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Prevalence of Intimate Partner Abuse in Women Treated at Community Hospital Emergency Departments

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Context.—The majority of prior studies examining intimate partner abuse in the emergency department (ED) setting have been conducted in large, urban tertiary care settings and may not reflect the experiences of women seen at community hospital EDs, which treat the majority of ED patients in the United States.

Objective.—To determine the prevalence of intimate partner abuse among female patients presenting for treatment in community hospital EDs and describe their characteristics.

Design.—An anonymous survey conducted from 1995 through 1997 inquiring about physical, sexual, and emotional abuse.

Setting.—Eleven community EDs in Pennsylvania and California.

Participants.—All women aged 18 years or older who came to the ED during selected shifts.

Main Outcome Measures.—Reported acute trauma from abuse, past-year physical or sexual abuse, and lifetime physical or emotional abuse.

Results.—Surveys were completed by 3455 (74%) of 4641 women seen. The prevalence of reported abuse by an intimate partner was 2.2% (95% confidence interval [CI], 1.7%-2.7%) for acute trauma from abuse, 14.4% (95% CI, 13.2%-15.6%) for past-year physical or sexual abuse, and 36.9% (95% CI, 35.3%-38.6%) for lifetime emotional or physical abuse. California had significantly higher reported rates of past-year physical or sexual abuse (17% vs 12%, $P < .001$) and lifetime abuse (44% vs 31%, $P < .001$) than Pennsylvania. Logistic regression modeling identified 4 risk factors for reported physical, sexual, or acute trauma from abuse within the past year: age, 18 to 39 years (odds ratio [OR], 2.2; 95% CI, 1.7-3.0); monthly income less than \$1000 (OR, 1.7; 95% CI, 1.3-2.1); children younger than 18 years living in the home (OR, 2.0; 95% CI, 1.5-2.6); and ending a relationship within the past year (OR, 7.0; 95% CI, 5.5-8.9).

Conclusion.—If the prevalence of abuse in community hospitals throughout the United States is similar to the range of prevalence estimates found in this study, then heightened awareness of intimate partner abuse is warranted for patients presenting to the ED.

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THE IDENTIFICATION and treatment of abused women by emergency department (ED) personnel have received increased attention recently because of the ED's potential role in preventing further abuse. For many abused women, the hospital ED is the first and sometimes the only contact they have with health care clinicians. Further-

more, when abused women are not identified, they are susceptible to increased health problems compared with women who are not abused as measured by more frequent ED visits, additional hospitalizations, and increased use of outpatient health care facilities.^{1,2}

Several studies have suggested that intimate partner abuse (IPA) is common among women who present for treatment in EDs. There are discrepancies in the literature, however, with regard to the number of women treated at the ED for abuse annually. The earliest studies reported that between 6% and 30% of women came to the ED because of symptoms related to abuse.³⁻⁵ Two recent estimates, using stricter definitions, placed the acute incidence of physical trauma from abuse at 2.7% for all women with a current partner who present to an ED⁶ and 3.1% for women aged 19 to 65 years presenting to 10 midwestern EDs.⁷ The lifetime prevalence of IPA reported by 4 of these studies ranged between 11% and 54%.³⁻⁶ It has also been reported that the ED staff detect as few as 5% of battered women presenting to the ED.³ A number of factors contribute to the marked differences in the prevalence rates of IPA for women treated in the ED. The lack of uniform definitions for the identification of IPA, variations in instruments for screening abuse, and the absence of longitudinal data, as well as different ED patient populations and different time periods for which the results are reported, all inhibit the ability to make comparisons across studies. For example, 1 study reported incidence and prevalence rates only for women who acknowledged that they currently had an intimate partner and included stress from living under abusive conditions as well as injury in their definition of IPA,⁶

whereas other studies included probable and suggestive cases determined from criteria applied to a medical record review^{4,7} and another limited the population to a highly selective trauma patient population.⁶

