

Screening Women and Elderly Adults for Family and Intimate Partner Violence: A Review of the Evidence for the U.S. Preventive Services Task Force

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Background: Family and intimate partner violence is common in the United States and is often associated with acute and chronic health problems. Although the clinician's role in identification and intervention is considered a professional, ethical, and sometimes legal responsibility, the effectiveness of screening is uncertain.

Purpose: To examine evidence on the benefits and harms of screening women and elderly adults in health care settings for family and intimate partner violence.

Data Sources: MEDLINE, PsycINFO, CINAHL, Health & Psychosocial Instruments, AARP Ageline, Cochrane Controlled Trials Register, reference lists, and experts.

Study Selection: The authors selected English-language studies that included original data focusing on the performance of screening instruments (14 studies for women, 3 for elderly persons) and the effectiveness of interventions based in health care settings (2 studies for women, none for elderly persons).

Data Extraction: Study design, patient samples and settings, methods of assessment or intervention, and outcome measures

were extracted, and a set of criteria was applied to evaluate study quality.

Data Synthesis: No trials of the effectiveness of screening in a health care setting for reducing harm have been published. Several screening instruments have been developed; some have demonstrated fair to good internal consistency and some have been validated with longer instruments, but none have been evaluated against measurable violence or health outcomes. Few intervention studies have been conducted. Existing intervention studies focused on pregnant women, and study limitations restrict their interpretation.

Conclusion: Although the literature on family and intimate partner violence is extensive, few studies provide data on detection and management to guide clinicians.

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As many as 1 to 4 million women are physically, sexually, or emotionally abused by their intimate partners each year in the United States (1, 2), and 31% of all women report abuse in their lifetime (3). Prevalence rates of abuse in clinical samples range from 4% to 44% within the past year and from 21% to 55% over a lifetime (4-14). The incidence of acute cases in emergency care settings ranges from 2% to 7% (15). Approximately 20% of female teenage survey respondents reported being physically or sexually abused by a dating partner (16). Although women also commit violence against men, women are 7 to 14 times more likely to sustain severe physical injury from an assault by an intimate partner (17).

Approximately 551 000 older adults in domestic settings were abused or neglected in 1996 (18). A random-sample survey of a community population indicated a prevalence rate of 32 per 1000 for physical violence, verbal aggression, and neglect (19). Complicating these estimates, however, is the difficulty in defining and quantifying elder abuse. Abuse of elderly persons takes many forms, including physical, sexual, psychological, and financial exploitation as well as neglect (20). Available data indicate that the highest rates of elder abuse are among women and those 80 years of age and older (18). In 90% of cases, the perpetrator is a family member, most often an adult child or spouse (18).

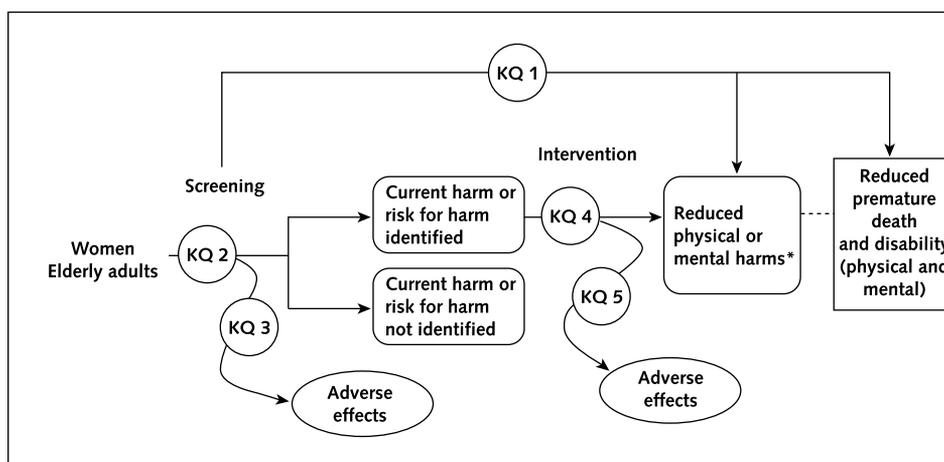
Many health problems are associated with abuse and neglect at all ages. These include repercussions of acute trauma, including death and unwanted pregnancy, as well

as long-term physical and mental problems, such as depression, post-traumatic stress disorder, somatization, suicide, and substance abuse (16, 21-30). Children who witness intimate partner violence are at risk for developmental delay, school failure, psychiatric disorders (31, 32), and violence against others (33).

Physician and nursing organizations consider the clinician's role in identification and intervention to be a professional responsibility (34, 35). Reporting child and elder abuse to protective services is mandatory in almost all states; 4 states (California, Colorado, Rhode Island, and Kentucky) have laws requiring mandatory reporting of intimate partner violence. Hospitals are also required to address abuse in order to maintain accreditation (36).

Whether screening leads to a decline in abuse is unknown. In the mid-1990s, after several medical organizations recommended screening for intimate partner abuse, rates of abuse decreased (37). A systematic review reported that most studies of screening for intimate partner violence in health care settings found that screening detected more abused women than no screening (38). Surveys indicate that 43% to 85% of female respondents consider screening in health care settings acceptable, although only one third of physicians and half of emergency department nurses favored screening (38). The evidence on how to screen and effectively intervene once problems are identified is limited, and few clinicians routinely screen patients who do not have apparent injuries (39-44).

Figure. Analytic framework and key questions (KQs).



KQ 1: Does screening for family and intimate partner violence reduce harm and premature death and disability? KQ 2: How well does screening identify current harm or risk for harm from family and intimate partner violence? KQ 3: What are the adverse effects of screening? KQ 4: How well do interventions reduce harm from family and intimate partner violence? KQ 5: What are the adverse effects of intervention? * Including physical trauma (such as fractures, dislocations, brain injury); unwanted pregnancy and sexually transmitted diseases; mental trauma; and social isolation and its repercussions, such as depression, anxiety, and nightmares.

In 1996, the U.S. Preventive Services Task Force (USPSTF) concluded that there was insufficient evidence to recommend for or against the use of specific screening instruments to detect family or intimate partner violence, although including questions about abuse in the routine history could be recommended on the basis of prevalence of abuse among adult women and the potential value of the information to clinicians (45). This report is an update on the current literature on family and intimate partner violence. It focuses on studies of the performance of screening instruments designed for the clinical setting and the effectiveness of clinical-based interventions for women and elderly adults. A separate report on screening for family violence in children is available elsewhere (46).

METHODS

The analytic framework and key questions guiding this review are detailed in the **Figure**. Relevant studies were identified from multiple searches of MEDLINE (1966 to December 2002), PsycINFO (1984 to December 2002), CINAHL (1982 to December 2002), Health & Psychosocial Instruments (1985 to December 2002), AARP Ageline (1978 to December 2002), and the Cochrane Controlled Trials Register (Appendix, available at www.annals.org). Additional articles were obtained by reviewing 2 recent systematic reviews (38, 47), by reviewing reference lists of pertinent studies, and by consulting experts.

We defined screening as an assessment of current harm or risk for harm from family and intimate partner violence in asymptomatic persons in a health care setting. Universal screening assesses everyone; selective screening assesses only those who meet specific criteria. The target populations for this review were women and elderly victims of abuse from family members, intimate partners, caretakers, or others

with similar relationships. The USPSTF focused this review on these populations because they are the largest at-risk groups in general primary care settings.

