

A Statewide Survey of Domestic Violence Screening Behaviors Among Pediatricians and Family Physicians

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Objective: To assess rates of previous domestic violence (DV) training, current screening practices, and barriers to screening among Connecticut pediatric primary care physicians.

Design: Self-administered mail survey.

Setting: State of Connecticut.

Participants: Pediatricians and pediatric care-providing family practice physicians (N=903).

Results: The response rate was 49% (n=438). The demographic characteristics of the response sample were as follows: 70% male, 76% older than 40 years, 84% white, 87% in private practice, and 64% in suburban practice. Only 12% of the physicians reported routinely screening for DV at all well-child care visits, 61% reported screening only selective patients, and 30% said they did not screen for DV at all. Sixteen percent of the physicians re-

ported having an office protocol for dealing with victims of DV. Respondents practicing in an urban setting were significantly more likely to screen routinely for DV than those practicing in a suburban setting (odds ratio, 1.77; 95% confidence interval, 1.12-2.79). Prior DV training was the strongest predictor of routine screening (odds ratio, 5.17; 95% confidence interval, 3.13-8.56). In fact, respondents with previous training made up 64% of those who routinely screened for DV.

Conclusions: Only a minority of Connecticut pediatric care physicians routinely screen mothers for DV. Primary care physicians with education and training about DV are screening at higher rates than physicians with no education and training. Pediatric physicians need training, protocols, and best-practice models on how to identify and intervene with families experiencing DV.

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APPROXIMATELY 4 million women are victims of physical domestic violence (DV) each year in the United States, and many more are subject to emotional abuse.¹ In many of these homes, children are also victims of DV, either as witnesses or as victims of abuse themselves.²⁻⁶ Researchers estimate that 40% to 60% of child victims of physical abuse have also witnessed the abuse of their mother by her male partner on one or more occasions.^{7,8} Children from violent homes are often overly aggressive, noncompliant, and disruptive. Some also display clinically significant internalizing problems, including frequent crying, sadness, social withdrawal, and somatic complaints.² Even among children who are not directly abused, serious emotional damage and physical health consequences may result from witnessing DV directed against their mothers.⁹

The pediatric primary care setting offers a unique opportunity to screen mothers for DV. Female victims of DV are often isolated from their own health care providers, reducing the likelihood of screening in this setting.¹⁰ However, battered women often cite their children's welfare as their greatest concern, suggesting that they may be more likely to obtain medical care for their children than for themselves and can be screened more often in this setting.¹¹ In addition, several studies indicate a high rate of DV among mothers seen in the pediatric setting, particularly during the postpartum period.¹²⁻¹⁴

Health care providers outside the pediatric setting are increasingly recognizing the importance of DV as a health issue, and several national organizations actively encourage providers to identify and refer victims of DV through routine screening.^{10,15-18} Pediatricians are only beginning to appreciate their unique oppor-

PARTICIPANTS AND METHODS

The study protocol was reviewed and approved by the institutional review board of the Connecticut Children's Medical Center, Hartford. We used an instrument developed by Parsons et al²¹ to measure DV screening of patients by obstetrician-gynecologists and adapted it to measure DV screening of patients' mothers by pediatric primary care physicians (ie, pediatricians and family physicians). Domestic violence was defined for physicians as "past or current physical, sexual, emotional or verbal harm to a woman caused by a spouse, partner or family member." Domestic violence screening was defined as "assessing an individual to determine if she has been a victim of domestic violence."

