Barriers to Screening for Domestic Violence

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CONTEXT: **Domestic violence has an estimated 30% lifetime prevalence among women, yet physicians detect as few as 1 in 20 victims of abuse.**

OBJECTIVE: **To identify factors associated with physicians' low screening rates for domestic violence and perceived barriers to screening.**

DESIGN: **Cross-sectional postal survey.**

PARTICIPANTS: **A national systematic sample of 2,400 physicians in 4 specialties likely to initially encounter abused women. The overall response rate was 53%.**

MAIN OUTCOME MEASURE: **Self-reported percentage of female patients screened for domestic violence; logistic models identified factors associated with screening less than 10%.**

RESULTS: **Respondent physicians screened a median of only 10% (interquartile range, 2 to 25) of female patients. Ten percent reported they never screen for domestic violence; only 6% screen all their patients. Higher screening rates were associated with obstetrics-gynecology specialty (odds ratio [OR], 0.49; 95% confidence interval [CI], 0.31 to 0.78), female gender (OR, 0.51; CI, 0.35 to 0.73), estimated prevalence of domestic violence in the physician's practice (per 10%, OR, 0.72; CI, 0.65 to 0.80), domestic violence training in the last 12 months (OR, 0.46; CI, 0.29 to 0.74) or previously (OR, 0.54; CI, 0.34 to 0.85), and confidence in one's ability to recognize victims (per Likert-scale point, OR, 0.71; CI, 0.58 to 0.87). Lower screening rates were associated with emergency medicine specialty (OR, 1.72; CI, 1.13 to 2.63), agreement that patients would volunteer a history of abuse (per Likert-scale point, OR, 1.60; CI, 1.25 to 2.05), and forgetting to ask about domestic violence (OR, 1.69; CI, 1.42 to 2.02).**

CONCLUSIONS: **Physicians screen few female patients for domestic violence. Further study should address whether domestic violence training can correct misperceptions and improve physician self-confidence in caring for victims and whether the use of specific intervention strategies can enhance screening rates.**

KEY WORDS: **women; abuse; physicians; domestic violence; knowledge; attitudes; practice; screening.**
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Domestic violence is a serious public health problem, with an estimated 2 to 4 million American women physically abused each year.[1] Studies conducted in health care settings show a consistent prevalence: 6% to 15% of women surveyed reported physical abuse within the previous 12 months, with a lifetime prevalence of 28% to 54%.[2–5]

Battered women rarely volunteer a history of violence.[6,7] Thus, many professional organizations, including the American Medical Association and the American College of Obstetrics and Gynecology, recommend that clinicians screen all female patients for domestic violence.[8,9] Nonetheless, physicians correctly identify as few as 1 in 20 victims.[10] Since previous studies showing low screening rates were drawn from local samples,[11–13] we conducted this comprehensive national study to provide a broader perspective on why physicians rarely screen their women patients for domestic violence. Among physicians in specialties likely to initially encounter abused women we sought to explore training in, and attitudes toward, domestic violence, and identify factors correlated with low rates of screening.

METHODS

Study Population

Between July 1997 and January 1998, we mailed a survey to a national systematic sample of 600 general internists, 600 family practitioners, 600 obstetrician-gynecologists, and 600 emergency medicine physicians from the American Medical Association Physician Masterfile, a directory of virtually all American physicians.[14] Nonrespondents received 2 further survey mailings. Systematic sampling is a widely used technique in which, to obtain a sample of n subjects from a list of N potential subjects, one selects every ith subject (where $i = N/n$), after a random start.[15]

Data Collection

The self-administered, 4-page survey took approximately 5 minutes to complete. It focused specifically on domestic violence against the female patient population, and included the American Medical Association's definition of domestic violence: "a pattern of coercive behaviors that can include battering and injury, sexual assault, social isolation, deprivation, and intimidation perpetrated by someone who was or is intimate with the victim." The survey instrument was pilot tested with 120 local physicians from all 4 specialties and revised prior to the national mailing. Key variables included the physician's estimate of the lifetime prevalence of domestic violence among women in his/her state and among women in his/her practice, as well as the

percentage of the physician's female patients screened for domestic violence. Prevalence estimates and screening rates were obtained by asking, "Please give your best estimate of the percentage of adult women in your practice (in your state) who have personally experienced domestic violence at some point in their lives," and "About what percentage of your female patients do you ask about domestic violence?" The physicians were asked to estimate in an open-ended manner by generating a number. The survey also asked about the amount and timing of the physician's most recent training on domestic violence. Using 5-point Likert scales of agreement, it assessed attitudes toward, and potential barriers to, screening for domestic violence. Common physician responses to encounters with suspected victims were also scored on a 5-point Likert scale. The survey also inquired whether the physician had been in an abusive relationship. This research was conducted in accordance with the regulations of the Institutional Review Board of the University of Chicago.

