

# Domestic Violence and Primary Care

## Attitudes, Practices, and Beliefs

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**Objective:** To assess the attitudes and beliefs of the primary care provider team (physicians, physician assistants, nurses, and medical assistants) toward the identification and management of abused patients and perpetrators of domestic violence (DV).

**Design:** Survey of the health care team using a confidential questionnaire.

**Setting and Subjects:** Five primary care clinics with 240 providers at a large urban health maintenance organization.

**Results:** The response rate was 86% (206 respondents). Fifty percent of clinicians and 70% of nurses/assistants believed that the prevalence of DV in their practice was 1% or less; 1 in 10 clinicians and nearly half of nurses/assistants had never identified an abused person; 45% of clinicians never or seldom asked about

DV when examining injured patients; and all participants were much less confident in asking about DV than about smoking or consuming alcohol. Twenty-five percent believed the abused person's personality led to the violence; 28% believed they did not have strategies to help abused persons; and 20% were concerned for their personal safety in discussing DV. Only 10% believed they had management information, but 77% had not attended any educational programs on DV in the past year.

**Conclusions:** This study provides important information about current knowledge, attitudes, and beliefs of health care providers toward the diagnosis and management of DV. This information should prove useful to all who attempt to design clinical strategies and educational programs to address this issue.

*Arch Fam Med.* 1999;8:301-306

**Editor's Note:** While this article suggests that physicians were not performing as well as desirable, it is also clear that the other office members were even less knowledgeable about domestic violence. We have made gains in the understanding of domestic violence by physicians but need to transfer more of this information to office staff members.

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**D**ESPITE THE medical and public health importance<sup>1-3</sup> of domestic violence (DV), most "physicians are uninformed as to risk factors in their patients for spouse abuse and other forms of violence."<sup>4</sup> The identification and management of persons being abused in clinical practice is low, with estimates that only 7% to 25% of cases are identified<sup>5-7</sup> and 60% to 90% of patients are inadequately or inappropriately managed.<sup>8-12</sup> Only 2% to 7% of patients seen in ambulatory care clinics report physician inquiry about verbal or physical abuse.<sup>13,14</sup>

As pressure increases for active physician involvement in the identification and management of abused patients,<sup>8,11</sup> there has been a rapid proliferation of identification and management protocols and continuing medical education courses on this topic. Vital program development information on the attitudes and beliefs of primary care providers regarding DV and its management is sparse. In a recent qualitative study, Sugg and Inui<sup>15</sup> delineated several barriers to the identification and management of DV as perceived by practicing primary care physicians: lack of confidence in identification and management skills, fear of offense, and lack of time. Other studies<sup>9,16</sup> found prejudicial attitudes and marginalization of providers affecting physician response to family violence. No studies have examined the attitudes and beliefs of other workers in the health care setting, such as nurses or medical assistants (MAs), who might come into contact with patients affected by DV.

Starting in 1995, our group of investigators embarked on an intensive, multi-

## PARTICIPANTS, MATERIALS, AND METHODS

### SETTING

Five primary care clinics within Group Health Cooperative (GHC) of Puget Sound, Seattle, Wash, a large urban health maintenance organization, were recruited to participate in this study. The patient population served by these clinics is generally comparable with the standard metropolitan statistical area for age, sex, and racial distribution. Group Health Cooperative members are, however, more highly educated, while incomes greater than \$50 000 per year are underrepresented compared with the standard metropolitan statistical area.

Clinic recruitment was based on provider interest in being involved in an intervention trial to improve health care for abused persons. Potential survey participants were health care team members involved in adult health care at the 5 clinics, including physicians, nurse practitioners, physician assistants, registered nurses (RNs), licensed practical nurses, and MAs.