Studies included in this review had English-language abstracts; were applicable to U.S. clinical practice; described abuse and violence against women or elderly adults; were conducted in or linked to primary care (for example, family practice or general internal medicine), obstetrics and gynecology, or emergency department settings; and included a physician or other health care provider in the process of assessment or intervention. We excluded studies about patients presenting with trauma. All eligible studies were reviewed, including those published before the 1996 USPSTF recommendation.

Assessment studies were included if they evaluated the performance of verbal or written questionnaires or other assessment procedures, such as physical examinations, that were brief and applicable to the primary care setting. Included studies described the study sample, the screening instrument or procedure, the abuse or neglect outcome, and the collection of data. Outcomes included indicators of physical abuse, neglect, emotional abuse, or sexual abuse and any reported related health outcomes (for example, depression).

Intervention studies were included if they measured the effectiveness of an intervention in reducing harm from family and intimate partner violence compared with non-intervention or usual care groups. We excluded studies that tested the effectiveness of interventions to educate health care professionals about family violence or to increase screening rates in institutions. We also excluded studies about mandatory reporting laws, descriptions of programs, the accuracy of physician diagnosis and reporting of abuse, and physician factors related to reporting.

From each included study, we abstracted the study

design, number of participants, setting, length and type of interventions, length of follow-up, outcomes, methods of outcome measurement, and study duration, among other variables. Two reviewers independently rated each study's quality using criteria specific to different study designs developed by the USPSTF (**Appendix**, available at www.annals.org) (48). When reviewers disagreed, a final score was reached through consensus.

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DATA SYNTHESIS

Intimate Partner Violence against Women

Screening

Of 806 abstracts identified by database searches, 14 met inclusion criteria. These included 6 studies that compared one instrument with another, 3 that compared an instrument with a directed interview, 2 that measured interrater reliability or internal consistency, and 3 that compared methods of administration. None evaluated the performance of a screening instrument or procedure by using verified abuse outcomes. Screening instruments are described in **Appendix Figures 1 and 2** and **Appendix Tables 1 and 2** (available at www.annals.org) (49–61).

Six studies compared brief screening instruments with previously validated instruments and were rated as good or fair in quality (**Table 1**) (15, 53, 54, 56, 57, 62). Brief instruments were generally correlated with longer instruments and in some cases performed better.

The Hurt, Insulted, Threatened, or Screamed at (HITS) instrument includes 4 questions (54). When administered to 259 women in family practice clinics, it demonstrated fair internal consistency (Cronbach α statistic = 0.80), and its results correlated with the previously validated 19-item Conflict Tactics Scales (CTS) ($r = 0.85$). In urban emergency department settings, the Partner Violence Screen (PVS), consisting of 3 questions, was compared with the 30-item Index of Spouse Abuse (ISA) (sensitivity, 64.5%; specificity, 80.3%) and the Conflict Tactics Scales (sensitivity, 71.4%; specificity, 84.4%) (53). However, the validity of the Conflict Tactics Scales may not have been tested sufficiently to qualify it as a gold standard in these studies.

A study of 1152 predominantly African-American women presenting for care at university-affiliated family practice clinics found that the 10-item Women's Experience with Battering (WEB) Scale had a higher detection rate (16%) than the 15-item Index of Spouse Abuse—Physical Scale (10%) (56). Another trial studying predom-

inantly white women in family practice clinics found that the 8-item Woman Abuse Screening Tool (WAST) was correlated with the 25-item Abuse Risk Inventory ($r = 0.69$) (57). A study of pregnant women in public prenatal clinics tested the 3-item Abuse Assessment Screen (AAS) against the Index of Spouse Abuse (62). Women identified as abused on the Abuse Assessment Screen also scored significantly higher on the Index of Spouse Abuse than nonabused women.

The previously validated Abuse Assessment Screen was modified for use in the emergency department setting to detect ongoing abuse rather than abuse within the previous 12 months and was renamed the Ongoing Abuse Screen (OAS) (15). Women presenting to an emergency department were screened with both instruments as well as with a single question about present abuse. The Abuse Assessment Screen yielded positive results in 59% of women screened, and the Ongoing Abuse Screen yielded positive results in 16%. The single question "Are you presently a victim of intimate partner violence?" yielded positive results in 3% of women.

Three studies comparing a screening instrument with an interview were rated as poor quality (51, 52, 55). The major limitation of these studies was that they did not identify a protocol for the directed interview. These studies reported higher detection rates with questionnaires than with interviews.

Two fair-quality studies measured the internal consistency of screening instruments. The Partner Abuse Interview, an 11-item questionnaire modified from the Conflict Tactics Scales, showed fair internal consistency (Cronbach α statistic = 0.82) when tested in 90 women at a suburban family practice clinic and university hospital (49). The WEB Scale, which was tested in primary care clinics and community groups, showed good internal consistency (Cronbach α statistic = 0.99) (63).

Three fair-quality studies compared methods of administration of screening instruments (42, 50, 58). A study of 4641 women presenting to 11 community emergency departments found that the prevalence of past-year and lifetime violence was significantly higher when a questionnaire containing items from the Abuse Assessment Screen was self-administered than when it was administered by a nurse (42). In another study conducted in an emergency department (58), reports of abuse were similar when a questionnaire was given as part of a face-to-face-interview (16%) and when it was administered by tape recorder with a written self-reported answer sheet (15%). In a study at a Planned Parenthood clinic using 4 questions, rates of reported abuse were higher on a nurse-conducted interview (29%) than by self-report (7%) (50).

Interventions

From 667 abstracts identified by database searches, only 2 studies met inclusion criteria (**Table 2**). These fair-quality studies evaluated interventions for abused, preg-

Table 1. Studies of Screening Instruments about Intimate Partner Violence against Women*

Study, Year (Reference)	Participants, n	Age	Ethnicity, %	Socioeconomic Status	Pregnancy Status
Comparison of screening instruments					
Coker et al., 2001 (56)	1152	Mean, 38 y (range, 18–65 y)	AA: 62; W: 38	100% insured (Medicaid or managed care); 89% high school graduate or greater	NR
Brown et al., 2000 (57)	307	Mean, 46 y (range, 18–86 y)	W: 98	59% employed, 59% with annual household income >\$30 000, 45% with postsecondary education	NR
Sherin et al., 1998 (54)	259	NR	NR	NR	NR
Feldhaus et al., 1997 (53)	322	Mean, 36 y	W: 45; AA: 19; H: 30	54% uninsured, 49% employed, 64% with annual income <\$15 000, 67% with high school education or greater	NR
McFarlane et al., 1992 (62)	691	31% teenagers, 57% age 20–29 y	AA: 39; H: 34; W: 27	95% below poverty level	All participants were pregnant
Ernst et al., 2002 (15)	488	Median, 36 y	W: 47; AA: 26; H: 11	NR	NR
Comparison of screening instrument with interview					
Morrison et al., 2000 (55)	1000	NR	NR	NR	NR
Canterino et al., 1999 (51)	224	Mean, 24 y	AA: 54; W: 30; H: 11	36% employed	All participants were pregnant
Norton et al., 1995 (52)	334	Mean, 23 y	W: 50	42% uninsured	All participants were pregnant
Pan et al., 1997 (49)	90	Mean, 38 y	W: 82; AA: 6; H: 7; A: 3	Average, 13.7 y of education; mean annual family income, \$32 000; 38% employed	NR
Smith and Martin, 1995 (63)	389	NR	W: 85	68% employed, 61% with high school education or greater	NR
Comparison of methods of administration of screening instrument					
Glass et al., 2001 (42)	4641	≥18 y	NR	NR	NR
Furbee et al., 1998 (58)	175	Mean, 34 y	NR	NR	NR
McFarlane et al., 1991 (50)	777	59% in age range 20–29 y	AA: 47; W: 34; H: 17	NR	NR

* A = Asian; AA = African American; AAS = Abuse Assessment Screen; ARI = Abuse Risk Inventory; CTS = Conflict Tactics Scales; DAS = Danger Assessment Screen; H = Hispanic; HITS = Hurt, Insulted, Threatened, and Screamed at; ISA = Index of Spouse Abuse; ISA-P = Index of Spouse Abuse—Physical Scale; NR = not reported; OAS = Ongoing Abuse Screen; PVS = Partner Violence Screen; W = white; WAST = Woman Abuse Screening Tool; WEB = Women’s Experience with Battering.

nant women and reported less violence after delivery even when a minimal or “brief” intervention was performed (64, 65). Neither study had a nonintervention control group.

