BRIEF REPORT

An Assessment of Residents' Abilities to Detect and Manage Domestic Violence

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Despite increased awareness of domestic violence (DV), little is known about residents' preparedness to diagnose and respond appropriately to abuse victims. We designed a pilot study to examine this. Seventy-one internal medicine residents participated in a 10-station standardized patient-based Clinical Skills Assessment. Forty (56%) were male and 31 (44%) were female; 46 (65%) were PGY I; 63 (89%) were trained internationally. One station presented a woman with headaches, whose underlying issue was DV. Forty (56%) residents correctly diagnosed DV. Thirty referred the patient for DV counseling. Eighteen addressed immediate safety concerns, and 23 asked about child abuse. Forty-eight (68%) made 1 or more incorrect recommendations. Thirty-six (51%) ordered unnecessary tests. Residents who did not diagnose DV spent nearly twice as much per patient on work-up (mean, \$942.00), compared to those who diagnosed DV (mean, \$421.00). Use of certain interviewing skills appeared to promote elicitation of DV. Assessment-driven educational interventions could help trainees improve their recognition of DV and make appropriate and cost-effective management choices.

KEY WORDS: domestic violence; abuse; health care costs; residency training; clinical competence; medical education.
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Domestic violence (DV) is serious and widespread.¹ There are ramifications beyond individual suffering, including an increased prevalence of a variety of clinical symptoms and problems,² birth defects resulting from injury during pregnancy, child abuse concomitant with spousal abuse, and the potential to produce a cycle of violence in later generations.³ Physicians greatly underdetect DV.^{4,5} Education can improve trainees' knowledge, skills, and attitudes about DV.⁶

The Residency Review Committee in Internal Medicine suggests that all residents should receive DV instruction.⁷ Eighty percent of all family practice residency programs⁸

and 40% of primary care programs nationwide report teaching about DV.⁹ While 86% of U.S. medical school deans report teaching about DV, only 57% of medical students report learning about DV.¹⁰ Because little is known about medical residents' preparedness to diagnose and respond appropriately to victims of domestic abuse, we designed a pilot study using a standardized patient assessment. In addition, we examined whether appropriate diagnosis and management were associated with decreased costs of medical work-up.

METHODS

At MCP Hahnemann School of Medicine, we offer a 10-station standardized patient-based Clinical Skills Assessment designed to evaluate residents' abilities in outpatient medical care. Residency directors of 4 university-affiliated programs (2 urban, 2 suburban) elected to have their residents participate.

Standardized patients portrayed a variety of common illnesses. Each station lasted 10 minutes. One station depicted a scenario common to DV victims—a woman presenting with chronic headaches, who, if asked appropriate questions, would admit to having an abusive partner. The headache had the characteristics of a typical tension headache, without a history of head trauma or other features suggesting the need for organic work-up. She had no significant past medical history or history of substance abuse. Immediately after the interview, the standardized patient completed a fifteen-item content checklist about the resident's elicitation of information and counseling interventions. The checklist reflected consensus about essentials of the DV interview¹¹⁻¹³ (Table 1). We also employed a 9-item interviewing skills checklist (Table 2) evaluating data gathering and interpersonal skills, derived from the Brown Interview Checklist.¹⁴ Both checklists required simple yes/no responses. The standardized patient was trained to evaluate residents' use of these skills according to specific criteria, independent of whether residents elicited the history of DV. Immediately after the interview, residents were asked to list the patient's problems, likely etiologies, work-up, and treatment plan. Authors NV and DGC independently reviewed and categorized items on post-encounter notes, achieving an initial 99% agreement. We categorized the residents' interventions as appropriate, inappropriate/unnecessary, or potentially

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Table 1. Standardized Patient 15-Item Checklist

	%	n
Data-gathering content: I told the examiner/the examiner asked about...		
1. about my alcohol consumption.	20	14
2. about my husband's alcohol consumption.	65	46
3. whether my husband physically abuses me.	56	40
4. whether my husband verbally abuses me.	59	42
5. whether my husband abuses the children.	32	23
6. whether there was a gun in the house.	3	2
7. whether I have any social support.	32	23
8. whether I feel depressed.	46	33
9. whether I would hurt myself.	10	7
10. whether it was safe for me to return home tonight.	25	18
Information gathering content: the examiner...		
11. recognized that my husband was abusing me.	56	40
12. said a women's shelter or counseling service could help me.	69	49
13. recommended marital therapy.	27	19
14. recommended I bring my husband in to see the doctor.	32	23
15. asked me to come back in 6 weeks (or sooner).	92	65

dangerous, on the basis of expert guidelines.¹¹⁻¹³ As examples, potentially dangerous recommendations include suggesting couples counseling and telling the patient to leave her partner immediately. Abusers are more likely to become violent when the battered partner discloses DV to others. Also, directing a patient to leave undermines her ability to make choices for herself, and violence often escalates when victims try to leave.¹²