### SURVEY INSTRUMENT

Three of us (N.K.S., D.C.T., and R.M.) developed a provider survey in which we defined DV as past or present physical and/or sexual violence between former or current intimate partners, adult household members, or adult children and a parent. Abused persons and perpetrators could be of either sex, and couples could be heterosexual or homosexual. The survey was designed to test providers' knowledge, beliefs, and attitudes concerning DV. Questionnaire content was based on a qualitative study of 38 GHC primary care physicians in which barriers to discussion of DV with patients was explored,<sup>8</sup> and on the Precede/Proceed model, which provided a theoretical basis for structuring an intervention on preventive practices in the medical setting.<sup>10-12</sup> Potential domains were identified, and questions designed around these domains were developed. A 5-point Likert scale ranging from strongly negative to strongly positive was used to categorize responses. Content validity was established and question refinement was performed by a panel of experts consisting of 2 physicians with expertise in DV, 2 social workers, 1 of whom is an expert in elder abuse, an RN who specializes in quality improvement, a psychologist

with expertise in batterer treatment, and a social behaviorist with expertise in survey methods.

The survey was initially piloted on an independent sample of 129 providers similar to the study sample. Factor analyses that confirmed the presence of 6 separable domains related to frequency of asking, provider self-efficacy, safety concerns, blaming the abused person, fear of offending, and perceived system support were performed. The internal consistency of the item domains in the present sample was assessed using the Cronbach  $\alpha$  coefficient. The item domain  $\alpha$  values were acceptable, ranging from .70 to .91. The overall instrument  $\alpha$  was .88.

There were also several questions that did not factor into domains but that were analyzed as nondomain items due to their importance in the area of DV. The nondomain items included perceived prevalence of DV, self-reported practice behavior, confidence in asking, and previous education on DV. The final questionnaire contained 89 individual questions, of which 39 questions factored into domains. The details of the questionnaire development and factor analysis will be reported separately.

### DATA ANALYSIS

The questionnaires were coded and double key entered. Frequencies were tabulated. For parts of the analysis the study participants were divided into 2 groups based on their job descriptions: the clinician group consisted of physicians, physician assistants, and nurse practitioners; and the nurse/assistant group consisted of RNs, licensed practical nurses, and MAs.

### SURVEY PROCEDURES

After human subjects' approval, the survey was distributed to all MAs, licensed practical nurses, RNs, physician assistants, nurse practitioners, and physicians. Initially, receptionists were to be included, but during a staff reorganization at GHC, most receptionists were removed from the clinic sites. Participants were able to complete the questionnaire in privacy and return it via mail. The act of returning the survey was considered passive consent. Questionnaires were confidential and were individually numbered to allow for tracking of nonresponses. Nonrespondents were contacted with 3 telephone calls and 1 visit to their clinic, at which the questionnaire was personally delivered to the subject.

faceted, longitudinal intervention in primary care, based on the application of the Precede/Proceed model.<sup>17-19</sup> We focused on improving the skills of the entire health care team in the identification and management of DV. As part of this project, we surveyed primary care providers' knowledge, attitudes, and beliefs on the subject before intervention. These baseline data provide information that is important to those planning programs to improve the identification and management of DV in the primary care setting.

### RESULTS

In the 5 study clinics, there were 240 providers serving a population of 92 201 members. There were a total of 206 respondents, including 71 physicians, 13

physician assistants, 6 nurse practitioners, 58 RNs, 25 licensed practical nurses, and 33 MAs, resulting in a response rate of 86%. Seventy percent of the respondents were women, 72% had worked in health care for more than 10 years, and 72% had worked at GHC for more than 5 years. There was no notable difference between respondents and nonrespondents based on these characteristics.

### SELF-REPORTED PRACTICE BEHAVIOR

Ten percent of the clinician group had never identified an abused person, and 55% had never identified a batterer. In the past year, 30% of the clinician group had not identified any abused persons and 72% had not identified any batterers.