The majority of prior studies examining IPA in the ED setting have been conducted at urban tertiary care hospitals. Typically, these hospitals are the primary teaching hospitals of medical schools, have multiple residency training programs, and serve as regional referral institutions and as level I trauma centers. The prevalence of IPA and experience of women seeking treatment at these hospitals may not reflect the large number of community hospital EDs, which treat the majority of ED patients in this country. Community hospital EDs typically serve a more limited population base, are located in diverse geographic regions (eg, urban, suburban, rural), do not treat large volumes of severe trauma cases, have no residency programs, and have social service programs available for referral only on weekdays during daylight hours. The prevalence of abuse at smaller community hospitals might be expected to differ from the prevalence observed at larger tertiary hospitals because general rates of violence are higher in urban areas.⁸

In an effort to improve our understanding of the prevalence of injuries from IPA in women presenting to community hospital EDs, we conducted a prospective multisite study involving 11 community hospitals in Pennsylvania and California. This article presents findings of the prevalence rates of abuse and characteristics of the abused women.

METHODS

A survey designed to identify the prevalence of domestic violence was administered to women 18 years and older who were treated at 6 community hospital EDs in Pennsylvania and 5 in California. These 11 sites were randomly selected from a list of hospitals that had previously agreed to serve as field-test sites for the evaluation of a national training program to improve ED response to abused women. However, none of the 11 hospitals had received any training prior to the initiation of this study. Midsize hospitals (20 000-40 000 ED visits per year) that were not tertiary care centers and not designated as level I, II, or III trauma centers were chosen for this evaluation. Three of the hospitals were located in urban areas, 4 in suburban areas, and 4 in rural areas.

Survey Instrument

The Patient Satisfaction and Safety Survey (PSSS) was used to screen the

ED patients for IPA and consisted of 18 short questions (largely yes or no questions). It included demographic information on age, race, education, children, monthly income, and relationship status and questions inquiring about the patients' perception of the medical care they received from the ED staff that day. Also within the PSSS were 4 questions that identified patients either currently in an abusive relationship or with a history of physical, sexual, and/or emotional abuse by an intimate partner. The abuse questions were obtained from the Abuse Assessment Screen, a screening instrument first developed by McFarlane et al and used by other researchers to identify abused women.⁹⁻¹¹ Criterion-related validity has been supported through significant differences to responses on the Abuse Assessment Screen from abused vs nonabused women when compared with the Index of Spouse Abuse, the Conflicts Tactic Scale, and the Danger Assessment.¹² All patient responses on the PSSS are anonymous.

Data Collection

Data were collected by female nurses who were members of each hospital's ED staff during 8-hour or 12-hour evening shifts between Friday and Tuesday so that both weekends and weekdays were represented. The largest numbers of patients traditionally tend to present to the ED on these days and during these shifts. The nurse interviewers administered the PSSS on the days they were not working, after being trained in the administration of a consistent verbal script to recruit the patients. The patients were informed that the survey was completely voluntary and anonymous, that it had nothing to do with the care they were receiving that day, and that the survey would not be seen by the physicians or nurses who were treating them. All information was kept confidential from the hospital staff. Both coordinating institutions in Pennsylvania and California received approval from their respective human subjects review boards.

Case Selection and Survey Administration

All female patients 18 years and older who entered the ED during the monitored shifts were entered on the study intake sheet. The interviewer assessed the appropriateness of administering the PSSS to each patient. A woman was considered ineligible if she was younger than 18 years; she could not communicate with the nurse interviewer; she was too ill, injured, or confused to respond to the questions; or she was never alone from family or friends. Patients who were initially intoxicated or too dis-

tressed were approached later during their admission to respond to the survey. Spanish versions of the PSSS were provided to patients at California hospitals if they could not read the English version. If the patient refused the survey after 2 attempts, no further effort was made to recruit her. As a safety precaution for the patient, informed consent and administration of the PSSS were conducted only when women were alone in the examination room. No friends, family members, or medical staff were present during its administration. Although the PSSS was designed to be self-administered, the interviewer assessed whether each patient could complete it alone or needed to have it read to her because of pain, poor vision, or low reading ability.