Using SPSS (a statistical software package) (Version 10; SPSS Inc., Chicago, Ill) we calculated frequencies of residents' responses on checklists and post-encounter notes. We used Pearson χ^2 to compare residents' responses on the content checklists with their responses on post-encounter notes, residents' skills checklist scores with elicitation of DV, and the responses of subgroups of residents on checklists (i.e., year of training, male versus female, international versus U.S. graduates). We calculated costs of tests or referrals ordered by residents on the basis of costs at a local university hospital.

RESULTS

Of 71 residents, 40 (56%) were male and 31 (44%) were female, aged 24 to 43. Forty-six (65%) were PGY I, 17 (24%) were PGY II, and 8 (11%) were PGY III; 8 (11%) were U.S. trained, while 63 (89%) were trained internationally.

Detection, Patient Assessment, and Management

Table 1 presents residents' performances on content checklist items that evaluate detection of DV, immediate safety concerns and other aspects of the patient's situation, and therapeutic recommendations. A review of the

post-encounter notes revealed the following: Of the 40 residents who correctly identified DV during the standardized patient encounter, 6 did not list DV as a problem on their post-encounter notes. Thirty of the 40 (75%) would have referred the patient for DV counseling. Among all residents, 48 (68%) made 1 or more incorrect recommendations; 24 (34%) of these were residents who had correctly diagnosed DV. Some of their recommendations could be dangerous: recommending marital therapy ($n = 19$; 27%), prescribing potentially addictive medicines ($n = 9$; 12%), telling the patient to leave her husband immediately ($n = 2$; 3%), or suggesting that the patient bring her abusive partner in to the doctor ($n = 23$; 32%). Inappropriate/unnecessary recommendations included the following: 10 residents (14%) referred the patient to a subspecialist (neurologist, ophthalmologist, etc.); 20 (28%) recommended 1 or more stress alleviating measures (i.e., relaxation, massage, stress counseling); 3 (4%) referred the patient to a substance abuse center. On the other hand, helpful recommendations included: suggesting the patient develop a safety plan (4; 6%), giving the patient the phone number of a battered women's shelter (7; 10%), and requesting follow-up in less than 1 month (30; 42%).

Cost

In post-encounter notes, 36 (51%) residents ordered a variety of tests, radiographic and laboratory combined. Specifically, 20 (28%) ordered 1 or more laboratory tests (CBC, sedimentation rate, electrolytes, thyroid function), and 23 (32%) ordered 1 or more radiographic tests (CT, MRI, or x-rays). To work up the patient's headache, 36 (51%) ordered unnecessary tests. There was a difference in test ordering behavior between those residents who diagnosed DV and those who did not: of the 40 residents who correctly diagnosed DV, 13 (32%) would order tests. In

Table 2. Resident's Skills Checklist

	%	n
Data gathering skills: did the examiner...		
1. allow me to finish my opening statement without interruption?	100	71
2. establish time line from beginning to present (narrative thread)?	94	67
3. keep asking for more info until I got all HPI symptoms out?	56	40
4. repeat/restate segments of what I've said - at least 1 time?	99	70
5. avoid multiple questions?	89	63
6. elicit my concerns?	58	41
Interpersonal skills: Did the examiner...		
1. name the emotion I've expressed or shown ("you seem upset/angry")?	44	31
2. offer understanding of the emotion expressed or shown?	56	40
3. offer partnership, reassurance, support, or praise?	61	43

HPI, history of present illness.

contrast, of the 31 residents who did not ask about DV, 23 (75%) would order tests. The mean amount spent on tests by those in the group who asked about DV was \$421 per resident, whereas those who did not ask about DV spent \$942 per resident.