In the first section of the survey, we requested demographic information, including sex, age, ethnicity, year of residency or medical training completion, location of practice (urban, suburban, or rural), type of practice (private, public, hospital-based, university-based, or health maintenance organization), participation in teaching residents, and participation in practicing general pediatricians. In section 2 of the survey, we questioned respondents on issues associated with DV screening, including past training, availability of public educational materials, screening activities, actions taken for victims of DV, respondents' personal histories of DV, and barriers to screening. The survey is described in more detail in Parsons et al.²¹

Address lists for active members of the Connecticut chapters of the American Academy of Pediatrics and the American Academy of Family Physicians were obtained from the Connecticut Children's Medical Center Foundation. Self-administered surveys were mailed to all pediatricians (n=525) and family practice physicians (n=378) engaged in the practice of general ambulatory pediatrics. Coded identification numbers accessible only to the principal investigator (G.L.) and research coordinator (E.G.) were used to maintain participant confidentiality. The surveys were mailed with a return addressed, postage-paid envelope and a cover letter explaining the purpose of the study, assuring confidentiality, and indicating that the survey would take less than 5 minutes to complete. Of 903 surveys mailed in the first wave, 220 physicians (24%) responded. Two additional mailings yielded an additional 169 and 49 responses, respectively, for a total of 438 respondents and an overall response rate of 49%.

Data from the survey were entered into Microsoft Access (Microsoft Corp, Seattle, Wash) and then imported into SPSS Version 9.0 (SPSS, Chicago, Ill) for analysis. Characteristics of the health care providers that may affect DV screening behaviors (sex, age, and past training) were treated as categorical variables and were analyzed using χ^2 contingency tables. Multivariate analyses and interaction effects were investigated using logistic regression. For these analyses, sex, age, previous DV training, and practice location were dichotomous variables: male/female, age 40 years or younger/age older than 40 years, any training/no training, and urban/suburban (rural was eliminated because there were too few respondents in this category).

Table 1. Demographic and Practice Characteristics of 438 Responding Pediatric Primary Care Physicians*

Variable	No. (%) of Respondents
Sex (n = 438)	
Male	308 (70.3)
Female	130 (29.7)
Age, y (n = 438)	
≤40	105 (24.0)
>40	333 (76.0)
Ethnicity (n = 428)	
White	361 (84.3)
Other	67 (15.7)
Location of practice (n = 428)	
Urban	117 (27.3)
Suburban	272 (63.6)
Rural	39 (9.1)
Type of practice (n = 391)	
Private	348 (89.0)
Other†	43 (11.0)
Teaching residents (n = 428)	201 (47.0)

*Pediatric primary care physicians include pediatricians and family physicians practicing in Connecticut. Each variable may not sum to 438 because of missing values in the data set.

†Other includes primary care physicians who have public, hospital-based, university-based, or health maintenance organization practices.

tunity to play a role in DV screening, and few guidelines exist to support this role.^{2-4,18-20} Despite this fact, the American Academy of Pediatrics strongly encourages pediatricians to learn to recognize the signs of DV in the pediatric setting and to include questions about DV as part of routine anticipatory guidance.¹⁹

In light of these factors, we sought to assess DV education and training, DV screening, and barriers to DV screening among a representative statewide sample of pediatricians and family physicians. To our knowledge, this is the first published statewide survey of DV screening by pediatric primary care physicians. The results have implications for developing guidelines and policies to improve and support DV screening in this setting.

RESULTS

Demographic and practice characteristics and responses to potential DV screening barriers were compared among respondents in mailing waves 1, 2, and 3 to assess the possibility of response bias owing to repeated exposure to the study measures. Since there were no significant differences ($P>.05$) between the mailing waves, we pooled all respondents for subsequent analysis.

Table 1 lists the demographic and practice characteristics of the respondent sample. Most were men (70.3%), aged older than 40 years (76.0%), and white (84.3%). Most respondents were practicing medicine in either a suburban practice (63.6%) or a private practice (89.0%). Almost half of the respondents (47.0%) said they taught residents.