Definitions

A battered woman was defined as one who had been injured by a husband, intimate partner, or ex-intimate partner by physical or sexual assault. Patients were classified into 1 of 6 categories of IPA based on their response to the questions from the PSSS: (1) *Acute trauma from abuse* was defined as answering yes to the question, "Did you come to the emergency department today because you were hurt by your husband, boyfriend, or partner (or ex-husband, ex-boyfriend, or ex-partner)?" (2) *Past-year prevalence of physical abuse* was defined as answering yes to the question, "Within the last year, have you been pushed, shoved, hit, slapped, kicked, or otherwise physically hurt by your husband, boyfriend, or partner (or ex-husband, ex-boyfriend, or ex-partner)?" (3) *Past-year prevalence of sexual abuse* was defined as answering yes to the question, "Within the past year, has your husband, boyfriend, or partner forced you to have sexual activities (or ex-husband, ex-boyfriend, or ex-partner)?" (4) *Past-year prevalence of physical or sexual abuse* was defined as answering yes to either question 2 or 3. (5) *Lifetime prevalence of abuse* was defined as answering yes to the question, "Have you ever been emotionally or physically abused by your husband, boyfriend, or partner (or ex-husband, ex-boyfriend, or ex-partner)?" (6) *No history of abuse* was defined as any case in which the patient answered no to all the questions on abuse.

Medical Record Review

Medical records were abstracted for all women entered on the intake sheet. This includes women who were ineligible or missed or who refused to complete the survey. The medical record abstraction provided information on patient demo-

graphics, discharge diagnoses, and disposition. The documentation was reviewed to identify any patient screening for IPA prior to being seen by the physician and for IPA identification by any ED personnel during the course of the visit. Because of the anonymity of the PSSS, the patient's responses to the questions could not be matched to the data abstracted from the medical records. Comparisons between these 2 data sets were conducted using only the summary data of comparable variables.

Data Analysis

Using the statistical software SPSS, Version 7.5 (SPSS Inc, Chicago, Ill), prevalence and 95% confidence intervals (CIs) were calculated for 3 categories of abuse: acute trauma from abuse, past-year prevalence of physical or sexual abuse, and lifetime prevalence of emotional or physical abuse by selected patient characteristics. Group differences and crude odds ratios (ORs) with 95% CIs were assessed for each category of abuse using a 2-tailed χ^2 test or the Fisher exact test with significance set at $\alpha=.05$. Separate logistic regression models were obtained for lifetime history of abuse and for past-year abuse (physical, sexual, or acute trauma). In both cases, the regression coefficients for the predictors were estimated by stepwise logistic regression with the criterion for variable entry being $\alpha<.05$ based on the likelihood ratio statistic. The model generated by the stepwise procedure was further reviewed for goodness of fit using the Hosmer-Lemeshow *c* statistic and for psychosocial plausibility. Once accepted, the final model was used to estimate adjusted ORs and 95% CIs. The possibility remained that predictor variables excluded by the stepwise procedure might still have possessed a confounding effect on the predictors remaining in the final model. To examine this potential confounding, we compared the regression coefficients and ORs of predictors in the final model with those coefficients and ORs of the same variables with the previously excluded predictors forced into the model. Substantial changes in the coefficients or in the ORs between the final model and the forced model would indicate that the excluded variables were confounders and should be returned to the final model.

RESULTS

A total of 4641 patients were seen at the 11 EDs during 3 waves of data collection conducted between April and August 1995, January and June 1996, and January and May 1997 (309 shifts; mean, 15 women per shift). Overall, 3455 (74%) of the 4641 patients agreed to complete

Table 1.—Selected Characteristics of Respondents at 11 Community Hospital Emergency Departments in California and Pennsylvania, 1995-1997

