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## Clinic-based screening for domestic violence: use of a child safety questionnaire

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### Abstract

**Background:** Domestic violence affects many women during their lifetime. Children living in homes where they are or have been exposed to violence are at increased risk for adverse outcomes. The American Academy of Pediatrics, the American Academy of Family Practice, and the American College of Obstetrics/Gynecology have recently joined in recommending routine screening of all families for the presence of domestic violence. We present our experience with an office-based domestic violence screening questionnaire.

**Methods:** A series of four child safety questionnaires (designed for parents of infant, preschool-age, school-age, and adolescent patients), which included specific questions about domestic violence, was given to all mothers presenting to a university out-patient general pediatric clinic. The questionnaires, offered in both English and Spanish, were reviewed for the presence of domestic violence exposure, usually at the time of the clinic visit. The number of women who reported either current or past exposure to domestic violence as disclosed by this active screening process was compared to the number discovered prior to the use of these questionnaires.

**Results:** Prior to the use of active screening with a child safety questionnaire, five cases of domestic violence were identified in our clinic population of approximately 5000 children over a 3 month period. Active screening of this population with a parent questionnaire resulted in the identification of 69 cases of current domestic violence exposure (2% of those screened) during each of 2 years of screening. Use of the child safety questionnaire was associated with a significantly increased odds of detecting current domestic violence (OR = 3.6, 95% CI [1.4, 9.1],  $P = 0.007$ ), with 72% [26–84%] of the cases identified being attributable to the use of the questionnaire. Of children screened, 2% were currently exposed to domestic violence, and 13% had been exposed to past domestic violence. Thus a total of 15% of our patient population has been exposed to domestic violence in their homes.

**Conclusion:** Children in our clinic population are frequently exposed to domestic violence. Active screening for the presence of current or past domestic violence through the use of a parent questionnaire resulted in a significant increase in our ability to identify such families and provide appropriate referral information.

## Background

Approximately 10 million children are exposed to some form of domestic violence each year in the USA. The significance of domestic violence as a pediatric issue has been highlighted in a 1998 position statement issued by the American Academy of Pediatrics (AAP) [1], and a joint 2002 consensus statement by the AAP, the American Academy of Family Practice (AAFP), and the American College of Obstetrics/Gynecology (ACOG), among other sponsoring organizations [2]. None of these organizations, however, offered specific tools with which to screen families for the presence of domestic violence.

Domestic violence, used here as synonymous with intimate partner violence (IPV), has been defined as 'a pattern of purposeful coercive behaviors that may include inflicted physical injury, psychological abuse, sexual assault, progressive social isolation, stalking, deprivation, intimidation and threats. These behaviors are perpetrated by someone who is ... involved in an intimate or dating relationship with an adult or adolescent victim, and are aimed at establishing control of one partner over the other' [2].

The lifetime prevalence of IPV against women has been reported to be as high as 25–30%, with annual prevalence rates of between 2% and 12%.

A recent evidence-based review of IPV found many studies reporting on the epidemiology of violence against women, although very few on approaches within a primary care setting for preventing IPV. Early identification of women in abusive relationships may permit interventions that provide protection against domestic violence. While the risks associated with routine domestic violence screening itself have not been studied, the need to identify and attempt to intervene on behalf of abused women is clear [3,4].

Pediatricians at times feel uncomfortable asking the parents of their patients about their exposure to IPV. Studies have demonstrated that women want healthcare providers to be trained in domestic violence screening and they want to be asked about violence in their relationships [5,6]. The fear expressed by some healthcare providers that they will offend women by asking such questions does not seem justified [7]. In one study, 67% of female patients who were surveyed believed physicians were the most helpful resource for women who were in violent relationships [8].

The present study is the first to screen large numbers of mothers in a southwestern United States pediatric clinic population over a 2 year period. Previous studies included fewer subjects and conducted screening over a shorter

period of time. Siegel *et al.* [9] included 154 women from a southeastern United States pediatric practice screened over a 3 month period, and identified 8 women (5%) who had been in abusive relationships within the previous 6 months, and 19 additional women (12%) who reported abuse occurring within the previous 24 months. Parkinson *et al.* [6] included 553 women from a northeastern pediatric practice screened over a 5 month period, and identified 14 women (2.5%) who were then currently in an abusive relationship, and 77 additional women (14%) who reported a history of past domestic violence.