Sixteen percent of the physicians indicated that they had an office protocol for dealing with victims of DV. Thirty percent of all respondents reported they do not screen for DV, 61% said they screen only selected patients, and 12% reported routine screening for DV during well-child or all visits. Multiple responses to this se-

ries of questions were permitted, so screening behaviors reported by health care providers were not mutually exclusive. **Table 2** summarizes the relationship between health care provider characteristics and DV screening behavior. Respondents practicing in an urban setting were less likely to report no screening than those in a suburban or rural setting ($P < .05$). Those in a health maintenance organization, hospital-based, university-based, or public practice were more likely to screen routinely than those in private practice ($P < .05$). Respondents with prior DV training were more likely to report both routine

screening ($P < .05$) and selective screening ($P < .001$) than respondents with no prior DV training. Furthermore, respondents with previous training made up two thirds of those who reported routine screening for DV. Most respondents (64%) said that physicians ask women about DV in their practices. However, 12% said that nurses assume this responsibility, 7% designated this responsibility to nurse practitioners, and 5% said physician assistants ask women about DV in their practices.

Logistic regression analyses using training, age, sex, and practice location as the predictor variables and screening behavior as the dependent variable confirmed significant relationships among DV training level and practice location and screening behavior (**Table 3**). Respondents with previous DV training were 5 times (odds ratio, [OR] 5.17; 95% confidence interval [CI], 3.13-8.56) more likely to screen for DV than those without training. Respondents practicing in an urban setting were almost 2 times (OR, 1.77; 95% CI, 1.12-2.79) more likely to screen than those practicing in a suburban setting. There were no statistically significant relationships between age or sex and screening behavior.

When asked what actions they or their staff take when a mother screens positive for DV, physicians most frequently cited the following actions: record DV in the patient's medical record (85%), inquire about abuse of the child (82%), obtain a more detailed history (78%), advise counseling (74%), provide emergency numbers (73%), and perform a homicide danger assessment (48%). Many respondents did not report providing educational materials or referral information, or scheduling another visit to discuss the issue of DV.

The most common barrier to screening cited by physicians was a lack of training on how to deal with DV (53.8%; OR, 1.93). Other significant barriers (**Table 4**) included a lack of time for fully evaluating mothers who screen positive for DV (39.6%; OR, 1.29), frustration with an inability to help DV victims (24.4%; OR, 1.32), lack of time for DV screening (22.8%; OR, 1.65), fear of offending their patients' mothers (17.4%; OR, 1.30), and belief that DV is not a problem in this population (13.8%; OR, 1.54; $P < .05$ for all). Additional significant barriers were cited as barriers by fewer than 10% of all physicians surveyed. Of the 51 physicians (12%) who reported a personal or family history of DV, most (67%) felt their experiences led them to attempt to identify victims of DV, rather than deterring them from screening for DV.

Table 2. Physician Screening Prevalence by Demographic, Practice, and Domestic Violence (DV) Training Characteristics for 438 Respondents*

Variable	Type of Screening for DV, No. (%) of Respondents		
	None	Selective	Routine
Location of practice			
Urban (n = 117)	25 (21.4)†	79 (67.5)	20 (17.1)
Suburban (n = 272)	95 (34.9)†	160 (58.8)	27 (9.9)
Rural (n = 39)	10 (25.6)†	26 (66.7)	4 (10.2)
Type of practice			
Private (n = 348)	105 (30.2)	216 (62.1)	37 (10.6)†
Other‡ (n = 43)	10 (23.3)	30 (69.8)	10 (23.3)†
Teaching residents			
Yes (n = 201)	58 (28.9)	122 (60.7)	32 (16.0)†
No (n = 227)	72 (31.7)	143 (63.0)	19 (8.4)†
Previous DV training			
Yes (n = 183)	23 (12.6)§	138 (75.4)§	32 (17.5)†
No (n = 255)	107 (42.0)§	127 (49.8)§	19 (7.5)†

*Each variable may not sum to 438 because of missing values in the data set. Statistical significance is based on χ^2 contingency analyses of independence between a specific characteristic and specific screening behavior.

† $P < .05$.

‡Other includes primary care physicians who have public, hospital-based, university-based, or health maintenance organization practices.

§ $P < .001$.