Analysis

Based on the relative proportions of these physician specialties in the Masterfile universe, we constructed post-stratification weights.[15] We performed appropriate weighted and unweighted descriptive statistical tests; the results did not differ, thus we present unweighted findings. Because the physicians' estimates were not normally distributed, we present medians with interquartile ranges (the 25th and 75th percentiles). To determine factors associated with screening less than 10% of women patients, we first examined bivariate logistic regression models for 17 candidate variables. Factors associated with low screening rates at the $P < .1$ level on bivariate analysis were entered into a stepwise multivariate logistic regression model (SAS/STAT User's Guide, Version 6; SAS Institute, Inc., Cary, NC). Specialty indicators were included in all multivariate models. For other candidate variables, we used entry criterion $P < .1$ and stay criterion $P < .05$, 2-tailed.

RESULTS

Respondents and Nonrespondents

Of the 2,400 physicians in the original sample, 123 had incorrect addresses, 185 were retired or not involved in any direct patient care, and 5 were deceased. The crude response rate was thus 1,103/2,087, or 53%. Of respondents, 28 returned partially completed and 1,075 returned fully completed surveys. The mean age (46 ± 14 years), gender (25% female), board certification rate (60%), and geographic distribution of respondents were similar to those of the AMA Masterfile population,[14] the mailed sample, and nonrespondents (comparisons not shown). The percentage of respondents who screened less than 10% of women patients for domestic violence was 46% for the first mailing wave, 50% for the second, and 50% for the third wave ($P = .48$), suggesting minimal response bias.[16]

Domestic Violence Prevalence Estimates and Screening Practices

The majority of physicians, 88% (95% confidence interval [CI], 86% to 90%), knew female patients in their practice who had experienced domestic violence. All specialties except emergency medicine estimated the median lifetime prevalence of domestic violence in their patient population as less than their own estimate of their state prevalence (Table 1). Obstetrician-gynecologists screened the highest proportion of women patients.

Respondent physicians screened a median of only 10% (interquartile range, 2% to 25%) of their female patients for domestic violence. Of these physicians, 10% (95% CI, 8% to 12%) never asked their patients about domestic violence, and only 6% (95% CI, 4% to 7%) reportedly screened all of their female patients. Only 41% (95% CI, 38% to 44%) had a standard way of asking about domestic violence.

Domestic Violence Training

Of respondents, 80% (95% CI, 77% to 82%) reported having had training on issues of domestic violence; 39% trained within the previous 12 months. Fewer internists (66%) reported any training than emergency physicians (85%), family practitioners (84%), and obstetrician-gynecologists (78%) ($P = .001$).

Barriers to Screening

Physicians believed they had as much responsibility to address the problem of domestic violence as other clinical problems (81%), but only 27% felt very confident in their

Table 1. Estimates of Prevalence of Domestic Violence and Screening Practices, by Specialty

	Median (Interquartile Range)		
Specialty	Percent Lifetime Prevalence of Domestic Violence Among Women in Physician's Own State	Percent Lifetime Prevalence of Domestic Violence Among Women in Physician's Practice	Percent of Women in Practice Screened for Domestic Violence
Obstetrics-gynecology	20 (10 to 30)	13 (5 to 25)*	20 (4 to 55)
Emergency medicine	20 (15 to 30)	20 (10 to 35)	5 (3 to 15)
Internal medicine	20 (10 to 30)	10 (3 to 20)	5 (1 to 20)
Family medicine	20 (10 to 30)	15 (5 to 25)*	10 (2 to 30)

* *Different from estimated percent prevalence of domestic violence in physician's state, sign rank test,* P < *.001.*

ability to recognize victims. Almost half (45%) felt they had inadequate resources to help identified victims. Concern that questions about domestic violence might offend or anger patients was expressed by one third, and 41% stated they usually forgot to ask routinely about domestic violence. Only 21% did not have time to ask routinely about domestic violence. One hundred forty-six of the physician respondents (13.6%) reported a personal history of an abusive relationship. Of those, 52% were men, representing 10% of the male respondents. Forty-eight percent were women, representing 20% of the female respondents.