## Methods

### Study population

The University of Arizona Pediatric Clinic is a primary care teaching site that provides medical care for approximately 5000 children, with 16000 patient visits annually. The ethnic composition of the clinic is representative of the community as a whole, with approximately 30% Hispanic and 5% African-American patients. Approximately 75% of the patient population is covered by Medicaid (AHCCCS in Arizona) (Table 1). The University of Arizona Human Subjects Committee approved this protocol to study the use of these questionnaires.

**Table 1: Patient demographics of the clinic study population**

Patient visits per year:	16,000
Individual patients seen (each year):	
2001 – 2001	4025
2001 – 2002	4983
2002 – 2003	5288
Insurance type:	
Medicaid (AHCCCS)	76%
Commercial/HMO	22%
Self-Pay	2%
Age distribution:	
< 1 year (infants)	11%
1 – 5 years (preschool)	40%
6 – 12 years (school-aged)	30%
13 – 18 years (adolescent)	18%
> 18 years (adult)	1%

### Questionnaire design and use

A series of four child safety questionnaires (designed for parents of infant, preschool-age, school-age, and adolescent patients) was developed, which included 12 questions covering multiple areas of child and adolescent safety [see Additional file 1]. Confidentiality of each form was maintained by using a medical record number rather than a name, which was later crossed out when no longer needed for clinical purposes. Questionnaires were printed in English on one side and in Spanish on the reverse. Embedded within the questionnaires were four questions specifically addressing IPV:

1. Have you ever been in a relationship with someone who has hit you, kicked you, slapped you, punched you, or threatened to hurt you?
2. CURRENTLY?
3. When you were pregnant did anyone ever physically hurt you?
4. Are you in a relationship with someone who yells at you, calls you names, or puts you down?

Screening was initiated in May 2001. Each parent or set of parents who presented with their child to the check-in desk was given a 'Child Safety Questionnaire' to complete while waiting for their appointment. The parent was given an age-appropriate questionnaire for each child when multiple children within the same family were being seen. When both parents accompanied a child, the questionnaire was given to the couple without specific instructions on who was to complete the form. Anecdotally most clinicians noted the mother would complete the questionnaire in such cases. Completion of the questionnaire was voluntary, and the clinic social worker's name and phone number was noted on the top of each form should the parent have any questions relating to the questionnaire.

Any parent who responded yes to either question 1, 3, or 4 was classified as experiencing domestic violence. Parents answering 'Yes' to question 2 were classified as experiencing current domestic violence, and those responding 'No' to question 2 were classified as experiencing past domestic violence. A dated notation was made in each child's medical record after the questionnaire was completed so that the family would not be given a second questionnaire within any 12 month period.

Repeat screening was continued into the second year of the study. Each family received a repeat questionnaire on the next return visit after the anniversary date of completing the questionnaire the previous year. All new patients continued to receive a questionnaire on their initial visit. The dates of both initial and subsequent screenings were noted in each child's medical record.

All clinic healthcare providers (nurse practitioners, medical students, resident physicians, and attending physicians) were reminded each month to review each questionnaire while the family was still in clinic. The providers were instructed to discuss any safety concerns noted on the questionnaire with the family, and offer appropriate anticipatory guidance.

If a questionnaire indicated the presence of either current or past exposure to domestic violence, the provider was

encouraged to discuss this privately with the parent. A referral was then made to the clinic's social worker, who attempted to speak with the parent at the time of the visit. In addition, the social worker independently contacted the child's parent if a questionnaire indicated domestic violence exposure that was not addressed by the provider during the visit.

#### **Statistical analysis**

Prevalence rates for current and past domestic violence were calculated for both the 3 month baseline period and 2 subsequent years during which the active screening took place. In addition, prevalence rates for current and past domestic violence were calculated for the same 3 month period during the first year of active screening in order to assess for the impact on the results of the different lengths of study periods before and after beginning active screening. The Fisher's exact test was used to compare the difference in detection rates of both current and past domestic violence exposure before and after active screening. An alpha <0.05 was considered statistically significant. Odds ratios with 95% confidence intervals were calculated to quantify the odds of detecting domestic violence among families of children visiting the pediatric clinic before and after active screening. In addition, the fraction of detected cases of current and past domestic violence attributable to the use of the screening safety was calculated. All statistical procedures were performed using Stata 7.0 statistical software [10].