Table 3. Statistical Analysis of Predictive Factors in Physicians' Domestic Violence (DV) Screening Behavior

Variable	Reference	Odds Ratio (95% Confidence Interval)
Urban practice	Suburban practice	1.77 (1.12-2.79)
DV training	No training	5.17 (3.13-8.56)

Table 4. Significant Barriers to Domestic Violence (DV) Screening by 438 Physicians

Statement	% of Respondents Who Agreed	Odds Ratio (95% Confidence Interval)
I am not trained to deal with the problem of DV	53.8	1.93 (1.16-2.39)
I do not have time to fully evaluate or counsel a mother who says she is a victim of DV	39.6	1.29 (1.13-1.51)
I feel frustrated because I cannot do anything about the mother's problem	24.4	1.32 (1.10-1.58)
We do not have time to ask about DV	22.8	1.65 (1.37-1.98)
I believe I may offend my (patients') mothers if I ask about DV	17.4	1.30 (1.09-1.56)
Domestic violence is not a problem in my patient population	13.8	1.54 (1.27-1.88)
I have a history of DV myself or in my close family	8.9	0.81 (0.66-0.99)
Even if a mother tells me she is abused, there is no way to verify it is true	5.1	1.43 (1.13-1.81)
There are too many other more important problems to ask (about)	3.3	1.38 (1.10-1.73)
It is none of my business	<1	1.99 (1.45-2.73)

To our knowledge, ours is the first published report of DV screening behavior among a statewide sample of pediatric primary care providers that includes pediatricians and family physicians. Our study has 3 major findings. First, only a small proportion of Connecticut pediatric primary care physicians are routinely screening mothers for DV at well-child care visits. Second, the major barrier to screening cited by our sample is a lack of sufficient training about DV. Third, pediatric primary care physicians who receive training about DV are more than 5 times more likely than untrained physicians to screen mothers for DV during well-child care visits.

In our study, only 12% of the physicians reported routinely screening mothers for DV at pediatric well-child care visits, 61% reported screening selected women, and almost 33% said they did not screen for DV at all. Our findings are consistent with the findings of a 2001 study by Erickson et al,²² who reported that only 8.5% of the physicians with admitting privileges at their children's medical center routinely screened their patients' mothers for DV, while 51% selectively screened. In the study by Parsons et al²¹ of obstetrician-gynecologists, 20.5% reported routinely screening patients for DV and 65.4% said they screened their patients' mothers selectively.

Similar to physicians in other settings, pediatric primary care physicians cited a lack of training as the greatest barrier to screening mothers for DV.^{9,21,22} Only 42% of the physicians in our sample reported receiving any type of prior DV training. While this finding is somewhat encouraging compared with other studies of pediatric health care providers, which report DV training rates of only 26% to 30%,^{22,23} the DV training rate in our sample is substantially lower than that reported by Parsons et al in their survey of obstetrician-gynecologists (66%).²¹ This difference is not surprising, however, given the active role the American College of Obstetricians and Gynecologists takes in promoting DV awareness and training among its members and all health care providers.

Other major barriers to DV screening in our study included a lack of time for screening and for evaluating and counseling mothers who screen positive, frustration that the physician cannot help victims of DV, fear of offending their patients' mothers, and a belief that DV is not a problem in this population. Many of these barriers have been observed in other health care settings as well.^{5,9-10,24-26} In other studies, barriers to effective screening by physicians included lack of training, a routine protocol, and experience, and insufficient time for screening.^{5-6,9,10,23-28} While it has been suggested that personal experience with DV could inhibit health care providers from identifying and intervening with other victims of DV,²⁹ our results show otherwise. Physicians in our study who had been victims of or witnessed DV reported being more likely to identify and intervene with other victims of DV, not less likely.