Characteristics	% of Total Cohort (N = 3455)	% of Pennsylvania Respondents (n = 1917)	% of California Respondents (n = 1538)	P Value*
Age, y				
18-39	49	43	56	.001
40-59	25	24	27	
60-79	18	23	13	
≥80	8	10	4	
Race or ethnicity				
White	73	84	60	.001
African American	16	14	17	
Hispanic	7	0.6	15	
Other	5	1.3	8	
Language				
English	94	98	89	.001
Spanish	4	1	8	
Other	2	1	3	
Monthly income				
<\$1000	48	48	47	...
≥\$1000	52	52	53	
Education				
<High school graduate	26	28	23	.001
≥High school graduate	74	72	77	
Children <18 years old living in the home				
Yes	42	37	49	.001
No	58	63	51	
Living situation				
Married or live with a partner	48	48	47	...
Live alone and have a partner	17	17	18	
Live alone and have no partner	33	33	33	
Ended a relationship in past year				
Yes	20	16	24	.001
No	80	84	76	
Fear of partner or ex-partner				
Yes	10	9	12	.04
No	90	91	88	
Disposition				
Discharged home	82	76	90	.001
Admitted or transferred	17	23	9	
Other	1	1	1	

*There was a significant difference between Pennsylvania and California respondents. Ellipses indicate data not applicable.

the PSSS. Of the patients not screened for IPA, 16% were ineligible, 6% refused, and 4% were missed by the nurses. Ineligible patients consisted largely of elderly patients with cognitive deficits or severely ill and injured patients who were admitted directly to the hospital without being interviewed. The respondents were significantly younger (mean age, 45 years vs 57 years; $P<.001$) and were less likely to be admitted directly to the hospital (17% vs 34%, $P<.001$) than nonrespondents. There were no differences between the 2 groups with respect to race or ethnicity or with whom they came to the ED. The medical record review showed that 34% of the patients were seen for an unintentional injury and 7% for treatment of either an intentional injury or for an injury in which the intent was uncertain. Although there were twice as many weekend shifts as weekday shifts monitored, there was no effect on recruitment (eg, number of refusals or ineligible patients) when week-

end and weekday survey administration were compared.

Table 1 shows the demographic characteristics for the respondents by state. A number of disparities existed between the California and Pennsylvania respondents. The Pennsylvania population was significantly older (mean age, 48 years vs 41 years; $P<.001$), whereas California had a larger nonwhite population due principally to a larger Hispanic population (15% vs 0.6%, $P<.001$). English was the principal language spoken by 94% of the patients, although Spanish was spoken by 8% of the California population. Self-reported family income was less than \$1000 per month for 48% of the total population. The California population had significantly fewer ED patients admitted to the hospital than Pennsylvania (9% vs 23%, $P<.001$) and 24% of California women reported that they had ended a relationship within the past year compared with 16% of Pennsylvania women ($P<.001$).

Table 2.—Prevalence of Intimate Partner Abuse by Selected Characteristics of Respondents and Category of Abuse, Pennsylvania and California, 1995-1997*

Characteristics	Acute Trauma From Abuse (n=75)		Past-Year Physical or Sexual Abuse (n=489)		Lifetime Emotional or Physical Abuse (n=1259)	
	%	P Value	%	P Value	%	P Value
All women	2.2	...	14.4	...	36.9	...
State						
California	2.4	.3	17.4	.001	44.2	.001
Pennsylvania	2.1		12.0		31.2	
Age, y						
18-39	2.9	.006	23.6	.001	44.9	.001
All others	1.6		5.7		29.4	
Race or ethnicity						
African American	3.1	.04†	18.3	.001‡	45.6	.001†
White	1.9		12.7		34.4	
Hispanic	1.7		19.1		35.2	
All others	4.9		23.4		51.4	
Monthly income						
<\$1000	3.1	.002	18.7	.001	42.3	.001
All others	1.4		10.7		34.5	
Education						
<High school graduate	2.4	.3	14.4	.5	33.8	.02
≥High school graduate	2.1		14.3		37.9	
Language						
English	2.2	.4	14.4	.5	37.6	.001
All others	2.7		13.9		26.2	
Living situation						
Live alone and have a partner	4.1	.001	23.6	.001	49.3	.001
All other living situations	1.8		12.6		34.8	
Children <18 years old living in the home						
Yes	3.3	.001	21.6	.001	47.0	.001
No	1.5		9.1		29.7	
Ended relationship in past year						
Yes	6.1	.001	43.3	.001	69.4	.001
No	1.3		7.4		29.5	
Fear of partner or ex-partner						
Yes	13	.001	63.5	.001	92.8	.001
No	1		8.4		30.1	

*Ellipses indicate data not applicable.

