics of importance to pediatrics. A total of 851 completed questionnaires were received, for a response rate of 53%. Analyses for the 2003 survey (#55) were based on 774 pediatricians who provide direct patient care (91% of all respondents).

Periodic Survey #38 was developed from the work of the AAP Task Force on Violence. This was also a self-administered questionnaire that was sent to 1629 randomly sampled, nonretired US members of the AAP from October 1997 through March 1998. A total of 1010 surveys were received, yielding a response rate of 62%. Data analyses of the 1998 survey (#38) were based on the 939 responding pediatricians who were currently providing direct patient care (93% of all respondents).

In both surveys, demographic information that included a description of the practice environment and previous training was recorded for each respondent. Survey respondents then were asked to quantify the number of injuries and psychological trauma caused by child abuse, domestic violence, community violence, and witnessing violence categorized by age group (0–1, 1–4, 5–9, 10–14, and 15+ years) that they had treated in the previous 12 months.

The following definitions were provided in both surveys:

- Child abuse was defined as an injury or psychological trauma that occurred as a result of physical abuse, sexual abuse, or neglect.
- Domestic violence was defined as violence between adult household members: parents, relative, intimate partners, or close family friends.
- Community violence was described in the survey as violence that occurred outside the family, including interpersonal aggression among peers and random acts of violence.

The surveys also explored respondent's attitudes toward (1) the effectiveness and importance of intentional injury prevention in routine clinical care, (2) the quality of community resources that are available to support the clinician's management of intentional injuries, (3) an assessment of their own confidence in the management of intentional injuries, and (4) the adequacy of their professional training in the subject area. Attitudes toward the practice of intentional injury prevention were measured using 5-point Likert scales (strongly agree to strongly disagree).

Data Analysis

Item response rates varied throughout the surveys. The percentage response on each survey question was based on the total number of pediatricians who responded to that particular question. Trend analyses of questions regarding reported number of injuries seen and attitudes toward violence prevention counseling compare 2003 (Periodic Survey #55) and 1998 (Periodic Survey #38) data. Analyses in both survey years included only respondents who provided direct patient care at the time of the survey: 774 in 2003 (91% of all respondents) and 939 pediatricians in 1998 (93% of all respondents). χ^2 tests were performed to compare responses between survey years.

RESULTS

Demographic Analysis

Demographic data for the pediatricians who were surveyed in 1998 and 2003 are presented in Table 1. Overall, the 2 survey groups were similar. However, there were small but statistically significant differences in the proportions of female respondents and pediatricians who practice in a suburban setting.

Reports of Intentional Injuries

The 2003 survey revealed a significant overall increase in the proportion of pediatricians who reported treatment of intentional injuries in the 12 months before the survey as compared with 1998 data. Furthermore, there were significant increases in reported treatment of each category of intentional injury (Table 2).

In general, the proportion of pediatricians who reported treating intentional injuries increased in urban non–inner-city, suburban, and rural practice settings. Particularly large increases in all categories of intentional injuries were reported by pediatricians in rural areas. There was no significant change in the proportion of pediatricians who reported treatment of child abuse or domestic violence in urban inner-city practice areas between the surveys (Table 3).

Attitudes Toward Prevention of Intentional Injuries

In both surveys, the majority of pediatricians surveyed agreed that screening for all categories of intentional injuries should be included in routine health care and can help prevent violent injuries (Table 4). Child abuse screening remained more widely accepted than domestic violence and community violence screening in 2003. However, agreement that screening should be included in routine care

TABLE 1. Comparison of Demographics for Pediatricians Who Responded to 1998 and 2003 AAP Periodic Surveys #38 and #55

	1998		2003	
	n	%	*n*	%
Spend >50% time in general pediatrics	678	74	591	77
Primary employment setting				
Solo/2-physician practice	134	16	105	15
Group/staff HMO	386	45	351	52*
Hospital/clinic/medical school	334	39	227	33*
Practice setting				
Urban, inner city	261	29	176	24*
Urban, non–inner city	228	25	210	28
Suburban	268	29	274	37†
Rural	159	17	86	11‡
Gender				
Male	469	51	318	42‡
Female	456	49	449	58‡
Mean age, y	41		42*	
Mean y in practice (postresidency)	n/a		13	

Demographic data represent only pediatricians who provide direct patient care. HMO, health maintenance organization.
* $P < .05$, χ^2 analysis comparing 1998 and 2003 analyses.
† $P < .01$, χ^2 analysis comparing 1998 and 2003 analyses.
‡ $P < .001$, χ^2 analysis comparing 1998 and 2003 analyses.