All prevalence rates were calculated using the number of cases of domestic violence per number of unique children seen in the clinic during each study period. This was undertaken because the goal of the screening questionnaire is to screen for all children impacted by domestic violence seen in our clinic and screening was performed for each child in a family. An equally reasonable perspective is to analyse the prevalence rates from the perspective of the affected parent, so we also completed analysis using the number of unique families seen during each study period. These results were virtually identical, and have therefore not been included. Prevalence data were also calculated using the number of forms completed during each of the 2 years during active screening. However, no such data were available for comparison during the baseline period prior to active screening.

#### **Results**

The demographic characteristics of the pediatric clinic are shown in Table 1. The number of cases of current and past domestic violence, children seen, represented families seen, and number of questionnaires completed during each of the study periods are shown in Table 2.

**Table 2: Analysis of parent questionnaires**

Time period	Current DV <sup>1</sup>	Past DV <sup>2</sup>	Children seen <sup>3</sup>	Families seen <sup>4</sup>	Forms completed <sup>5</sup>
Before active screening:					
May to July 2000	5	0	1201	1106	N/A
Active Screening:					
May to July 2001	24	227	1622	1412	1581
May 2001 to April 2002	69	487	4983	4001	3618
May 2002 to April 2003	69	428	5288	4240	3452

<sup>1</sup>Number of questionnaires reporting current domestic violence. <sup>2</sup>Number of questionnaires reporting only past domestic violence. <sup>3</sup>Number of unique children seen in clinic during time period. <sup>4</sup>Number of unique families seen in clinic during time period. <sup>5</sup>Number of completed questionnaires returned to social worker.

Only five cases of current domestic violence were identified by pediatric clinic physicians or nurses and subsequently referred to the clinic social worker for further evaluation during the 3 month period prior to active screening with the study questionnaire. During this same 3 month period, 1201 children were seen in the clinic, with a prevalence of 4 cases of domestic violence per 1000 children. During the same 3 month period the following year with active screening, 24 cases of current domestic violence were identified among the 1622 children seen, giving a prevalence of 15 cases per 1000 children. Following the use of the safety questionnaire, current domestic violence was more likely to be identified (odds ratio [95% CI] 3.6 [1.4, 9.3],  $P = 0.007$ ) with 72% (95% CI [26–89%]) of the cases identified being attributable to the use of the questionnaire. When the screening results from the entire 12 months of the first year were analysed, the results were quite similar, with a prevalence of 14 cases per 1000 children, an increased odds of detection of domestic violence (odds ratio [95% CI] 3.3 [1.3, 8.2],  $P = 0.004$ ), and 70% (95% CI [25–88%]) of cases being attributable to the use of the questionnaire.

During the second 12 months of active screening, the findings were quite similar to those in the first year. The prevalence rate was 13 cases per 1000 children. The use of the questionnaire continued to be associated with greater odds of detection (odds ratio [95% CI] 3.1 [1.3, 7.8],  $P = 0.006$ ) with 68% (95% CI [21–87%]) of cases identified being attributable to the use of the questionnaire.

We estimate that 27% and 35%, respectively, of children seen in the first and second year of the active screening did not have a completed questionnaire returned to the social worker, so we have probably underestimated the number of cases of current domestic violence seen in our clinic. Using the number of completed forms rather than the number of children seen in our clinic during each study period, the prevalence rates for current domestic violence were increased to 19 cases per 1000 children during the first year, and 20 cases per 1000 children during the second year.

Because past exposure to domestic violence can continue to impact the health of the victim and children in the household, we also assessed the effectiveness of the questionnaire in identifying past domestic violence. During the baseline period prior to active screening, which was considered the standard of care at the time, no cases of past domestic violence were referred to the social worker for evaluation. However, during the same 3 month period during active screening, a significantly increased ( $P < 0.0001$ ) prevalence of past domestic violence of 140 cases per 1000 children was found. Compared to the baseline period prior to active screening the prevalences of past domestic violence detected during both the entire first year (98 cases per 1000 children,  $P < 0.0001$ ) and the second year (81 cases per 1000 children,  $P < 0.0001$ ) of active screening were significantly increased.