†African American rates significantly greater than white and Hispanic rates.

‡African American and Hispanic rates significantly greater than white rates.

Table 2 presents selected characteristics of the respondents to the PSSS for each category of abuse. Of the 3455 respondents, 75 (2.2%; 95% CI, 1.7%-2.7%) reported that they came to the ED because of acute trauma from abuse. The medical record abstraction identified only 35 cases with physical abuse documented in the patient record, 33 of which involved patients who completed the PSSS and 2 who were in the nonrespondent group. This would correspond to a documented abuse identification rate of 33 (44%) of 75. A total of 12.6% (95% CI, 11.5%-13.8%) of the respondents reported that they had been in a physically abusive relationship within the past year and 4.6% (95% CI, 3.8%-5.2%) acknowledged having been forced to have sexual activities in the past year, which yielded a combined prevalence for past-year physical or sexual abuse of 14.4% (95% CI, 13.2%-15.6%). The percentage of the population who reported that they had been either emotionally or physically abused by an intimate partner during their lifetime was 36.9% (95% CI, 35.3%-38.6%). The prevalence rates for abuse

varied by state, with California patients reporting significantly higher rates of past-year physical abuse (14.9% vs 10.8%, $P < .001$), past-year sexual abuse (5.6% vs 3.7%, $P < .001$), and lifetime history of abuse (44.3% vs 31.0%, $P < .001$) than Pennsylvania patients. There was no difference between Pennsylvania and California for the prevalence of acute trauma from abuse.

The bivariate analyses in Table 2 show that 7 variables were associated with significantly higher rates of all 3 categories of abuse. The 7 variables included women aged 18 to 39 years, African American women, self-reported monthly income of less than \$1000, living alone and having a current intimate partner, having a child younger than 18 years living in the home, ending a relationship within the past year, and current fear of a partner or ex-partner. Women who spoke English and women with a high school education or higher were associated only with higher rates of lifetime emotional or physical abuse. With respect to the living situations of the women seen at the ED for acute trauma from abuse, 49% were ei-

ther married or living with an intimate partner, 32% reported that they lived alone but had a current intimate partner, and 18% reported that they lived alone and had no intimate partner.

Rates of abuse were also examined by each hospital's urban, suburban, or rural status. There were no significant differences among the 3 groups for lifetime abuse (urban, 39%; suburban, 36%; rural, 35%) or past-year physical or sexual abuse (urban, 14%; suburban, 16%; rural, 13%). Suburban community hospitals had the highest rate of acute trauma from abuse (2.8%), slightly higher than urban hospitals (2.1%) and significantly higher than rural hospitals (1.3%, $P = .01$).

Logistic regression modeling identified 4 independent risk factors for the prevalence of any reported physical abuse within the past year for this population (physical, sexual, or acute trauma from abuse) (Table 3): age between 18 and 39 years (OR, 2.2; 95% CI, 1.7-3.0), monthly income of less than \$1000 (OR, 1.7; 95% CI, 1.3-2.1), having a child younger than 18 years living in the home (OR, 2.0; 95% CI, 1.5-2.6), and ending a relationship within the past year (OR, 7.0; 95% CI, 5.5-8.9). None of the variables excluded from the final model demonstrated a confounding effect on the ORs of the significant risk factors.

The logistic regression analysis also identified 7 independent risk factors for reported lifetime emotional or physical abuse in this population (Table 4): African American race (OR, 1.3; 95% CI, 1.04-1.6), monthly income of less than \$1000 (OR, 1.4; 95% CI, 1.1-1.6), education level of a high school degree or higher (OR, 1.2; 95% CI, 1.0-1.5), English-language speaking (OR, 2.6; 95% CI, 1.7-3.9), having a child younger than 18 years living in the home (OR, 1.9; 95% CI, 1.6-2.2), ending a relationship in the past year (OR, 4.8; 95% CI, 3.9-5.9), and California residency (OR, 1.6; 95% CI, 1.4-1.9).