TABLE 2. Proportion of Surveyed Pediatricians Who Reported Treatment of Intentional Injuries in the 12 Months Before 1998 and 2003 AAP Periodic Surveys #38 and #55

	1998, %	2003, %
Child abuse	54	66*
Domestic violence	38	47*
Community violence	41	65*

* $P < .001$, χ^2 analysis comparing proportions from 1998 and 2003 analyses.

increased for both domestic and community violence from 1998 to 2003. Agreement regarding the efficacy of prevention screening increased for both domestic and community violence. Agreement regarding the efficacy of child abuse screening did not change between surveys but remained higher than other types of intentional injury prevention.

Similarly, confidence in the ability to identify and manage intentional injury increased for domestic and community violence from 1998 to 2003 but remained low. The proportion of pediatricians who reported confidence in ability to identify and manage child abuse was higher than other forms of intentional injury in both surveys. However, reported confidence in ability to identify child abuse actually decreased from 1998 to 2003, whereas confidence in ability to manage child abuse did not change significantly.

The proportion of respondents who felt adequately trained in either domestic or community violence prevention and management increased between surveys. However, despite these increases, more than two thirds of pediatricians reported feeling inadequately trained in domestic or community violence prevention or management in 2003. Approximately half of respondents felt adequately trained in child abuse management in both surveys.

When asked about the logistics of integrating community violence prevention activities into their practice, only 28% of pediatricians in 2003 believed that they had adequate time to address any of these issues in a routine health maintenance visit. Only 35% believed that they spent adequate time addressing such issues in their practice. Finally, with regard to the AAP's upcoming Violence Intervention and Prevention Program, which will provide pediatricians with violence prevention guidelines and materials, the proportion of pediatricians who reported being "somewhat likely" or "very likely" to participate increased from 80% in 1998 to 85% in 2003 ($P = .017$).

DISCUSSION

The results of 2 surveys of practicing pediatricians that were conducted 5 years apart by the AAP illustrate several important trends in pediatrician experience and attitudes toward intentional injury prevention and management in clinical practice. The significant activity in the policy arena during the intervening 5-year period was intended to increase identification of cases, convince pediatricians that violence prevention is within the scope of practice, and lead to improved training and therefore improved provider confidence. The results reported here demonstrate modest signs of success in the first 2 of these objectives and a continued need for improvements in training and practice.

The proportion of pediatricians who reported treating all categories of violent injury increased during the 5 years from 1998 to 2003. This increase occurred across all demographic areas but was especially dramatic in rural areas, where the proportion of pediatricians who reported treatment of violent injury increased by 50% or more. Because this was measured by physician recall, this increase either may represent increased awareness of cases or may have resulted from a true increase in the underlying intentional injury-related visits.

The proportion of physicians who regard intentional injury prevention as an appropriate part of routine health care, already high in 1998, has increased in some areas. Child abuse screening in clin-

TABLE 3. Proportion of Surveyed Pediatricians Who Reported Treatment of Intentional Injuries in the 12 Months Before 1998 and 2003 AAP Periodic Surveys #38 and #55, Stratified by Practice Area

	Child Abuse, %		Domestic Violence, %		Community Violence, %	
	1998	2003	1998	2003	1998	2003
Urban inner city	67	72	48	44	57	70
Urban non–inner city	51	65*	28	46*	35	62†
Suburban	41	55*	31	44†	34	60†
Rural	60	90†	44	71†	36	77†

* $P < .01$, χ^2 analysis comparing proportions from 1998 and 2003 analyses.
† $P < .001$, χ^2 analysis comparing proportions from 1998 and 2003 analyses.