**Table 1. Frequency of Asking About Domestic Violence\***

Patient Condition	No. of Clinicians Questioned	Frequency of Asking About Domestic Violence†		
		Almost Always or Always	Sometimes	Seldom or Never
Injuries	84	16 (19.1)	30 (35.7)	38 (45.2)
Depression or anxiety	86	15 (17.5)	19 (22.1)	52 (60.5)
Chronic pelvic pain	76	10 (13.1)	19 (25.0)	47 (61.8)
Headache	86	11 (12.8)	12 (14.0)	63 (73.3)
Irritable bowel syndrome	83	6 (7.2)	9 (10.8)	68 (81.9)

\*Clinicians were asked the question, "In the past 3 months, when seeing someone with the following conditions, how often have you asked the patient about the possibility of domestic violence?" Missing values include nonrespondents, clinicians who had not seen the condition in the prior 3 months, and nurses and assistants who did not view the assessment function as part of their role.

†Values are given as the number (percentage) of clinicians.

Among the nurse/assistant group, 46% had never identified an abused person and 73% had never identified a batterer. In the past year, 61% of this group identified no abused persons; and 85%, no batterers.

#### PERCEIVED PREVALENCE OF THE PROBLEM

Fifty percent of the clinician group and 70% of the nurse/assistant group believed that DV was rare (1% of the population) or very rare (0.1% of the population) at their practice site. Only 12% of the clinician group and 1% of the nurse/assistant group believed that it was common (10% of the population) or very common (15% of the population). When asked about the prevalence of DV at GHC as a whole, fewer clinicians and nurses/assistants perceived it as rare or very rare (22% and 31%, respectively) and were more likely to perceive DV as common or very common (20% and 13%, respectively).

#### FREQUENCY OF ASKING ABOUT DV

Participants in the clinician group, whose role involves examining patients, were asked how often they inquired about DV when seeing a patient with a high-risk condition: injury, depression or anxiety, chronic pelvic pain, headache, and irritable bowel syndrome during the last 3 months (**Table 1**). When treating an injured patient, 45.2% of clinicians seldom or never asked about DV. Patients with depression or anxiety or chronic pelvic pain were seldom or never screened more than 60% of the time. For all of the high-risk conditions, less than 20% of clinicians always or almost always asked about DV.

#### FEAR OF OFFENDING

More than 85% of respondents indicated that inquiring about DV was not an invasion of patient privacy nor outside their role. Most providers (65%) were not concerned about offending patients when screening for abused persons. Three quarters of the respondents believed DV questions would not demean or anger the patient.

#### BLAMING THE ABUSED PERSON

When asked if the abused person had done something to bring about the violence in the relationship, most respondents (79.5%) disagreed. However, 15% of the respondents agreed that they had patients whose personality caused them to be abused, and 25% believed that the abused person's passive-dependent personality led to abuse. Nineteen percent indicated that the abused persons stayed because they were getting something out of the abusive relationship, but 68.5% disagreed with this statement.

#### CONFIDENCE IN ASKING

Clinician and nurse/assistant confidence in asking about various health issues is shown in **Table 2**. The clinicians reported high confidence in asking about smoking and alcohol and moderate confidence in asking about sexual orientation and firearm use or possession. Only 39.3% expressed confidence in asking about physical abuse, and 25.8% were not at all confident in the latter. The nurse/assistant group was less confident in asking about all topics except smoking. While 21% were confident in asking about physical abuse, nearly half were not at all confident.

#### SAFETY CONCERNS

Twenty percent of respondents did express concern for their own personal safety when asking about battering, and 26.5% believed their workplace was not secure enough to safely discuss DV with batterers. While 25% of providers worried that the batterers would direct their anger toward them, 65.8% believed there were strategies to help providers ask batterers about DV without putting themselves at risk; only 6% believed there were no safe ways to ask about battering.

Thirty-nine percent of respondents expressed concern about increasing the risk to abused persons by discussing DV with batterers. However, half of the providers believed there were ways to speak with batterers without increasing the risk to the abused person.