In one study in a prenatal clinic (64), 329 pregnant Hispanic women who had positive results for abuse on the Abuse Assessment Screen were randomly assigned to one of 3 groups: brief, in which they were given a wallet-sized

card listing community resources; counseling, in which they received unlimited access to a counselor in the clinic; or outreach, in which they received counseling plus a “mentor mother” in the community. At 2-month follow-up, violence scores measured by using the Severity of Violence against Women Scale were significantly lower in the outreach group than in the counseling group but not in the brief group. However, at 6-, 12-, and 18-month follow-up,

Table 1—Continued

Setting	Screening Instrument	Findings	Quality Rating	Comments
2 university-affiliated family practice clinics	WEB Scale, 10 items; ISA-P, 15 items. All participants were screened with both instruments.	Higher detection rate with WEB Scale (16%) than ISA-P (10%)	Fair	Questions asked by graduate students (not health care professionals); used modified version of reference standard; instruments administered verbally although designed as written questionnaires
20 family practice offices	WAST, 8 items; ARI, self-report, 25 items	WAST and ARI results were correlated ($r = 0.69$, $P = 0.01$); WAST was internally consistent (Cronbach α statistic = 0.75)	Fair	Additional question added to the original 7-item WAST
Family practice offices, urban and suburban sample	HITS instrument, written, 4 items; CTS, verbal, 19 items	HITS internally consistent (Cronbach α statistic = 0.80); HITS and CTS results were correlated ($r = 0.85$)	Good	
2 urban, hospital-based emergency departments	PVS, verbal, 3 items; ISA, written, 30 items; CTS, verbal, 19 items	PVS had higher sensitivity and specificity than ISA (65% and 80%) or CTS (71% and 84%)	Good	Screening done by research assistant (not health care professional)
Public prenatal clinics	AAS, 3 items; ISA; CTS; DAS	Women identified as abused on the AAS also scored significantly higher on the ISA	Good	
Large metropolitan emergency department	AAS; OAS; single question "Are you presently a victim of intimate partner violence?"	The OAS had a sensitivity of 30%, specificity of 100%, and a positive predictive value of 100%	Good	
Charts reviewed in emergency department, tertiary care hospital	Emergency Department Domestic Violence Screening Questions, 5 items; standard interview and chart review	Retrospective review of charts identified 4 patients (0.4%) as past or present victims of domestic violence; detection rate was higher with questionnaire (4% acute abuse, 7% probable abuse, 4% past abuse)	Poor	Inappropriate reference standard (interview not defined)
Prenatal clinic, community-based tertiary care center	Domestic Abuse Assessment Questionnaire, self-report, 5 items; directed interview	Self-report questionnaire yielded higher detection rate (85% vs. 59%; $P = 0.03$)	Poor	Inappropriate reference standard (interview not defined)
Prenatal visit, interviewed by social services	AAS, 5 items; standard interview and chart review	More frequent detection of violence with AAS (41%) than with interview (14%)	Poor	Inappropriate reference standard (interview not defined)
Suburban family practice clinic, tertiary care university hospital	Partner Abuse Interview, 11 items, (modified CTS)	Internally consistent (Cronbach α statistic = 0.82)	Fair	Small sample size, inappropriate reference standard (not compared with another method)
Various primary care clinics and community groups	WEB Scale, 10 items	High internal consistency (Cronbach α statistic = 0.99 for full sample, 0.93 for battered women, 0.86 for non-battered women)	Fair	Inappropriate reference standard (not compared with another method)
Emergency departments at 11 community hospitals	AAS as part of intake survey; patients chose whether to self-administer or have it read by a nurse interviewer	Prevalence of lifetime and past-year abuse was higher with self-administered questionnaire	Fair	Patients self-selected method
Emergency department, rural, university-affiliated	Face-to-face interview; tape-recorded questionnaire with written answer sheet	Comparable results (16% prevalence of abuse detected with face-to-face interview compared with 15% detected with taped interview)	Fair	Narrow spectrum of patients
Planned Parenthood clinic	Self-report, 4 items; interview, 4 items	Higher prevalence of abuse was detected by nurse-conducted interview (29%) than by self-report (7%)	Fair	Narrow spectrum of patients

violence scores were lower in all groups without statistically significant differences between groups.

In another study of pregnant women in prenatal clinics who had positive results on the Abuse Assessment Screen (65), 132 received 3 counseling sessions and 67 were offered wallet-sized cards listing community resources. At 6 and 12 months after delivery, less violence occurred in the intervention group, as measured by the Index of Spouse Abuse

($P = 0.007$) and Severity of Violence against Women Scale ($P = 0.052$). However, differences were not statistically significant.

Elder Abuse and Neglect Screening

Of 1045 abstracts identified by database searches, 3 studies of screening instruments for elder abuse met mod-

Table 2. Studies of Interventions for Intimate Partner Violence against Women*

Study, Year (Reference)	Design	Population and Setting	Intervention and Outcome Measure	Results	Quality Rating	Comments
McFarlane et al., 2000 (64)	Randomized trial comparing 3 interventions	329 pregnant, Hispanic women at prenatal clinics in the southwestern United States. All women were screened by using the AAS; those with positive results were randomly assigned to intervention groups; outcomes were determined by the SVAWS at each follow-up visit	Groups were brief (wallet-sized card with resources); counseling (unlimited access to counselor in clinic), and outreach (counseling plus "mentor mother" in the community), monitored at 2, 6, 12, and 18 mo after delivery	Abuse decreased significantly in all groups; no statistically significant differences among the 3 groups at 6, 12, and 18 mo; at 2 mo, scores were significantly lower for the outreach group compared with the counseling group but not compared with the brief group	Fair	Narrow patient sample, outcomes by self-report
Parker et al., 1999 (65)	Nonrandomized trial comparing 2 interventions	199 pregnant women at prenatal clinics in Texas and Virginia; 35% were African American, 33% were Hispanic, 32% were white. Women were screened with AAS; those with positive results were eligible for interventions; outcomes were determined by SVAWS and ISA at each follow-up visit	Groups were intervention (3 counseling sessions) or minimal intervention (wallet-sized card with resources), monitored at 6 and 12 mo after delivery	Less violence in the intervention group at 6 and 12 mo (SVAWS [$P = 0.052$]; ISA [$P = 0.007$])	Fair	Nonrandom assignment, outcomes by self-report, poor attendance at support groups

* AAS = Abuse Assessment Screen; ISA = Index of Spouse Abuse; SVAWS = Severity of Violence against Women Scale.

ified inclusion criteria (60, 61, 66) (Table 3). None were developed or tested in traditional clinical settings. However, because the care of elderly adults occurs largely outside these settings, studies were included if it appeared that they could be adapted to clinical settings.