Correlates of Screening Rates

In multivariate logistic regression analysis, 10 factors were independent correlates of screening less than 10% of female patients (Table 2). Factors correlated with less screening were emergency medicine specialty, more agreement that asking about domestic violence was unnecessary since patients were likely to volunteer a history of abuse, more concern that these questions might offend or anger patients, and greater admission of usually forgetting to ask routinely. Screening rates above 10% were associated with obstetrics-gynecology specialty, female physician gender, higher estimated prevalence of domestic violence among adult women in the physician's practice, greater confidence in his/her ability to recognize victims of domestic violence, greater confidence in his/her ability to assist victims of domestic violence, and more agreement that routine domestic violence screening should be part of the annual examination. Although any history of domestic violence training increased screening, training within the previous 12 months had a stronger relationship with screening rates. Logistic modeling using a screening cut-point of less than 50% of adult female patients produced similar results, except that female physician gender reduced to a trend ($P < .10$), and confidence in one's ability to recognize victims and concerns about offending patients dropped out.

Table 2. Factors Associated with Screening <10% of Women Patients for Domestic Violence

Factor	Bivariate OR (95% CI)*	Multivariate OR (95% CI)†
Specialty		
Obstetrics-gynecology	0.55 (0.38 to 0.78)	0.49 (0.31 to 0.78)
Emergency medicine	1.19 (0.86 to 1.66)‡	1.72 (1.13 to 2.63)§
Internal medicine	1.35 (0.94 to 0.196)‡	1.02 (0.63 to 1.65)‡
Family medicine	1.0	1.0
Training on domestic violence		
Within the previous 12 mo	0.26 (0.18 to 0.37)	0.46 (0.29 to 0.74)
>12 mo prior	0.46 (0.32 to 0.66)	0.54 (0.34 to 0.85)
No training	1.0	1.0
Female physician gender	0.41 (0.31 to 0.54)	0.51 (0.35 to 0.73)
Estimate of lifetime prevalence of DV (per 10% of women patients)‖		
In respondent's state	0.78 (0.71 to 0.85)	—
In respondent's practice	0.75 (0.66 to 0.82)	0.72 (0.65 to 0.80)
Physician has been in an abusive relationship with a parent, relative, sexual partner, or friend	0.51 (0.35 to 0.74)	—
Agreement that...¶		
I am very confident in my ability to recognize DV victims‖	0.61 (0.53 to 0.71)	0.71 (0.58 to 0.87)
I am very confident in my ability to assist recognized DV victims‖	0.66 (0.58 to 0.76)	0.79 (0.66 to 0.96)§
Professionals in my discipline have as much responsibility to deal with domestic violence as with other clinical problems	0.71 (0.62 to 0.82)	—
Routinely asking female patients about DV should be part of the annual physical exam‖	0.55 (0.49 to 0.63)	0.76 (0.63 to 0.91)
I do not have the resources to adequately help abused women	1.31 (1.17 to 1.47)	—
I do not have adequate training in appropriate questions to ask	1.77 (1.56 to 2.02)	—
I do not need to question my patients; if DV is a problem they will let me know‖	2.60 (2.14 to 3.15)	1.60 (1.25 to 2.05)
Questions about DV may offend or anger my patients‖	1.53 (1.35 to 1.73)	1.18 (1.00 to 1.39)#
I do not have time to ask routinely about domestic violence	1.52 (1.35 to 1.73)	—
I usually forget to ask routinely about domestic violence	1.82 (1.59 to 2.08)	1.69 (1.42 to 2.02)

* *Odds ratios (ORs) and 95% confidence intervals (CIs) from bivariate logistic regression models. All* P *values < .01, except where noted.*
† *Odds ratios and 95% confidence intervals from multivariate logistic regression adjusting for other covariates in the column. All* P *values < .01, except where noted.*
‡ P, *not significant.*
§ $P < .05$.
‖ *DV signifies domestic violence.*
¶ *On 5-point Likert scales of agreement ranging from 'strongly disagree' to 'strongly agree.'*
\# $P < .051$.

Responses to Encounters with Suspected Victims

Common physician responses to encounters with suspected victims of domestic violence included making a note in the patient's chart (76%), discussing their observations with the patient (80%), encouraging the patient to report to the police (63%), giving the patient information about community resources (80%), and facilitating safety arrangements (65%). Less commonly, physicians would encourage the patient to seek legal counsel (48%).