As the clinic experiences significant patient turnover each year, it is not known how many new cases of domestic violence were identified during the second year of active screening that were not so identified the first year.

Over the 2 year period, a total of 7070 questionnaires were completed. A total of 138 (2%) indicated current exposure to an abusive relationship and a total of 915 (13%) indicated past exposure to domestic violence, for a total prevalence of exposure to domestic violence of 15% within our patient population.

All women who indicated either past or current exposure to domestic violence were contacted and offered referral resources to social service agencies. It is not known how many of these women actually contacted the agencies to seek further assistance.

## Discussion

### *Intimate partner violence and children*

The use of child safety questionnaires [see Additional file 1], completed by parents while waiting for the physician, has permitted the identification of significantly more children who are currently in a family situation where domestic violence is occurring, than were identified before a

specific tool was utilized. In addition, this tool has helped identify families in which domestic violence has occurred in the past, but is not ongoing. These families were rarely identified in the absence of current IPV.

The need to identify both groups of children is highlighted in the 1998 policy statement by the AAP on the role of the pediatrician in recognizing families in which abuse takes place [1]. Focusing on the effects of IPV on children, the AAP notes that child abuse occurs in one-third to three-quarters of families that experience domestic violence, and that intervening on behalf of battered women may be one of the most effective ways to prevent child abuse.

Witnessing violence in the home can be as traumatic for children as being the actual victims of physical or sexual abuse. Children of abused mothers are at significant risk of emotional and behavioral sequelae. Adolescents who observe abuse within their families may be at increased risk of repeating these behaviors in their own relationships.

The AAP also noted that abused women are often reluctant to seek care for their own injuries, but usually continue seeking routine care for their children. The pediatric office may thus be the ideal environment in which to screen for domestic violence. The AAP recommends that inquiries about possible domestic violence be a part of routine pediatric anticipatory guidance [1].

The joint 2002 consensus statement 'Identifying and Responding to Domestic Violence: Consensus Recommendations for Child and Adolescent Health', endorsed by the AAP, AAFP, and ACOG, provided specific screening guidelines for primary care practices, although it did not offer specific tools for office use. The joint report did state that a focus on early identification of all families and victims of IPV should occur as part of routine office screening and anticipatory guidance. This screening should be provided to all new patients, and then at least annually thereafter [2].

#### **Child safety questionnaire use**

Active screening for domestic violence through the use of the Child Safety Questionnaire resulted in a greater than threefold increase in our ability to identify and offer services to these families.

An estimated 40+ cases per year of current domestic violence would probably have been missed in our clinic without active screening. With the implementation of active screening for domestic violence, those parents were assessed and referred to social service agencies while still in our clinic.

An added benefit to use of this survey instrument was its teaching value for pediatric and family practice housestaff. Almost all residents rotating through the clinic experienced at least one unanticipated positive response on the questionnaires, indicating unsuspected current or past domestic violence, and were guided in the appropriate evaluation and referral for a family with domestic violence issues. In designing the questionnaires, we had hoped that they would prove useful in this way, and were surprised by the great extent to which this was the case.

#### **Limitations of this study**

We were unable to analyze responses in more detail, as the primary impetus for the questionnaire was the active identification and referral of women at risk. The large number of responses initially overwhelmed our ability to provide adequate follow-up, and all effort was placed into providing immediate resources to women at highest risk.

One lesson learned was that almost as soon as active domestic violence screening was initiated, the need for clinical social services support increased dramatically. Once questions concerning IPV began to be asked, requests for assistance were forthcoming on an almost daily basis. It is important for physicians to familiarize themselves with the social resources available in their community. The Internet proved to be one useful resource in dealing with domestic violence in clinical situations. A listing of domestic violence Internet resources is given in Table 3.