COMMENT

To our knowledge, this is the first prospective study that quantifies the prevalence of abuse in a sample of female patients presenting to midsize community hospital EDs. The percentage of female patients who acknowledged that they came to the ED because of injuries from abuse by an intimate partner or ex-partner was 2.2%. This is similar to the results from 2 other recent ED-based studies that cite rates from abuse of 2.7% for women with current partners⁶ and 3.1% for women aged 19 to 65 years.⁷

Two of the strongest associations for both lifetime and past-year abuse in this study were having ended a relationship within the past year and being in fear of

a current or ex-intimate partner. To our knowledge, this is believed to be the first study in the literature that has reported a significant association between ending a relationship within the past year and physical abuse. Additionally, 18% of the women in our study who reported being at the ED for acute trauma from abuse also said they were living alone and did not have an intimate partner. This could reflect abuse inflicted by an ex-partner, which represents an important and underinvestigated category of domestic violence.^{13,14} These findings reinforce those of Feldhaus et al,¹⁵ who reported that a short 3-question screen for IPA in ED patients that focuses on a woman's perception of her safety, in terms of both her current and previous relationships and the existence of past-year physical abuse, were sensitive enough to identify between 65% and 71% of the abused women identified on the Index of Spouse Abuse and Conflict Tactics Scale, respectively. Questions that address both a woman's fear of a partner or ex-partner and the perception of entrapment within a relationship have potential value both as initial screening questions and as exploratory probes for potential abuse victimization. It has been previously reported that many patients seen at 1 ED for abuse were there for treatment not directly related to trauma.³ Even abused women may not make the connection between abuse and the physical symptoms they are experiencing. Broadening the scope of IPA screening in the ED by moving beyond screening the relatively low percentage of women who present with acute trauma from abuse to identifying women who have been in physically abusive relationships within the past year has the potential to identify a larger population of at-risk women prior to their experiencing the degree of physical violence that results in medically treated injuries.

Several limitations must also be noted in this study. Multivariate analyses showed that there was a significantly higher prevalence of lifetime abuse reported by the California population even after adjustment for other variables such as age and income. Differences in past-year physical abuse between the 2 states were no longer significant, although borderline, after adjusting for the other covariates. This may reflect actual differences between the 2 patient populations or a greater sensitivity toward domestic violence in California. In random sample survey data, Californians were significantly more likely than the rest of the United States to see IPA as a very important issue and to report knowing someone who was ever abused or ever being abused themselves.¹⁶

Table 3.—Crude and Adjusted ORs for Predictors of Past-Year Physical, Sexual, or Acute Trauma From Abuse, Pennsylvania and California, 1995-1997*

Characteristics	Crude OR (95% CI)	Adjusted OR (95% CI)
Age, y		
18-39	5.6 (4.3-7.6)	2.2 (1.7-3.1)
≥40	1.0 (Referent)	1.0 (Referent)
Race or ethnicity		
African American	1.3 (1.1-1.7)	1.05 (0.8-1.3)†
All other women	1.0 (Referent)	1.0 (Referent)
Monthly income		
<\$1000	1.9 (1.5-2.4)	1.7 (1.3-2.1)
≥\$1000	1.0 (Referent)	1.0 (Referent)
Children <18 years old living in the home		
Yes	2.8 (2.3-3.5)	2.0 (1.5-2.6)
No	1.0 (Referent)	1.0 (Referent)
Living situation		
Live alone and have a partner	2.7 (1.9-3.9)	1.08 (0.8-1.4)†
All other living situations	1.0 (Referent)	1.0 (Referent)
Ended a relationship in past year		
Yes	9.7 (7.8-12.1)	7.0 (5.5-8.9)
No	1.0 (Referent)	1.0 (Referent)
Fear of partner or ex-partner		
Yes	17.6 (13.6-22.7)	...
No	1.0 (Referent)	...
State		
California	1.4 (1.2-2.8)	1.2 (0.9-1.5)†
Pennsylvania	1.0 (Referent)	1.0 (Referent)

*N=505. OR indicates odds ratio; CI, confidence interval; and ellipses, data not applicable.