In one study (61), a screening instrument for caregivers was tested in 3 groups: abusive caregivers from a social service agency, nonabusive caregivers from a social service agency, and nonabusive caregivers from the community. The Caregiver Abuse Screen (CASE) is based on "yes" or "no" responses to 8 items. Scores on the Caregiver Abuse Screen distinguished abusers from nonabusers (Cronbach α statistic = 0.71) and correlated with the previously validated Indicator of Abuse (IOA) ($r = 0.41$; $P < 0.001$) and the Hwalek-Sengstock Elder Abuse Screening Test (HSEAST) ($r = 0.26$; $P < 0.025$).

Two studies described screening elderly adults (60, 66). One study (60) evaluated 3 groups: victims of abuse, individuals who were referred to adult protective services and were found not to be abused, and nonabused elderly adults from a family practice clinic. The 15-item HSEAST was administered to all groups and correctly classified 67% to 74% of cases ($P < 0.001$). The HSEAST was also evaluated in a study of elderly adults living in public housing in Florida (66). Abuse status (past abuse or none) was reported by participants and verified by a social worker who reviewed their records at the housing authority. Scores for abused and nonabused persons were significantly different (mean total score, 4.01 vs. 3.01; $P = 0.049$). This study also indicated that a 9-item model performed as well as the longer 15-item version, correctly identifying 71.4% of abused persons with 17% false-positive and 12% false-negative rates.

Table 3. Studies of Screening Instruments about Elder Abuse and Neglect*

Study, Year (Reference)	Participants, n	Age, y	Ethnicity	Socioeconomic Status	Setting
Caregiver screening					
Reis and Nahmiash, 1995 (61)	139	Mean, 61	NR	Mean annual income, \$20 000	3 groups of caregivers: 44 abusive and 45 nonabusive caregivers from a social service agency, 50 nonabusive caregivers from community
Elder screening					
Neale et al., 1991 (60)	259	Mean, 77	Mostly white	NR	3 groups of elderly persons: 170 victims of abuse, 42 referred to adult protective services and found not to be abused, 47 from a family practice clinic
Moody et al., 2000 (66)	100	≥ 60	NR	NR	Convenience sample of elderly persons living in public housing in Florida

* CASE = Caregiver Abuse Screen; HSEAST = Hwalek-Sengstock Elder Abuse Screening Test; IOA = Indicator of Abuse; NR = not reported.

Interventions

From 1084 abstracts identified by database searches, 72 articles were retrieved for further review. However, none provided data about effective interventions. Some papers described individual elder abuse programs, but none included comparison groups or health outcome measures.

Adverse Effects of Screening and Interventions

No studies were identified that provided data about the adverse effects of screening or interventions. No screening instrument demonstrated 100% sensitivity and specificity. False-negative test results may hinder identification of those who are truly at risk. False-positive test results, most common in low-risk populations, can lead to inappropriate labeling and punitive attitudes. Additional possible adverse effects of screening and interventions include psychological distress, escalation of abuse and family tension, loss of personal residence and financial resources, erosion of family structure, loss of autonomy for the victim, and lost time from work. Women who leave an abuser can become the target of retaliation, which can lead to homicide (67).

There has been concern that patients may feel uncomfortable or threatened if asked questions about family and intimate partner violence. Most women in a study of screening in prenatal clinics believed it was a good idea (98%) and felt "OK" during the process (96%) when asked at a subsequent visit (68). In another study, only 3% of women found 3 screenings with the Abuse Assessment Screen, during and after pregnancy, unacceptable (69). Although most women presenting with their children to a pediatric emergency department believed screening for intimate partner violence was appropriate, many indicated that their willingness to disclose information might be affected by fear of being reported to child protective services (70). This concern was validated by clinicians in the study, who indicated that they would feel obligated to file a report if violence was present in the home.

A telephone survey of abused and nonabused women in 11 U.S. cities indicated that abused women were less

likely to support mandatory reporting than nonabused women (59% vs. 73%; $P < 0.01$). Respondents believed that victims would be less likely to disclose abuse, that victims would resent someone else having control of the situation, and that reporting would increase the risk for perpetrator retaliation (71, 72).

DISCUSSION

We identified no studies that directly addressed the effectiveness of screening in a health care setting for reducing harm from family and intimate partner violence or the adverse effects of screening and interventions. Several instruments have been developed for intimate partner violence screening. Some have demonstrated fair to good internal consistency, and some have been validated with longer instruments, although none have been evaluated against measurable violence or health outcomes. The optimal methods of administration have not been determined. Few intervention studies have been conducted, and these focused on pregnant women. Outcomes were based on scores on questionnaires and suggest benefit; however, study limitations restrict interpretation.

Few screening instruments have been developed to identify potential elderly victims of abuse or perpetrators of such abuse. These instruments performed fairly well when administered in studies but have not been tested in health care settings. We found no studies of interventions in elderly persons.

Other systematic reviews of interventions for victims of intimate partner violence found few studies with outcomes other than the health outcomes we sought (38, 47). Referrals to community resources, shelters, social workers, and police often increased when abused women were identified. However, it is not known whether these interventions improved violence or health outcomes because the studies were inadequately designed to answer these questions and provided inconsistent results (38, 47).

The prevalence of abuse and the sensitivity and speci-

Table 3—Continued

Screening Instrument	Findings	Quality Rating	Comments
CASE, 8 items (yes or no)	Scores distinguished abusers from nonabusers (Cronbach α statistic = 0.71); other characteristics were similar; CASE scores correlated with IOA ($r = 0.41$; $P < 0.001$); CASE scores correlated with HSEAST ($r = 0.26$; $P < 0.025$)	Fair	Small sample size; administered as part of a social services project; not in a clinical setting
HSEAST, 15 items	Scores distinguished abused from not abused ($P < 0.001$; Cronbach α statistic = 0.29); correctly classified 67%–74% of cases; 6 items were strongly related to abuse	Fair	Small sample size
HSEAST, 15 items; IOA, 29 items	Scores for abused and nonabused were significantly different ($P = 0.049$); correctly classified 71% of cases; discriminated abuse cases 84.4% of the time and nonabused cases 99.2% of the time	Fair	Small sample size; intended for social service practitioners

ficacy of screening instruments depend on definitions of abuse (physical, sexual, emotional, and combinations) and acuity (current, past, and any). These definitions are not standardized across instruments. Performance characteristics of screening instruments are difficult to determine because comparisons of scores from instruments and actual episodes of abuse are lacking and the accuracy of self-report varies widely. The effectiveness of specific screening methods and interventions could also vary by setting, delivery, culture, and population.

Self-reported abuse by elderly persons may be compromised by cognitive impairment and overshadowed by other medical problems addressed in health care settings. A more comprehensive approach, including physical examination and caretaker and home evaluations, as well as direct questioning, may be more effective.

There are many gaps in the evidence (73). Definitions and measures of abuse, neglect, severity, and chronicity need to be standardized across studies. Existing screening instruments require more testing and validation in medical settings and in languages other than English (74). Little is known about the course of violence during pregnancy and postpartum periods, health implications for the mother and child, the role of violence in reproductive decision making, and what screening and intervention strategies are most effective for pregnant women. Studies of the effectiveness of treatment programs for abused victims, as well as for perpetrators (75–77), would provide needed evidence that identification and intervention can lead to improved health outcomes. These outcomes should include not only measures of reduced violence but also improved quality of life, mental health, social support, self-esteem, and productivity. The feasibility of screening procedures and interventions in health care settings requires evaluations that consider costs, time, resources, clinician consistency, barriers, and patient adherence. Strategies enlisting and evaluating health systems and community programs are needed (78).