DISCUSSION

As in prior studies,[11,12] most physicians believed they had a responsibility to address domestic violence, but they screened few of their female patients. The overall screening rate of 10% was consistent with the rate found in a similar study of physicians in California.[13] Many physicians reported training on domestic violence; much of that training occurred recently as part of continuing medical education, reflecting the increased awareness of domestic violence in the last few years. In contrast with a previous study,[13] we found any history of training made physicians more likely to screen, but training within the previous year had a stronger influence.

Physicians provided low estimates of the lifetime prevalence of domestic violence among women in their state. Although the prevalence of abuse varies from state to state, the lifetime prevalence remains high at 30% to 44%.[17,18] Nearly all physicians estimated the prevalence of domestic violence among women in their practices as even lower than the prevalence they estimated in their states; lower estimated prevalence in the practice correlated with less screening.

Not surprisingly, physicians' lack of confidence in their abilities regarding domestic violence resulted in lower screening rates. Male physicians had lower screening rates than female physicians. A previous smaller study found no gender difference in screening habits,[13] but our results are consistent with another study of domestic violence screening[19] as well as studies demonstrating that women physicians have higher rates of breast and cervical cancer screening than male physicians.[20,21] Physicians who had been abused were not more likely to screen, perhaps due to ambivalent feelings about their own experiences or an unwillingness to identify too closely with their patients.[22–24]

We identified a number of barriers to screening for domestic violence. Despite studies indicating that patients do not mind being asked,[6,7,22,23] fear persists about these questions offending patients. Similarly persistent is the mistaken belief that abused women will usually volunteer a history of violence.[6,7] Simply addressing such misconceptions during educational sessions may remove these barriers. Many physicians indicated they usually forgot to ask about domestic violence, suggesting an important role for chart reminders or check-off boxes on standardized history forms. Such reminders have been shown to increase domestic violence detection in an emergency department.[25,26]

Our study had several limitations. First, the response rate, although adequate for a mail survey of physicians without telephone contact,[27] may have introduced response bias. The similar screening rates across the mailing waves make this bias less likely. However, the physicians who chose to respond to the survey may have been more likely to be concerned about domestic violence, suggesting that actual screening rates may be even lower than in this sample. In addition, physicians interested in domestic violence may have had more recent training and been more likely to report screening more patients, which would enhance the effects of training on reported screening. Second, since domestic violence is a prominent subject nationally, physicians may have overestimated their screening rates (social desirability bias). Previous studies comparing physician self-report of cancer screening[28,29] and coronary artery disease risk factor management[30] with chart audits revealed that physicians tended to significantly overestimate their screening and counseling rates. Again, this suggests actual screening rates may be even lower than reported here. Third, although the survey instrument was pilot tested for clarity and face validity, its criterion validity is unknown.

This survey is the first comprehensive national assessment of attitudes and practices regarding domestic violence among the specialties most likely to have initial contact with these victims. These results suggest several strategies that may increase physicians' detection of domestic violence. Training on domestic violence should be mandatory in medical school and residency curricula, and offered widely as part of continuing medical education. Such training should focus on correcting misconceptions about domestic violence and should provide concrete screening tools, including specific questions to ask.[31] Chart reminders may also increase case finding.[25,26] Finally, links to victim services providers may increase physicians' confidence in their ability to intervene, and thereby increase screening. Future studies should examine whether targeted, multidimensional intervention strategies improve screening rates.

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REFERENCES

1. Novello AC, Rosenberg M, Saltzman L, Shosky J. From the Surgeon General. U.S. Public Health Service. JAMA. 1992;267:3132.