**Table 2. Confidence in Asking About Health Issues\***

Topic	Group†	No. of Participants‡	Confidence in Asking§		
			Not at All or Slightly	Moderately	Very or Extremely
Smoking	<b>Total</b>	<b>199</b>	3.5	4.0	92.5
	Clin	89	1.1	0.0	98.9
	RN/Asst	110	5.4	7.3	87.3
Alcohol	<b>Total</b>	<b>199</b>	8.5	9.5	81.9
	Clin	89	0.0	2.3	97.8
	RN/Asst	110	15.5	15.5	69.0
Possession or use of firearms	<b>Total</b>	<b>195</b>	40.0	17.4	42.6
	Clin	88	20.5	15.9	63.6
	RN/Asst	107	56.1	18.7	25.2
Sexual orientation	<b>Total</b>	<b>195</b>	26.2	29.7	44.1
	Clin	87	11.5	26.4	62.1
	RN/Asst	108	38.0	32.4	29.6
Abuse Emotional	<b>Total</b>	<b>198</b>	38.9	30.8	30.3
	Clin	89	21.3	33.7	44.9
	RN/Asst	109	53.2	28.4	18.4
Physical	<b>Total</b>	<b>198</b>	38.4	32.2	29.3
	Clin	89	25.8	34.8	39.3
	RN/Asst	109	48.6	30.3	21.1

\*Participants were asked the question, "How confident do you feel asking about the following topics?"

†Total indicates all participants; Clin, physicians, physician assistants, and nurse practitioners; and RN/Asst, registered nurses, licensed practical nurses, and medical assistants.

‡Missing values are not included.

§Values are given as percentage of participants.

**Table 3. Perceived Self-efficacy of Providers in Managing Domestic Violence**

Topic	Group*	No. of Participants†	Response of Participants‡		
			Agree	Neutral	Disagree
Strategies to help batterers	<b>Total</b>	<b>197</b>	53.8	37.6	8.6
	Clin	89	64.0	30.3	5.6
	RN/Asst	108	45.3	43.5	11.1
Strategies to help abused patients	<b>Total</b>	<b>180</b>	23.9	42.2	33.9
	Clin	86	23.3	48.8	27.9
	RN/Asst	94	24.5	36.2	39.4
Confident in referring batterers	<b>Total</b>	<b>192</b>	18.2	29.2	52.6
	Clin	89	22.4	34.8	42.7
	RN/Asst	103	14.6	24.3	61.2
Confident in referring abused patients	<b>Total</b>	<b>194</b>	25.8	25.3	50.0
	Clin	89	37.1	29.2	33.7
	RN/Asst	105	16.2	21.9	61.9
Access to management information	<b>Total</b>	<b>195</b>	6.7	17.4	75.4
	Clin	88	10.3	25.0	64.8
	RN/Asst	107	3.7	12.1	84.1

\*The groups are defined in the second footnote to Table 2.

†Missing values are not included.

‡Values are given as percentage of participants. Percentages may not total 100% due to rounding.

### PROVIDER SELF-EFFICACY

Provider self-efficacy in the management of DV entailed 2 general issues: influencing abused persons and batterers to seek help and making appropriate referrals. As shown in **Table 3**, only 23% of all participants believed that they had strategies for assisting abused persons, while a greater percentage of clinicians and nurses/assistants believed they could assist batterers. However, less than 16% of the nurse/assistant group expressed confidence

in referring either abused persons or batterers, and only 37% of clinicians were confident in their ability to make a referral for abused patients. Seventy-five percent of clinicians and nurses/assistants were unaware of the written guidelines that existed at GHC.