Although the literature on family and intimate partner violence is extensive, few studies provide data on detection and management to guide clinicians. As a result, clinicians confront difficulties in fulfilling their role in prevention and treatment of the adverse health effects of violence.

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References

1. National Institute of Justice and Centers for Disease Control and Prevention. Prevalence, Incidence, and Consequences of Violence against Women: Findings from the National Violence against Women Survey. Washington, DC: National Institute of Justice and Centers for Disease Control and Prevention; 1998.
2. The Commonwealth Fund. First Comprehensive National Health Survey of American Women. New York: Commonwealth Fund; 1993.
3. The Commonwealth Fund. Health Concerns across a Woman's Lifespan: The Commonwealth Fund 1998 Survey of Women's Health. New York: Commonwealth Fund; 1999.
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. [PMID: 1890502]
5. Rath GD, Jarratt LG, Leonardson G. Rates of domestic violence against adult women by men partners. *J Am Board Fam Pract.* 1989;2:227-33. [PMID: 2801190]
6. Martins R, Holzapfel S, Baker P. Wife abuse: are we detecting it? *J Womens Health.* 1992;1:77-80.
7. Hamberger LK, Saunders DG, Hovey M. Prevalence of domestic violence in community practice and rate of physician inquiry. *Fam Med.* 1992;24:283-7. [PMID: 1601239]
8. Abbott J, Johnson R, Koziol-McLain J, Lowenstein SR. Domestic violence against women. Incidence and prevalence in an emergency department population. *JAMA.* 1995;273:1763-7. [PMID: 7769770]
9. McCauley J, Kern DE, Kolodner K, Dill L, Schroeder AF, DeChant HK, 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. [PMID: 7574191]
10. Dearwater SR, Coben JH, Campbell JC, Nah G, Glass N, McLoughlin E, et al. Prevalence of intimate partner abuse in women treated at community hospital emergency departments. *JAMA.* 1998;280:433-8. [PMID: 9701078]
11. Jones DP. Intervention [Editorial]. *Child Abuse Negl.* 1999;23:1341-4. [PMID: 10626615]
12. Karus D, Siegel K, Raveis VH. Psychosocial adjustment of women to living with HIV/AIDS. *AIDS & Behavior.* 1999;3:227-87.
13. Coker AL, Smith PH, Bethea L, King MR, McKeown RE. Physical health consequences of physical and psychological intimate partner violence. *Arch Fam Med.* 2000;9:451-7. [PMID: 10810951]
14. Richardson J, Coid J, Petruckevitch A, Chung WS, Moorey S, Feder G. Identifying domestic violence: cross sectional study in primary care. *BMJ.* 2002;324:274. [PMID: 11823360]
15. Ernst AA, Weiss SJ, Cham E, Marquez M. Comparison of three instruments for assessing ongoing intimate partner violence. *Med Sci Monit.* 2002;8:CR197-201. [PMID: 11887036]
16. Silverman JG, Raj A, Mucci LA, Hathaway JE. Dating violence against