TABLE 4. Attitudes Among Surveyed Pediatricians Surrounding Screening and Management of Intentional Injuries (as reported in 1998 and 2003 AAP Periodic Surveys #38 and #55)

	Child Abuse, %		Domestic Violence, %		Community Violence, %	
	1998	2003	1998	2003	1998	2003
Agree that pediatricians should screen for violence-related risk during health maintenance visits	93	90*	66	72†	71	77*
Agree that pediatricians can help reduce the incidence of violence	71	69	52	66‡	50	56†
Confident in ability to identify children who are at risk for violent injury	65	60†	37	43†	33	41‡
Confident in ability to manage children with violent injuries	63	60	44	52*	N/A	N/A
Confident in ability to advise parents on violence prevention strategies	N/A	N/A	N/A	N/A	33	40*
Possess adequate professional training to manage violent injury	50	50	21	30‡	17	24‡

* $P < .01$, χ^2 analysis comparing proportions from 1998 and 2003 analyses.
† $P < .05$, χ^2 analysis comparing proportions from 1998 and 2003 analyses.
‡ $P < .001$, χ^2 analysis comparing proportions from 1998 and 2003 analyses.

ical practice was the most widely accepted form of intentional violence prevention in both surveys. Acceptance of domestic and community violence as appropriate components of health maintenance visits increased significantly during the 5-year interval between surveys.

Regarding their clinical practice, however, the results were mixed. The gap between attitudes and clinical experience on the one hand and self-reported confidence in the identification and management of intentional injury on the other hand narrowed somewhat during this period. Confidence in identification and management of child abuse remained the highest, although there was a slight decrease in confidence in this area. The finding that the percentage of pediatricians who perceived that they possessed adequate professional training to manage child abuse remained static at 50% during this period is possibly related to this drop in pediatrician confidence. The significant increase in confidence regarding domestic and community violence prevention and management is reassuring but inadequate: fewer than half of surveyed pediatricians expressed confidence in these areas of practice, and fewer than one third reported adequate professional training in these areas.

Limitations

These surveys were conducted among pediatricians and do not account for other health care providers who also provide medical care for children. Although survey response was typical of physician surveys, it is possible that attitudes of nonrespondents might differ from pediatricians who responded.[25] There were small but statistically significant differences in the demographics of the 2 survey groups. It is not clear what effect these differences may have had on our results.

Implications

Policy statements and guidelines, although perhaps influencing awareness and attitudes, have not yet translated into improvements in physician confidence in their own ability to identify, manage, and prevent intentional injuries to children. These results demonstrate a continued interest in violence prevention among pediatricians and a continued call for increased training and support. In response, the AAP will be releasing a new research-based violence prevention program in 2005.

Continued research will be required to improve the education and training of pediatricians in effective and practical strategies to ensure the incorporation of intentional injury prevention into the routine health care of children. One such project, Safety Check, is currently being conducted by the Pediatric Research in Office Settings network.[12] In summary, the results reported here, together with findings from other ongoing programmatic and research activities, suggest that pediatricians are poised to move violence prevention from good idea to standard practice.

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FETAL PAIN: A SYSTEMATIC MULTIDISCIPLINARY REVIEW OF THE EVIDENCE

"Proposed federal legislation would require physicians to inform women seeking abortions at 20 or more weeks after fertilization that the fetus feels pain and to offer anesthesia administered directly to the fetus. This article examines whether a fetus feels pain and if so, whether safe and effective techniques exist for providing direct fetal anesthesia or analgesia in the context of therapeutic procedures or abortion. . . . Evidence regarding the capacity for fetal pain is limited but indicates that fetal perception of pain is unlikely before the third trimester. Little or no evidence addresses the effectiveness of direct fetal anesthetic or analgesic techniques. Similarly, limited or no data exist on the safety of such techniques for pregnant women in the context of abortion. Anesthetic techniques currently used during fetal surgery are not directly applicable to abortion procedures."

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