### PERCEIVED SYSTEM SUPPORT

Sixty-two percent of respondents believed that medical social workers could help providers manage patients af-

**Table 4. Perceived System Support**

Statement	No. of Participants*	Response of Participants†		
		Agree	Neutral	Disagree
Medical social worker helpful	194	62.4	25.8	11.9
Access to medical social worker	195	46.7	19.5	33.8
Access to mental health	196	52.6	27.6	19.9

\*Missing values are not included.

†Values are given as the percentage of participants.

ected by DV, but only 47% indicated that they had ready access to the social workers (**Table 4**). Thirty percent of all providers believed that mental health care would meet the needs of abused persons, but just over 50% believed they had ready access to mental health services if their patient should need referral.

#### PREVIOUS EDUCATION ON DV

Forty-five participants (22%) had attended 1 or more types of educational programs in the past year, including conferences (31.1%), workshops (13.3%), and lectures (58.0%). Seventy percent of the clinician and 83% of the nurse/assistant group had not attended any educational programs in the past year. Because of the small percentage of providers who had received training in the prior year, analyses examining the effect of training on attitudes, practices, and beliefs were not undertaken.

#### COMMENT

This study provides important information about current attitudes and beliefs of health care providers toward DV diagnosis and management, which can be instrumental in designing appropriate clinical interventions to improve care in primary care settings.

There are several potential limitations to this study that need to be considered, and may limit its applicability to other settings. The study was limited to the primary care setting and, thus, the data may not be generalizable to other sites such as the emergency department, inpatient wards, or mental health settings. It also was conducted only among providers in urban clinics, who might differ in their attitudes from individuals practicing in rural areas. Furthermore, respondents may give socially desirable answers despite the questionnaire being conducted in a confidential manner. The response bias should be small, given that we were able to obtain responses from 86% of clinic personnel.

The Precede/Proceed model,<sup>17-19</sup> by focusing on predisposing factors in providers, environmental enabling factors, and reinforcing factors, lends itself to addressing the major issues raised by this survey.

Predisposing factors refer to the motivation to perform a specific behavior and include such issues as beliefs and attitudes. Health care providers' beliefs about the prevalence of DV in their practice may influence their

decision to ask patients about abuse. Other studies have found that the prevalence of DV ranges from 5% to 25% of women in primary care settings.<sup>3,13,20,21</sup> In this study, a large proportion of the providers estimated the prevalence in their practice to be less than 1%. Although the prevalence of DV may vary from site to site, this finding likely indicates a notable misconception of the actual magnitude of the problem.

Attitudes also affect a health provider's inclination to ask about abuse. In this study, fear of offending the patient by asking about DV did not appear to be a strong concern for health care providers. Most believed that it was within the medical purview to inquire about DV and that asking did not represent an unacceptable invasion of the patient's privacy.

Blaming the abused person, although not absent, was also not strongly present in this study. Providers readily indicated that the abused person had not "done something" to bring about the violence, but one quarter of respondents pointed to the abused person's underlying personality as having a potential role in the abuse. This may in part reflect the continuation of the "typical abused woman" stereotype or indicate an underlying belief that the abused person does in some way "cause" the violence.

Perceived self-efficacy clearly stood out as an issue for providers. Lack of confidence in their ability to make appropriate referrals and poor access to management information impair a medical team's ability to adequately care for abused persons or perpetrators. Training of the entire medical staff in strategies to help abused persons and knowledge of DV resources will ensure that no matter who the patient confides in, an appropriate response will be made.

Enabling factors refer to the skills and resources required to carry out the behavior and involve issues such as knowledge, training, logistics, and available materials. In this study, all participants acknowledged their discomfort with questioning patients about various health topics. Study participants were clearly more confident asking about health habits that have unequivocally been accepted as part of the medical purview, such as alcohol and smoking, than with more controversial topics, such as gun ownership or DV. Most physicians in practice have received training in broaching the issue of smoking and alcohol use<sup>22-24</sup>; the same is not true for violence.<sup>25</sup>

As previously mentioned, the focus of our intervention was the whole primary care team. The results in Table 2 were presented separately for the clinician and nurse/assistant groups, not for the purpose of comparison since we had no a priori hypothesis about these subgroups, but to understand the specific support or training that may be needed. In many clinics, nurses and MAs are being asked to screen patients for various health behaviors. Comfort with asking about these behaviors is essential to patient care. Moreover, some patients may prefer to confide in a nurse or MA about their abuse, making it critical that all team members are confident in addressing the issue in a manner compatible with their role in a practice.