- adolescent girls and associated substance use, unhealthy weight control, sexual risk behavior, pregnancy, and suicidality. *JAMA*. 2001;286:572-9. [PMID: 11476659]
17. **Muelleman RL, Lenaghan PA, Pakieser RA.** Battered women: injury locations and types. *Ann Emerg Med*. 1996;28:486-92. [PMID: 8909268]
 18. **The National Elder Abuse Incidence Study (NEAIS).** Final Report. The National Center on Elder Abuse at the American Public Human Services Association in Collaboration with Westat, Inc., for the Administration for Children and Families and The Administration on Aging in the U.S. Department of Health and Human Services. 1998. Accessed at www.aoa.gov/eldfam/Elder_Rights/Elder_Abuse/ABuseReport_Full.pdf in July 2002.
 19. **Pillemer K, Suitor J.** Elder abuse. In: Van Hasselt VB, Morrison RL, Bellack AS, Hersen M, eds. *Handbook of Family Violence*. New York: Plenum Pr; 1988:247-70.
 20. Elder abuse and neglect. Council on Scientific Affairs. *JAMA*. 1987;257:966-71. [PMID: 3806880]
 21. **Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, et al.** Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *Am J Prev Med*. 1998;14:245-58. [PMID: 9635069]
 22. **Anda RF, Chapman DP, Felitti VJ, Edwards V, Williamson DF, Croft JB, et al.** Adverse childhood experiences and risk of paternity in teen pregnancy. *Obstet Gynecol*. 2002;100:37-45. [PMID: 12100801]
 23. **Dube SR, Anda RF, Felitti VJ, Chapman DP, Williamson DF, Giles WH.** Childhood abuse, household dysfunction, and the risk of attempted suicide throughout the life span: findings from the Adverse Childhood Experiences Study. *JAMA*. 2001;286:3089-96. [PMID: 11754674]
 24. **Diaz A, Simantov E, Rickert VI.** Effect of abuse on health: results of a national survey. *Arch Pediatr Adolesc Med*. 2002;156:811-7. [PMID: 12144373]
 25. **Osofsky JD, Wewers S, Hann DM, Fick AC.** Chronic community violence: what is happening to our children? *Psychiatry*. 1993;56:36-45. [PMID: 8488211]
 26. **Shakoor BH, Chalmers D.** Co-victimization of African-American children who witness violence: effects on cognitive, emotional, and behavioral development. *J Natl Med Assoc*. 1991;83:233-8. [PMID: 2038083]
 27. **Lansford JE, Dodge KA, Pettit GS, Bates JE, Crozier J, Kaplow J.** A 12-year prospective study of the long-term effects of early child physical maltreatment on psychological, behavioral, and academic problems in adolescence. *Arch Pediatr Adolesc Med*. 2002;156:824-30. [PMID: 12144375]
 28. **Campbell JC, Lewandowski IA.** Mental and physical health effects of intimate partner violence on women and children. *Psychiatr Clin North Am*. 1997;20:353-74. [PMID: 9196919]
 29. **Campbell DW, Sharps PW, Gary FA, Campbell JC, Lopez LM.** Intimate partner violence in African American women. *Online J Issues Nurs*. 2002;7:5. [PMID: 12044219]
 30. **Coker AL, Smith PH, Thompson MP, McKeown RE, Bethea L, Davis KE.** Social support protects against the negative effects of partner violence on mental health. *J Womens Health Gend Based Med*. 2002;11:465-76. [PMID: 12165164]
 31. **Maxfield MG, Widom CS.** The cycle of violence. Revisited 6 years later. *Arch Pediatr Adolesc Med*. 1996;150:390-5. [PMID: 8634734]
 32. **Garbarino J, Kostelny K, Dubrow N.** What children can tell us about living in danger. *Am Psychol*. 1991;46:376-83. [PMID: 2048796]
 33. **Durant RH, Pendergrast RA, Cadenhead C.** Exposure to violence and victimization and fighting behavior by urban black adolescents. *J Adolesc Health*. 1994;15:311-8. [PMID: 7918504]
 34. **American Medical Association Council on Scientific Affairs.** Diagnostic and Treatment Guidelines Concerning Child Abuse and Neglect. Chicago: American Med Assoc; 1984.
 35. **American Medical Association Council on Scientific Affairs.** Diagnostic and Treatment Guidelines on Elder Abuse and Neglect. Chicago: American Med Assoc; 1992.
 36. **Joint Commission on Accreditation of Healthcare Organizations.** Accreditation Manual for Hospitals. Volume 1—Standards. Oakbrook Terrace, IL: Joint Commission on Accreditation of Healthcare Organizations; 1992.
 37. **Cole TB.** Is domestic violence screening helpful? *JAMA*. 2000;284:551-3. [PMID: 10918685]
 38. **Ramsay J, Richardson J, Carter YH, Davidson LL, Feder G.** Should health professionals screen women for domestic violence? Systematic review. *BMJ*. 2002;325:314. [PMID: 12169509]
 39. **Borowsky IW, Ireland M.** Parental screening for intimate partner violence by pediatricians and family physicians. *Pediatrics*. 2002;110:509-16. [PMID: 12205252]
 40. **Chamberlain L, Perham-Hester KA.** Physicians' screening practices for female partner abuse during prenatal visits. *Matern Child Health J*. 2000;4:141-8. [PMID: 10994583]
 41. **Chamberlain L, Perham-Hester KA.** The impact of perceived barriers on primary care physicians' screening practices for female partner abuse. *Women Health*. 2002;35:55-69. [PMID: 12201510]
 42. **Glass N, Dearwater S, Campbell J.** Intimate partner violence screening and intervention: data from eleven Pennsylvania and California community hospital emergency departments. *J Emerg Nurs*. 2001;27:141-9. [PMID: 11275861]
 43. **Rodriguez MA, Sheldon WR, Bauer HM, Perez-Stable EJ.** The factors associated with disclosure of intimate partner abuse to clinicians. *J Fam Pract*. 2001;50:338-44. [PMID: 11309220]
 44. **Erickson MJ, Hill TD, Siegel RM.** Barriers to domestic violence screening in the pediatric setting. *Pediatrics*. 2001;108:98-102. [PMID: 11433060]
 45. **U.S. Preventive Services Task Force.** Guide to Clinical Preventive Services. 2nd ed. Baltimore: Williams & Wilkins; 1996.
 46. **Nelson H, Nygren P, Klein J.** Screening children for family violence: a review of the evidence for the U.S. Preventive Services Task Force. *Annals of Family Medicine*. 2004 [In press].
 47. **Wathen CN, MacMillan HL.** Interventions for violence against women: scientific review. *JAMA*. 2003;289:589-600. [PMID: 12578492]
 48. **Harris RP, Helfand M, Woolf SH, Lohr KN, Mulrow CD, Teutsch SM, et al.** Current methods of the US Preventive Services Task Force: a review of the process. *Am J Prev Med*. 2001;20:21-35. [PMID: 11306229]
 49. **Pan HS, Ehrensaf MK, Heyman RE, O'Leary KD, Schwartz R.** Evaluating domestic partner abuse in a family practice clinic. *Fam Med*. 1997;29:492-5. [PMID: 9232411]
 50. **McFarlane J, Christoffel K, Bateman L, Miller V, Bullock L.** Assessing for abuse: self-report versus nurse interview. *Public Health Nurs*. 1991;8:245-50. [PMID: 1766908]
 51. **Canterino JC, VanHorn LG, Harrigan JT, Ananth CV, Vintzileos AM.** Domestic abuse in pregnancy: a comparison of a self-completed domestic abuse questionnaire with a directed interview. *Am J Obstet Gynecol*. 1999;181:1049-51. [PMID: 10561616]
 52. **Norton LB, Peipert JF, Zierler S, Lima B, Hume L.** Battering in pregnancy: an assessment of two screening methods. *Obstet Gynecol*. 1995;85:321-5. [PMID: 7862365]
 53. **Feldhaus KM, Koziol-McLain J, Amsbury HL, Norton IM, Lowenstein SR, Abbott JT.** Accuracy of 3 brief screening questions for detecting partner violence in the emergency department. *JAMA*. 1997;277:1357-61. [PMID: 9134940]
 54. **Sherin KM, Sinacore JM, Li XQ, Zitter RE, Shakil A.** HITS: a short domestic violence screening tool for use in a family practice setting. *Fam Med*. 1998;30:508-12. [PMID: 9669164]
 55. **Morrison LJ, Allan R, Grunfeld A.** Improving the emergency department detection rate of domestic violence using direct questioning. *J Emerg Med*. 2000;19:117-24. [PMID: 10903457]
 56. **Coker AL, Pope BO, Smith PH, Sanderson M, Hussey JR.** Assessment of clinical partner violence screening tools. *J Am Med Womens Assoc*. 2001;56:19-23. [PMID: 11202067]
 57. **Brown JB, Lent B, Schmidt G, Sas G.** Application of the Woman Abuse Screening Tool (WAST) and WAST-short in the family practice setting. *J Fam Pract*. 2000;49:896-903. [PMID: 11052161]
 58. **Furbee PM, Sikora R, Williams JM, Derk SJ.** Comparison of domestic violence screening methods: a pilot study. *Ann Emerg Med*. 1998;31:495-501. [PMID: 9546020]
 59. **Reis M, Nahmiash D.** Validation of the indicators of abuse (IOA) screen. *Gerontologist*. 1998;38:471-80. [PMID: 9726134]
 60. **Neale AV, Hwalek MA, Scott RO, Sengstock MC, Stahl C.** Validation of the Hwalek-Sengstock Elder Abuse Screening Test. *J Appl Gerontol*. 1991;10:

406-18.

61. **Reis M, Nahmiash D.** Validation of the Caregiver Abuse Screen (CASE). *Can J Aging.* 1995;14:45-60.
62. **McFarlane J, Parker B, Soeken K, Bullock L.** Assessing for abuse during pregnancy. Severity and frequency of injuries and associated entry into prenatal care. *JAMA.* 1992;267:3176-8. [PMID: 1593739]
63. **Smith M, Martin F.** Domestic violence: recognition, intervention, and prevention. *Medsurg Nurs.* 1995;4:21-5. [PMID: 7874217]
64. **McFarlane J, Soeken K, Wiist W.** An evaluation of interventions to decrease intimate partner violence to pregnant women. *Public Health Nurs.* 2000;17:443-51. [PMID: 11115142]
65. **Parker B, McFarlane J, Soeken K, Silva C, Reel S.** Testing an intervention to prevent further abuse to pregnant women. *Res Nurs Health.* 1999;22:59-66. [PMID: 9928964]
66. **Moody LE, Voss A, Lengacher CA.** Assessing abuse among the elderly living in public housing. *J Nurs Meas.* 2000;8:61-70. [PMID: 11026166]
67. **Campbell JC, Webster D, Koziol-McLain J, Block C, Campbell D, Curry MA, et al.** Risk factors for femicide in abusive relationships: results from a multisite case control study. *Am J Public Health.* 2003;93:1089-97. [PMID: 12835191]
68. **Webster J, Stratigos SM, Grimes KM.** Women's responses to screening for domestic violence in a health-care setting. *Midwifery.* 2001;17:289-94. [PMID: 11749061]
69. **Stenson K, Saarinen H, Heimer G, Sidenvall B.** Women's attitudes to being asked about exposure to violence. *Midwifery.* 2001;17:2-10. [PMID: 11207100]
70. **Dowd MD, Kennedy C, Knapp JF, Stallbaumer-Rouyer J.** Mothers' and health care providers' perspectives on screening for intimate partner violence in a pediatric emergency department. *Arch Pediatr Adolesc Med.* 2002;156:794-9. [PMID: 12144370]
71. **Sachs CJ, Koziol-McLain J, Glass N, Webster D, Campbell J.** A population-based survey assessing support for mandatory domestic violence reporting by health care personnel. *Women Health.* 2002;35:121-33. [PMID: 12201503]
72. **Gielen AC, McDonnell KA, Burke JG, O'Campo P.** Women's lives after an HIV-positive diagnosis: disclosure and violence. *Matern Child Health J.* 2000;4:111-20. [PMID: 10994579]
73. **Voelker R.** Elder abuse and neglect a new research topic. *JAMA.* 2002;288:2254-6. [PMID: 12425686]
74. **Fogarty CT, Brown JB.** Screening for abuse in Spanish-speaking women. *J Am Board Fam Pract.* 2002;15:101-11. [PMID: 12002193]
75. **Brewster AL, Milner JS, Mollerstrom WW, Saha BT, Harris N.** Evaluation of spouse abuse treatment: description and evaluation of the Air Force Family Advocacy Programs for spouse physical abuse. *Mil Med.* 2002;167:464-9. [PMID: 12099080]
76. **Wolfe DA, Wekerle C.** Treatment strategies for child physical abuse and neglect: a critical progress report. *Clin Psychol Rev.* 1993;13:473-500.
77. **Moore ML, Zaccaro D, Parsons LH.** Attitudes and practices of registered nurses toward women who have experienced abuse/domestic violence. *J Obstet Gynecol Neonatal Nurs.* 1998;27:175-82. [PMID: 9549703]
78. **Agency for Healthcare Research and Quality.** Evaluating Domestic Violence Programs. September 2002. Accessed at www.ahrq.gov/research/domesticviol in September 2002.