2. Abbott J, Johnson R, Koziol-McLane J, Lowenstein SR. Domestic violence against women. Incidence and prevalence in an emergency department population. JAMA. 1995;273:1763–7.
3. Hamberger LK, Saunders DG, Hovey M. Prevalence of domestic violence in community practice and rate of physician inquiry. Fam Med. 1992;24:283–7.
4. Gin NE, Rucker L, Frayne S, Cygan R, Hubbell FA. Prevalence of domestic violence among patients in three ambulatory care internal medicine clinics. J Gen Intern Med. 1991;6:317–22.
5. McCauley J, Kern D, Kolodner J, et al. The “battering syndrome”: prevalence and clinical characteristics of domestic violence in primary care internal medicine practices. Ann Intern Med. 1995; 123:737–46.
6. Friedman LS, Samet JH, Roberts MS, Hudlin M, Hans P. Inquiry about victimization experiences. A survey of patient preferences and physician practices. Arch Intern Med. 1992;152:1186–90.
7. McCauley J, Yurk RA, Jenckes M, Ford DE. Inside “Pandora’s box.” Abused women’s experiences with clinicians and health services. J Gen Intern Med. 1998;13:549–55.
8. Council on Scientific Affairs. American Medical Association. Violence against women: relevance for medical practitioners. JAMA. 1992;267:3184–9.
9. American College of Obstetricians and Gynecologists. ACOG technical bulletin. Domestic violence. Number 209-August 1995. Int J Gynaecol Obstet. 1995;51:161–70.
10. Sasetti MR. Domestic violence. Prim Care. 1993;20:289–303.
11. Easteal PW, Easteal S. Attitudes and practices of doctors toward spouse assault victims: an Australian study. Violence Vict. 1992; 7:217–28.
12. Ferris LE, Tudiver F. Family physicians’ approach to wife abuse: a study of Ontario, Canada, practices. Fam Med. 1992;24:276–82.
13. Rodriguez MA, Bauer HM, McLoughlin E, Grumbach K. Screening and intervention for intimate partner abuse. Practices and attitude of primary care physicians. JAMA. 1999;282:468–74.
14. Department of Data Services. American Medical Association. Physicians’ Characteristics and Distribution in the U.S. Chicago, Ill: American Medical Assocation; 1994.
15. Rossi PH, Wright JD, Anderson AB. Handbook of Survey Research. Boston, Mass: Academic; 1983.
16. Sheikh K, Mattingly S. Investigating non-response in mail surveys. J Epidemiol Community Health. 1981;35:293–6.
17. Buehler J, Dixon B, Toomey K. Analysis of data from the 1995 Georgia Women’s Health Survey discloses a 30% lifetime prevalence of intimate partner violence among women in Georgia. MMWR Morb Mortal Wkly Rep. 1998;47:670–3.
18. Dearwater SR, Coben JH, Campbell JC, et al. Prevalence of intimate partner abuse in women treated at community hospital emergency departments. JAMA. 1998;280:433–8.
19. Saunders DG, Kindy P. Predictors of physicians’ responses to women abuse: the role of gender, background, and brief training. J Gen Intern Med. 1993;8:606–9.
20. Lurie N, Slater J, McGovern P, Ekstrum J, Quam L, Margolis K. Preventive care for women. Does the sex of the physician matter? N Engl J Med. 1993;329:478–82.
21. Krueter MW, Strecher VJ, Harris R, Kobrin SC, Skinner CS. Are patients of women physicians screened more aggressively? A prospective study of physician gender and screening. J Gen Intern Med. 1995;10:119–25.
22. Sugg NK, Inui T. Primary care physicians’ response to domestic violence. Opening Pandora’s box. JAMA. 1992;267:3157–60.
23. Alpert EJ. Violence in intimate relationships and the practicing internist: new “disease” or new agenda? Ann Intern Med. 1995; 123:774–81.
24. Warshaw C. Domestic violence: challenges to medical practice. J Women’s Health. 1993;2:73–80.
25. Olson L, Anctil C, Fullerton L, Brillman J, Arbuckle J, Sklar D. Increasing emergency physician recognition of domestic violence. Ann Emerg Med. 1996;27:741–6.
26. McLeer SV, Anwar R. A study of battered women presenting in an emergency department. Am J Public Health. 1989;79:65–6.
27. Asch DA, Jedrziewski MK, Christakis NA. Response rates to mail surveys published in medical journals. J Clin Epidemiol. 1997;50: 1129–36.
28. Montano DE, Phillips WR. Cancer screening by primary care physicians: comparison of rates obtained from physician self-report, patient survey, and chart audit. Am J Public Health. 1995; 85:795–800.
29. McPhee SJ, Richard RJ, Solkowitz SN. Performance of cancer screening in a university general internal medicine practice. J Gen Intern Med. 1986;1:275–81.
30. Leaf DA, Neighbor WE, Schaad D, Scott CS. A comparison of self-report and chart audit in surveying resident physician assessment of cardiac risk factors. J Gen Intern Med. 1995;10:194–8.
31. Brown JB, Lent B, Brett PJ, Pederson LL. Development of the Women Abuse Screening Tool for use in family practice. Fam Med. 1996;28:422–8.