Enabling factors include creating an environment conducive to performing the behavior. Safety, for the

health care provider and for the abused person, may play a part in the reluctance to ask about DV. Although studies on fatal and nonfatal injury to hospital personnel do not indicate an increased risk to providers from DV intervention,<sup>26,27</sup> adequate security is important in case of attempted assault. Similarly, health providers need to be trained in assisting abused persons with safety plans and in putting in place critical safety measures for the abused person before confronting a batterer.

Institutional-level enabling factors include ready access to other professionals who can assist battered patients. Nearly half of the providers surveyed believed that they did not have sufficient access to medical social workers or mental health professionals. If these professionals or other community resources are not available, providers may avoid the topic of DV, believing that they have no backup in offering assistance. Protocols, handbooks, and up-to-date referral lists are a minimum requirement in the ambulatory setting to begin to deal with DV. While the institution in which the study was conducted did have written protocols, more than 85% of the respondents were unaware of their existence. McLeer and Anwar<sup>28</sup> found that during a 10-year period, the identification rate in the emergency department for DV dropped from 30% to 7% despite the continued existence of a protocol. They concluded, as we do, that protocols are not enough. There must be continued institutional support, including access to professional support, internal within the health system or external in community resources, and a commitment to ongoing training of staff to identify and treat abused persons.

Reinforcing factors are those that reward a behavior. Measurement and feedback of outcomes results, rewards, recognition, and peer support are all elements that may perpetuate the positive aspects of training.

Various factors, many previously outlined, may explain the low identification rate of abused persons and batterers found in this study. Thirty percent of clinicians and 61% of nurses/assistants had not identified even one abused person in the past year. Also of concern is the low rate of asking about DV in high-risk conditions, such as injury and depression. When nearly half of clinicians seldom or never ask about the intentionality of an injury when examining a patient, a critical opportunity to diagnose DV and potentially prevent future injury or death has been missed. The need for training is evident in this study. Management information and skill building would greatly enhance a team's ability to respond to DV.

A clinic-wide intervention based on these study results and the elements previously outlined in the Precede/Proceed model has been developed and will be reported elsewhere. Our intervention used various educational formats, including didactics, role-playing, discussions with former abused persons and judicial officials, and case presentations. Evaluation of the intervention is in progress, and results will be reported as available.

Accepted for publication September 8, 1998.

This study was supported by grant HS07568-02 from the Agency for Health Care Policy and Research, Washington, DC.

We thank Eve Adams for manuscript preparation; the Domestic Violence Project Study team for their support and

hard work: Barbara Meyer, MD, Kathy Smith-DiJulio, MA, Madlen Caplow, MPH, Ben Givens, Colleen McBride, PhD, and Lori Fleming; and the 5 Group Health Cooperative study clinics for their willingness to participate.