APPENDIX

Search Strategies for Intimate Partner Violence Screening Instruments

MEDLINE (1966 to 2002), PsycINFO (1984 to 2002), and Health & Psychosocial Instruments (1985 to 2002) were used for the following search strategy.

1. spouse abuse/or domestic violence.mp. or battered woman.mp. [mp = title, abstract, heading word, table of contents, key phrase identifiers]
2. (screening or identity or early detection).mp.
3. questionnaires.mp.
4. physicians, family/ or "family physicians".mp.
5. primary health care/ or "primary care".mp.
6. family practice/or "family practice".mp.
7. 2 or 3 or 4 or 5 or 6
8. 1 or 7
9. limit 8 to (human and English)

Search Strategies for Intimate Partner Violence Interventions

MEDLINE (1966 to 2002) and CINAHL (1982 to 2002) were used for the following search strategy.

1. spouse abuse/ or domestic violence.mp. or battered women.mp.
2. ((intimate partner or life partner or partner or wife or husband) and (violence or abuse)).mp.
3. 1 or 2
4. internal medicine.mp.
5. Physicians, Family/ or family physicians.mp.
6. exp Primary Health Care/ or primary care.mp.
7. Family Practice/ or family practice.mp.
8. EMERGENCIES/ or emergency.mp.
9. exp emergency service, hospital/ or emergency department\$.mp.
10. OBSTETRICS/ or "OBSTETRICS AND GYNECOLOGY DEPARTMENT, HOSPITAL"/ or obstetrics.mp.
11. 4 or 5 or 6 or 7 or 8 or 9 or 10
12. 3 and 11
13. pc.fs. or prevent\$.mp. or intervention.mp. or assessment.mp.
14. exp counseling/ or counsel\$.mp.
15. (patient education or questionnaire\$.mp).
16. questionnaires/
17. interviews/ or interview\$.mp.
18. exp clinical trials/ or clinical trial\$.mp.
19. 13 or 14 or 15 or 16 or 17 or 18
20. 12 and 19
21. limit 20 to (human and English language)
22. from 21 keep 1–151

PsycINFO (1984 to 2002) was used for the following search strategy.

1. exp Partner Abuse/ or spouse abuse.mp.
2. exp Battered Females/
3. exp Family Violence/ or exp Victimization/ or exp Emotional Abuse/ or battered women.mp.

4. 3 and (women or females).mp.
5. ((intimate partner\$ or life partner\$ or partner or wife or husband) and (violence or abuse)).mp.
6. 1 or 2 or 4 or 5
7. internal medicine.mp.
8. exp Family Physicians/ or family physicians.mp.
9. exp Primary Health Care/ or primary care.mp.
10. exp Family Physicians/ or family practice.mp.
11. exp emergency services/ or emergenc\$.mp.
12. exp OBSTETRICS/ or obstetrics.mp.
13. exp GYNECOLOGY/ or gynecology.mp.
14. 7 or 8 or 9 or 10 or 11 or 12 or 13 15. 6 and 14
16. (prevent\$ or intervention or assessment).mp.
17. exp counseling/ or counsel\$.mp.
18. exp Client Education/ or patient education.mp.
19. questionnaires/ or questionnaire\$.mp.
20. exp interviews/ or interview\$.mp.
21. clinical trial\$.mp.
22. exp at risk populations/ or cohort study\$.mp.

Search Strategies for Elder Abuse Screening Instruments

MEDLINE (1966 to 2002), PsycINFO (1984 to 2002), and Health & Psychosocial Instruments (1985 to 2002) were used for the following search strategy.

1. elder abuse.mp.
2. (domestic violence or family violence).mp.
3. (elder\$ or aged or old or ageing).mp.
4. (vulnerable or disabled or handicapped).mp.
5. (2 or 4) and 3
6. 1 or 5
7. mass screening/ or screening.mp.
8. questionnaires/ or questionnaire\$.mp.
9. interview/ or interview\$.mp.
10. 7 or 8 or 9
11. 6 and 10
12. limit 11 to (human and English language)
13. from 12 keep 1–1009

AARP Ageline (1978 to 2002) was used for the following search strategy.

1. elder abuse.mp.
2. ((family or domestic) and (abuse or violence)).mp.
3. (elder\$ or old or ageing or aging or aged or geriatric).mp.
4. 2 and 3
5. 1 or 4
6. (internal medicine or geriatrics or family physicians or family practice).mp.
7. (primary care or emergency or emergency services).mp.

Search Strategies for Elder Abuse Interventions

MEDLINE (1966 to 2002) and CINAHL (1982 to 2002) were used for the following search strategy.

1. elder abuse.mp.
2. (domestic violence or family violence).mp.
3. (elder\$ or aged or old or ageing).mp.
4. 2 and 3
5. (vulnerable or disabled or handicapped).mp.

6. 1 or 4 or 5
7. GERIATRICS/ or geriatrics.mp.
8. Internal Medicine/ or internal medicine.mp.
9. Physicians, Family/ or family physicians.mp.
10. exp Primary Health Care/ or primary care.mp.
11. Family Practice/ or family practice.mp
12. EMERGENCIES/ or emergency.mp.
13. exp Emergency Service, Hospital/ or emergency department.mp.
14. 7 or 8 or 9 or 10 or 11 or 12 or 13
15. 6 and 14
16. limit 15 to (human and English language)
17. pc.fs. or prevent\$.mp. or intervention.mp. or assessment.mp.
18. exp COUNSELING/ or counseling.mp.
19. patient education.mp.
20. questionnaires.mp.
21. QUESTIONNAIRES/
22. INTERVIEWS/ or interviews.mp.
23. exp clinical trials/ or clinical trial\$.mp.
24. 17 or 18 or 19 or 20 or 21 or 22 or 23
25. 16 and 24
26. from 25 keep 1–129

PsycINFO (1984 to 2002) was used for the following search strategy.