Use of Interviewing Skills

Residents who employed 5 or more of 9 interviewing skills were more likely to elicit the history of DV than those who did not employ these skills (Table 2). Women residents tended to achieve higher scores in data-gathering items (content checklist; $P = .062$). There were no significant differences in residents' responses comparing year of training or international versus U.S. graduates.

DISCUSSION

Standardized patient evaluations are widely accepted as measures of clinical abilities.¹⁵ In our study, this method appears to be effective for identifying gaps in residents' knowledge and skills in detecting and managing victims of domestic violence. Standardized patient assessments may highlight programmatic educational needs and have heuristic value for individual residents. Below, we discuss identified deficits in residents' knowledge and skills in working with DV victims, and potential implications for training and research.

Detection

Fifty-six percent of our resident sample identified DV in the standardized patient encounter. The majority of these residents demonstrated deficiencies in their approaches, including suggesting inappropriate work-up and care that could be dangerous and/or expensive. We discuss residents' performances and the implications for education and further study.

Patient Assessment

Assessing the seriousness of violence and evaluating patients' immediate versus long-term danger are critically important.¹¹ In our study, a minority of residents asked about immediate safety concerns, if there was a gun in the house, whether the patient would hurt herself, or if it was safe to return home. Because of a high incidence of concomitant child abuse with DV,³ physicians should inquire about child abuse if DV is elicited. Forty-two percent of residents who elicited DV did not ask about child abuse, indicating their lack of knowledge about this association.

Management

Following a diagnosis of DV, appropriate counseling and other interventions can prevent needless suffering while initiating a healing process. Referring a patient for counseling is the core of DV management.¹² In reviewing

post-encounter notes, 30/40 residents (75%) who elicited DV would have referred the patient for DV counseling. However, the majority of residents made 1 or more incorrect recommendations, some of which could lead to escalation of violence.¹² Victims of DV have an increased risk of depression compared to women without partner abuse,¹ and are at increased risk of substance abuse and suicide.⁴ Forty-six percent of our sample asked about depression, but only 7 (10%) asked about potential suicide. Furthermore, some prescribed potentially addictive medicines that might compromise the patient's judgment, rendering her more vulnerable to abuse. Twenty (28%) recommended 1 or more stress-alleviating measures (i.e., relaxation, massage, stress counseling), which in some instances, might be appropriate. However, these suggestions may trivialize the woman's suffering, sending a message that she should endure her pain and accept it. A small minority of residents made helpful recommendations, including developing a safety plan, giving the patient the phone number of a battered women's shelter, and requesting follow-up in less than 1 month.

Cost

DV is costly. Medical costs due to DV between 1992 and 1996 were \$61,800,000 annually.¹⁶ Results from a survey of Fortune 1000 company executives indicate that they believe the financial performance of their companies is negatively impacted by DV in lost productivity, attendance, and increased insurance costs.¹⁷ Furthermore, DV victims have an increased consumption of health care resources.¹⁸ In our sample, 36 (51%) of residents ordered unnecessary tests. Surprisingly, 13 (32%) of these were residents who had correctly diagnosed the patient. In addition, 10 residents (14%) referred the patient to subspecialists unrelated to the DV diagnosis. Unnecessary tests can cause the patient discomfort and expenses beyond the actual tests (child care arrangements, transportation), can lead to further unnecessary testing due to false positives, and increase administrative expenses. A majority of residents in our sample who diagnosed DV did not order any tests ($n = 27$; 68%). However, of the residents who diagnosed DV and ordered tests, the mean spent on work-up was \$421, still less than half the amount spent by those who did not ask about DV at all. Clearly, DV training should include attention to appropriate and cost-effective work-up.

Use of Interviewing Skills

Residents who utilized certain interviewing skills were more likely to elicit a history of DV. These skills were: attention to the timeline of symptom development, repeatedly asking the patient to say more about the symptoms, and explicitly asking patients about their concerns. It is not surprising that residents who elicited the history of DV offered understanding and support more

frequently than those residents who did not, although use of these empathic skills may have promoted disclosure. Although more study is needed, it seems likely that attention to teaching certain medical interviewing skills could facilitate greater recognition of DV in medical practice.