The central finding of this study is the strong, significant association between DV training and reported physician screening behaviors. Forty-two percent of the physicians in our sample reported receiving some form of DV training prior to our study. These physicians ac-

counted for 64% of all physicians who reported routine screening during well-child care visits and 52% of those who reported screening on a selective basis. Parsons et al²¹ also reported a significant association between DV training and screening, and Erickson et al²² reported a more than 10-fold increase in screening rates in pediatric physicians who had received training about DV. While our finding may not represent a cause-and-effect relationship, the strength and consistency of the association between DV training and screening in this and other studies is indicative of causality. However, when Waalen et al³⁰ reviewed the evaluations of 12 interventions designed to increase DV screening by health care providers, they found that health care provider education alone was not successful in improving screening rates, but that education must be combined with other interventions, such as providing physicians with specific screening questions. Since we did not ask physicians about the type of training they received, we cannot determine if those who received more hands-on training or specific screening tools were more likely to screen than physicians who received only education about DV.

This study has a few important limitations. First, because we had no information on the demographic or practice characteristics of nonresponders or the survey sample as a whole, we were unable to control for response bias in our analysis. Second, our response rate was only 49% after 3 waves of mailing. While this rate compares favorably with that in the study by Parsons et al²¹ of obstetrician-gynecologists (15%), it is somewhat lower than the average response rate for mail surveys of physicians of a similar sample size ($n < 1000$), which was 61% in a recent review.³¹ However, given the sensitive nature of the topic of our survey, it is reasonable to expect a lower than average response rate, as has been encountered in other studies.^{21,32} A third limitation of our study is self-selection. It is reasonable to hypothesize that those health care providers who took the time and effort to complete the survey did so because they had an interest in issues of DV.³¹ Such bias among respondents could have resulted in an overrepresentation of physicians with DV training, personal DV experience, or current DV screening experience in our sample. In addition, physicians who have an interest in DV or who have received DV training may be more likely than others to offer what they believe to be socially acceptable responses to our questions about DV screening, thereby inflating the strength of the association between DV training and DV screening in this study. However, the consistency of this association with prior reports suggests that the association is real, and perhaps even underestimated in our sample.^{21,22}

An important strength of our study is the size of our sample. Our response sample included 438 physicians compared with only 310 physicians included in the study of DV screening practices at a single children's medical center by Erickson et al.²²

Our findings have several important implications. Few pediatric primary care physicians are routinely screening their patients' mothers for DV, despite recommendations by the American Academy of Pediatrics to the contrary. One reason for this inconsistency could be the lack of training about DV available to pediatricians.

What This Study Adds

Maternal DV is common in the pediatric primary care setting and has important negative consequences for the long-term health and development of children. Since pediatric physicians have repeated exposure to their patients' mothers, they are in a unique position to screen for maternal DV. However, little is known about how often pediatricians actually screen for maternal DV in this setting and what health care provider characteristics enhance screening rates. The findings from our study show that few pediatricians and family physicians actually screen mothers routinely for DV and that prior training about DV significantly improves screening rates. The findings suggest that health care provider training may be an effective intervention for improving DV screening rates among pediatric primary care physicians.

Only 42% of the pediatricians and family practice physicians in our sample reported obtaining some form of previous DV training. Moreover, a lack of training was cited by physicians as the greatest barrier to screening in their practices, supporting current recommendations by the American Academy of Pediatrics to include DV training in residency training programs and continuing medical education.¹⁹ Education and training interventions designed to improve screening rates in this setting will need to address the many barriers to DV screening identified in this and other studies, including the development of standard protocols for DV screening in pediatric primary care, training physicians and other health care providers to better address the psychological issues associated with DV, and finding creative ways to reduce the time commitment for physicians to screen all of their patients' mothers for DV. Recently, other investigators have examined the ability of computer-based screening to address many of these issues, with some early success.^{33,34} In our busy, urban, primary care center, women who screen positive for DV are referred to a social worker who then facilitates a referral to a battered women's shelter. For our practice this helps take the burden off the medical provider, as well as address the time constraints associated with screening during well-child care visits.

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