†Data not included in the final model of best fit.

Table 4.—Crude and Adjusted ORs for Predictors of Lifetime Emotional or Physical Abuse, Pennsylvania and California, 1995-1997*

Characteristics	Crude OR (95% CI)	Adjusted OR (95% CI)
Age, y		
18-39	2.0 (1.7-2.3)	0.9 (0.8-1.1)†
≥40	1.0 (Referent)	1.0 (Referent)
Race or ethnicity		
African American	1.5 (1.3-1.9)	1.3 (1.04-1.6)
All other women	1.0 (Referent)	1.0 (Referent)
Monthly income		
<\$1000	1.4 (1.2-1.6)	1.4 (1.1-1.6)
≥\$1000	1.0 (Referent)	1.0 (Referent)
Education		
<High school graduate	1.0 (Referent)	1.0 (Referent)
≥High school graduate	1.2 (1.02-1.4)	1.2 (1.0-1.5)
Language		
English	1.7 (1.2-2.4)	2.6 (1.7-3.9)
Spanish	1.0 (Referent)	1.0 (Referent)
Children <18 years old living in the home		
Yes	2.1 (1.8-2.4)	1.9 (1.6-2.2)
No	1.0 (Referent)	1.0 (Referent)
Living situation		
Live alone and have a partner	1.7 (1.2-2.2)	1.05 (0.8-1.2)†
All other situations	1.0 (Referent)	1.0 (Referent)
Ended relationship in past year		
Yes	5.4 (4.5-6.5)	4.8 (3.9-5.9)
No	1.0 (Referent)	1.0 (Referent)
Fear of partner or ex-partner		
Yes	29.9 (19.7-45.2)	...
No	1.0 (Referent)	...
State		
California	1.7 (1.4-2.2)	1.6 (1.4-1.9)
Pennsylvania	1.0 (Referent)	1.0 (Referent)

*N=1259. OR indicates odds ratio; CI, confidence interval; and ellipses, data not applicable.

†Data not included in the final model of best fit.

Self-reported behavior rather than direct observation can also lead to underreporting, perhaps because of personal sensitivity to the subject of IPA. Because the patients were asked to recall physical

and sexual abuse over a 1-year period, our study may have overestimated or underestimated the prevalence rates of physical abuse because of recall bias.¹⁷ There is also the possibility for selection

bias because abuse rates observed for the respondents could differ from that of the nonrespondents. However, very few women (5%) refused to be interviewed and the ineligible patients consisted largely of elderly patients with cognitive deficits or severely ill and injured patients who were admitted directly to the hospital without being interviewed. Those patients who were ineligible because of severe injury or illness could potentially have had higher rates of abuse. Although this was not detected in medical record review, abuse was generally underreported in the medical record review.

Findings from this study support evidence from previous studies that a significant number of women are seen in EDs who have experienced IPA, both during the past year and at any point in their lifetime, and that the problem is not limited to large, urban, or tertiary care hospitals. They also illustrate that although community hospitals are encountering significant numbers of abused women, they are not identifying or documenting the abuse. Less than half

of the women in our study who reported coming to the ED because of injuries from abuse were documented as victims of abuse by the ED staff. Emergency care providers in all health care settings should understand the widespread prevalence of this problem and establish protocols that initiate appropriate screening for IPA and address timely plans of action for the treatment, documentation, and referral of IPA cases to prevent recidivism and further health care problems.

Future studies need to move beyond descriptive studies toward analytic epidemiological studies of the natural history of IPA, the health care use patterns of abused women, the attitudes and convictions of IPA perpetrators as they relate to ongoing abuse, and the effectiveness of training programs to improve ED recognition and referral of IPA cases.¹⁸ More information is necessary on how people's attitudes and beliefs about IPA may contribute to condoning this behavior. Finally, to fully assess the value of IPA identification and referral as a regular and systematic part of routine ED

care, we need to determine the immediate impact and long-term outcomes of patients receiving these services.

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