Limitations

This is a pilot study of a convenience sample of residents from 4 programs in Philadelphia, limiting the generalizability of our findings. In addition, most of the residents in our sample ($n = 63$; 89%) graduated from international medical schools. In 1997, international graduates made up 26% of the entire Graduate Medical Education population, 40% of internal medicine programs, and 48% of all internal medicine subspecialties.¹⁹ As practicing physicians, international graduates will see many patients with DV and need to be capable of diagnosing and managing these patients. Recognition of DV may be more difficult when cultural differences exist between patients and physicians. This should be an area for further study. Another potential limitation is the use of a standardized patient to represent a victim of DV. Residents' performances with a standardized patient may not correlate with their actual clinical practice. It would be optimal to repeat this pilot with a larger and more representative sample of residents, and to correlate their performances with clinical practice.

Conclusions

Including a DV case in a standardized patient exercise can be a useful method for assessing residents' abilities in detecting and managing DV, as well as in evaluating the efficacy of training interventions. It may be important to emphasize helpful, unnecessary, and potentially dangerous interventions. A majority of women would tell their doctors about abuse and believe that doctors should routinely ask about DV.²⁰ Most physicians also believe that it is part of their role to provide assistance to victims of DV.²¹ Assessment-driven educational interventions, with attention to interviewing skills, could help trainees improve their recognition of DV and make the best management choices, including appropriate and cost-effective work-up.

REFERENCES

1. Bauer HM, Rodriguez MA, Perez-Stable EJ. Prevalence and determinants of intimate partner abuse among public hospital primary care patients. *J Gen Intern Med.* 2000;15:811-7.
2. 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;123:737-46.
3. Department of Health and Human Services. Office of Women's Health Report. Domestic Violence Facts. Washington, DC: Bureau of Primary Care; 1997.
4. Kurz D, Stark E. Not-so-benign neglect: the medical response to battering. In: Yllo K, Bograd M, eds. *Feminist Perspectives on Wife Abuse*. Beverly Hills, Calif: Sage Publications; 1988:249-66.
5. Freund KM, Bak SM, Blackhall L. Identifying domestic violence in primary care practice. *J Gen Intern Med.* 1996;11:44-6.
6. Kripke EN, Steele G, O'Brien MK, Novack DN. Domestic violence training program for residents. *J Gen Intern Med.* 1998;13:839-41.
7. American Medical Association. Graduate Medical Education Directory. Program Requirements for Residency Education in Internal Medicine-2000-2001. Chicago, Ill: American Medical Association; 2000:93-101.
8. Rovi S, Mouton CP. Domestic violence education in family practice residencies. *Fam Med.* 1999;31:398-403.
9. Staropoli CA, Moulton AW, Cyr MG. Primary care internal medicine training and women's health. *J Gen Intern Med.* 1997;12:129-31.
10. Alpert EJ, Tonkin AE, Seeherman AM, Holtz HA. Family violence curricula in U.S. medical schools. *Am J Prev Med.* 1998;14:273-82.
11. Stringham P. Domestic violence. *Prim Care.* 1999;26:374-85.
12. Alpert EJ. Violence in intimate relationships and the practicing internist: new "disease" or new agenda. *Ann Intern Med.* 1995;123:774-81.
13. Sassetti MR. Domestic violence. *Prim Care.* 1993;20:289-305.
14. Novack DH, Dube C, Goldstein MG. Teaching medical interviewing, a basic course on interviewing and the physician-patient relationship. *Arch Intern Med.* 1992;152:1814-20.
15. Holmboe ES, Hawkins RE. Methods for evaluating the clinical competence of residents in internal medicine: a review. *Ann Intern Med.* 1998;129:42-8.
16. Greenfield LA, Rand MR, Craven D, et al., eds. Bureau of Justice Statistics Factbook. Washington, DC: U.S. Department of Justice; March 1998:NCJ-167237.
17. U.S. Department of Labor. Women's Bureau. 1994. Working Women Count! A Report to the Nation. Washington DC: U.S. Department of Labor; 1994.
18. Wisner CL, Gilmer TP, Saltzman LE, Zink TM. Intimate partner violence against women. do victims cost health plans more? *J Fam Pract.* 1999;48:439-43.
19. Dunn MR, Miller RS, Richter TH. Graduate medical education, 1997-1998. *JAMA.* 1998;280:809-12.
20. Caralis PV, Musialowski R. Women's experiences with domestic violence and their attitudes and expectations regarding medical care of abuse victims. *South Med J.* 1997;90:1075-80.
21. Garimella R, Plichta SB, Houseman C, Garzon L. Physician beliefs about victims of spouse abuse and about the physician role. *J Women's Health Gend Based Med.* 2000;9:405-11.

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