**Table 3: Domestic violence Internet resources (all verified May 1 2004)**

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Identifying and responding to domestic violence: Consensus recommendations for child and adolescent health. <a href="http://endabuse.org/programs/healthcare/files/Pediatric.pdf">http://endabuse.org/programs/healthcare/files/Pediatric.pdf</a>
The Family Violence Prevention Fund, 383 Rhode Island Street, Suite 304, San Francisco, CA 94103-5133, (415) 252-8900 TTY (800) 595-4889. (September 2002) <a href="http://www.endabuse.org">http://www.endabuse.org</a>
Domestic violence handbook. Oakland County Coordinating Council Against Domestic Violence. <a href="http://www.domesticviolence.org/content.html">http://www.domesticviolence.org/content.html</a>
National Coalition Against Domestic Violence Web Site. <a href="http://www.ncadv.org/">http://www.ncadv.org/</a>
National Domestic Violence Hotline website (with listing of individual state hotlines). <a href="http://www.ndvh.org/">http://www.ndvh.org/</a>
Domestic Violence Hotlines and Resources, Domestic Violence Information Center, Feminist Majority Foundation. <a href="http://www.feminist.org/other/dv/dvhome.html">http://www.feminist.org/other/dv/dvhome.html</a>

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Questionnaires, by their nature, depend on self-reporting. We were unable to determine the sensitivity or specificity with this tool, as the actual incidence of family domestic violence in our population is not known.

### Conclusions

The AAP, together with both the AAFP and ACOG, recommend screening for domestic violence exposure during routine office visits. We present a tool for such screening in the form of a child safety questionnaire, and present the results of the initial 24 months of its use in our university pediatric clinic. Use of this form dramatically increased the number of women identified as having current or past exposure to domestic violence, and permitted referrals to appropriate social agencies in an attempt to prevent further exposure to violence.

### List of abbreviations

AAP, American Academy of Pediatrics; AAFP, American Academy of Family Practice; ACOG, American College of Obstetrics and Gynecology; DV, domestic violence; IPV, intimate partner violence.

### Competing interests

None declared.

### Authors' contributions

RW and DS together conceived of the study, and designed the Child Safety Questionnaire. RW wrote the first draft of the manuscript, which was then revised by both DS and TB. TB participated in the design of the study and performed the statistical analysis. All authors read and approved the final manuscript.

### Additional material

#### Additional File 1

*Domestic Violence Questionnaires. This MS Word document contains the full text, in English and Spanish, of all questionnaires used in this study. These questionnaires may be edited and formatted as desired. A line crediting the authors would be appreciated.*

Click here for file

[<http://www.biomedcentral.com/content/supplementary/1741-7015-2-25-S1.doc>]

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### References

1. American Academy of Pediatrics Committee on Child Abuse and Neglect: **The role of the pediatrician in recognizing and inter-**

**vening on behalf of abused women.** *Pediatrics* 1998, **101**:1091-1092.

2. Goves BM, Augustyn M, Lee D, Sawires P: *Identifying and responding to domestic violence: Consensus recommendations for child and adolescent health* 2002 [<http://endabuse.org/programs/healthcare/files/Pediatric.pdf>]. San Francisco, CA: The Family Violence Prevention Fund
3. Wathen CN, MacMillan HL: **Interventions for violence against women: scientific review.** *JAMA* 2003, **289**:589-600.
4. Rhodes KV, Levinson W: **Interventions for intimate partner violence against women: clinical applications.** *JAMA* 2003, **289**:601-605.
5. Rodriguez MA, Quiroga SS, Bauer HM: **Breaking the silence. Battered women's perspectives on medical care.** *Arch Fam Med* 1996, **5**:153-158.
6. Parkinson GW, Adams RC, Emerling FG: **Maternal domestic violence screening in an office-based pediatric practice.** *Pediatrics* 2001, **108**:e43 [<http://pediatrics.aappublications.org/cgi/content/full/108/3/e43>].
7. Lapidus G, Cooke MB, Gelven E, Sherman K, Duncan M, Banco L: **A statewide survey of domestic violence screening behaviors among pediatricians and family physicians.** *Arch Pediatr Adolesc Med* 2002, **156**:332-336.
8. Hamilton B, Coates J: **Perceived helpfulness and use of professional services by abused women.** *J Fam Violence* 1993, **8**:313-324.
9. Siegel RM, Hill TD, Henderson VA, Ernst HM, Boat BV: **Screening for domestic violence in the community pediatric setting.** *Pediatrics* 1999, **104**:874-877.
10. Stata Statistical Software: *Stata Statistical Software 7.0.* College Station, TX; Stata Corporation 2001.

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