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## REFERENCES

1. Alpert E. Violence in intimate relationships and the practicing internist: new "disease" or new agenda? *Ann Intern Med.* 1995;123:774-781.
2. Rosenberg M, Fenley MA, Johnson D, Short L. Bridging prevention and practice: public health and family violence. *Acad Med.* 1997;72:513-518.
3. McCauley J, Kern DE, Kolodner K, et al. The "battering syndrome": prevalence and clinical characteristics of domestic violence in primary care internal medicine practices. *Ann Intern Med.* 1995;123:737-746.
4. US Public Health Service. *Healthy People 2000: National Health Promotion and Disease Prevention Objectives.* Washington, DC: US Dept of Health and Human Services; 1991. Publication PHS 91-50512:227.
5. Randall T. Domestic violence intervention calls for more than treating injuries. *JAMA.* 1990;64:939-940.
6. Randall T. Domestic violence begets other problems of which physicians must be aware to be effective. *JAMA.* 1990;264:940-944.
7. Drossman DA, Talley NJ, Leserman J, Olden KW, Barreiro MA. Sexual and physical abuse and gastrointestinal illness: review and recommendations. *Ann Intern Med.* 1995;123:782-794.
8. Randall T. AMA, Joint Commission urge physicians to become part of the solution to family violence epidemic. *JAMA.* 1991;266:2524.
9. Kurz D. Emergency department responses to battered women: resistance to medicalization. *Soc Probl.* 1987;34:69-81.
10. Warshaw C. Limitations of the medical model in the care of battered women. *Gender Soc.* 1989;3:506-517.
11. Seeing the pain: America's physicians confront family violence. *American Medical News.* January 6, 1992:3.
12. Manning A. MDs on alert for family violence. *USA Today.* January 17, 1992:D1.
13. Hamberger LK, Saunders DG, Hovey M. Prevalence of domestic violence in community practice and rate of physician inquiry. *Fam Med.* 1992;24:283-287.
14. Friedman LS, Samet JH, Roberts MS, et al. Inquiry about victimization experiences: a survey of patient preferences and physician practices. *Arch Intern Med.* 1992;152:1186-1190.
15. Sugg N, Inui T. Opening Pandora's box: primary care physicians' response to domestic violence. *JAMA.* 1992;267:3157-3160.
16. Cohen S, DeVos E, Newberger E. Barriers to physician identification and treatment of family violence: lessons from five communities. *Acad Med.* 1997;72(suppl 1):S19-S25.
17. Green L, Kreuter M. *Application of PRECEDE/PROCEED in Community Settings: Health Promotion Planning: An Educational and Environmental Approach.* Mountain View, Calif: Mayfield Publishing Co; 1991.
18. Green L, Kreuter M, Deeds S, Partridge K. *Health Education Planning: A Diagnostic Approach.* Mountain View, Calif: Mayfield Publishing Co; 1980.
19. Walsh JME, McPhee SH. A systems model of clinical preventive care: an analysis of factors influencing patient and physician. *Health Educ Q.* 1992;19:157-175.
20. Johnson M, Elliot B. Domestic violence among family practice patients in mid-sized and rural communities. *J Fam Pract.* 1997;44:391-400.
21. Freund K, Bak S, Blackhall L. Identifying domestic violence in primary care practice. *J Gen Intern Med.* 1996;11:44-46.
22. Scott CS, Leaf D, Neighbor WE, Schaad DC, Brock DM, VanCitters RL. Preventive cardiology education and practice in residency training: residents' attitudes, perceptions, and practices. *Prev Cardiol.* 1990;6(suppl 2):60-69.
23. Lewis DC. Medical education for alcohol and other drug abuse in the United States. *CMAJ.* 1990;143:1091-1096.
24. Stein DH, Salive ME. Adequacy of training in preventive medicine and public health: a national survey of residency graduates. *Acad Med.* 1996;71:375-380.
25. Alpert E, Sege R, Bradshaw Y. Interpersonal violence and the education of physicians. *Acad Med.* 1997;72(suppl 1):S41-S50.
26. Goodman RA, Jenkins EL, Mercy JA. Workplace-related homicide among health care workers in the United States, 1980 through 1990. *JAMA.* 1994;272:1686-1688.
27. Foust D, Rhee KJ. The incidence of battery in an urban emergency department. *Ann Emerg Med.* 1993;22:583-585.
28. McLeer SV, Anwar RA. A study of battered women presenting in an emergency department. *Am J Public Health.* 1989;79:65-66.