1. elder abuse.mp.
2. (domestic violence or family violence).mp.
3. (elder\$ or aged or aging or ageing or old or geriatric).mp.
4. (vulnerable or disabled or handicapped).mp.
5. 3 or 4
6. 2 and 5
7. 1 or 6
8. exp GERIATRICS/ or geriatrics.mp.
9. internal medicine.mp. or exp Physicians/
10. exp Family Physicians/ or family physicians.mp.
11. exp Primary Health Care/ or primary care.mp.
12. exp Family Physicians/ or exp General Practitioners/ or family practice.mp.
13. exp emergency services/ or emergency\$.mp.
14. 8 or 9 or 10 or 11 or 12 or 13
15. 7 and 14
16. limit 15 to (human and English language)
17. prevention/ or prevent\$.mp. or intervention.mp. or assessment.mp.
18. exp counseling/ or counsel\$.mp. or assess\$.mp.
19. exp Client Education/ or patient education.mp.
20. questionnaires/ or questionnaire\$.mp.
21. exp interviews/ or interview\$.mp.
22. clinical trial\$.mp.
23. exp at risk populations/ or exp cohort analysis/ or cohort stud\$.mp.
24. 17 or 18 or 19 or 20 or 21 or 22 or 23
25. 16 and 24
26. from 25 keep 1–36

AARP Ageline (1978 to 2002) was used for the following search strategy.

1. elder abuse.mp.
2. ((family or domestic) and (abuse or violence)).mp.
3. (elder\$ or old or ageing or aging or aged or geriatric).mp.
4. 2 and 3
5. 1 or 4
6. (internal medicine or geriatrics or family physicians or family practice).mp.
7. (primary care or emergency or emergency services).mp.
8. 6 or 7
9. 5 and 8
10. from 9 keep 1–75

Quality Rating Criteria for Diagnostic Accuracy Studies

The quality rating criteria for diagnostic accuracy studies were as follows: screening test relevant, available for primary care, and adequately described; study uses a credible reference standard, performed regardless of test results; reference standard interpreted independently of the screening test; study handles indeterminate results in a reasonable manner; spectrum of patients included in study; adequate sample size; and administration of reliable screening test. The definition of ratings are as follows, based on these criteria.

A study with a rating of “good” evaluates a relevant, available screening test; uses a credible reference standard; interprets the reference standard independently of the screening test; assesses the reliability of the test; has few indeterminate results or handles them in a reasonable manner, and includes a large number (>100) of broad-spectrum patients with and without disease.

A study with a rating of “fair” evaluates a relevant available screening test; uses a reasonable standard, although not the best; interprets the reference standard independently of the screening test; has a moderate sample size (50 to 100 patients); and includes a “medium” spectrum of patients.

A study with a rating of “poor” has important limitations, such as an inappropriate reference standard, an improperly administered screening test, a biased ascertainment of the reference standard, and a small sample size involving a narrow selected spectrum of patients.

Quality Rating Criteria for Randomized, Controlled Trials and Cohort Studies

For initial assembly of comparable groups, the following criteria apply. For randomized, controlled trials, adequate randomization is required, including concealment and whether potential confounders were distributed equally among groups. For cohort studies, inception cohorts and potential confounders with restriction or measurement for adjustment in the analysis should be considered.

Additional criteria include the following: maintenance of comparable groups (includes attrition, crossovers, adherence, contamination); important differential loss to follow-up or overall high rates of loss to follow-up; equal, reliable, and valid measurements (includes masking of outcome assessment); clear definition of interventions; important outcomes considered; and adjustment for potential confounders for cohort studies, or

Appendix Table 1. Women's Experience with Battering Scale (WEB)*

Description of How Your Partner Makes You Feel	Agree Strongly	Agree Somewhat	Agree a Little	Disagree a Little	Disagree Somewhat	Disagree Strongly
1. He makes me feel unsafe even in my own home.	6	5	4	3	2	1
2. I feel ashamed of the things he does to me.	6	5	4	3	2	1
3. I try not to rock the boat because I am afraid of what he might do.	6	5	4	3	2	1
4. I feel like I am programmed to react a certain way to him.	6	5	4	3	2	1
5. I feel like he keeps me prisoner.	6	5	4	3	2	1
6. He makes me feel like I have no control over my life, no power, no protection.	6	5	4	3	2	1
7. I hide the truth from others because I am afraid not to.	6	5	4	3	2	1
8. I feel owned and controlled by him.	6	5	4	3	2	1
9. He can scare me without laying a hand on me.	6	5	4	3	2	1
10. He has a look that goes straight through me and terrifies me.	6	5	4	3	2	1

* Based on reference 56. To score the Women's Experience with Battering Scale, sum responses for items 1 to 10. The range of scores is 10 to 60. A score ≥ 20 indicates battering.

intention-to-treat analysis for randomized, controlled trials. Definitions of ratings are as follows, based on these criteria.

A study with a rating of "good" meets all the criteria. Comparable groups are assembled initially and maintained throughout the study (follow-up $\geq 80\%$). Reliable and valid measurement instruments are used and applied equally to the groups, interventions are spelled out clearly, important outcomes are considered, and appropriate attention is given to confounders in the analysis.

Studies will be graded "fair" if any or all of the following problems occur, without the important limitations noted in the "poor" category below: Generally comparable groups are assembled initially, but some question remains about whether some (although not major) differences occurred in follow-up; measurement instruments are acceptable (although not the best) and generally applied equally; some but not all important outcomes are considered; and researchers account for some but not all potential confounders.

Studies will be graded "poor" if any of the following major limitations exist: Groups assembled initially are not close to being comparable or are not maintained throughout the study, unreli-

able or invalid measurement instruments are used or are not applied at all equally among groups (including not masking outcome assessment), and key confounders are given little or no attention.

Quality Rating Criteria for Case-Control Studies

For quality rating of case-control studies, the following criteria apply: accurate ascertainment of cases, nonbiased selection of cases and controls with exclusion criteria applied equally to both, adequate response rate, diagnostic testing procedures applied equally to each group, measurement of exposure accurate and applied equally to each group, and appropriate attention to potential confounding variable. Definition of ratings are as follows, based on these criteria.

A study with a rating of "good" involves appropriate ascertainment of cases and nonbiased selection of case and control participants, equal application of the exclusion criteria to cases and controls, a response rate equal to or greater than 80%, accurate diagnostic procedures and measurements that are applied equally to cases and controls, and appropriate attention to confounding variables.

Appendix Table 2. Index of Spouse Abuse—Physical Scale (ISA-PS)*

Question	All of the Time	Most of the Time	A Good Part of the Time	Some of the Time	A Little of the Time	Very Rarely	None of the Time
1. My partner pushes and shoves me around violently.	7	6	5	4	3	2	1
2. My partner hits and punches my arms and body.	7	6	5	4	3	2	1
3. My partner threatens me with a weapon like a gun or a knife.	7	6	5	4	3	2	1
4. My partner beats me so hard I must seek medical help.	7	6	5	4	3	2	1
5. My partner beats me when he drinks.	7	6	5	4	3	2	1
6. My partner hits, punches, or kicks my face and head.	7	6	5	4	3	2	1
7. My partner beats me in the face so badly that I'm ashamed to be seen in public.	7	6	5	4	3	2	1
8. My partner tries to choke, strangle, or suffocate me.	7	6	5	4	3	2	1
9. My partner knocks me down and then kicks or stomps me.	7	6	5	4	3	2	1
10. My partner throws dangerous objects at me.	7	6	5	4	3	2	1
11. My partner has injured me with a weapon like a gun, knife, or other object.	7	6	5	4	3	2	1
12. My partner has broken one or more of my bones.	7	6	5	4	3	2	1
13. My partner physically forces me to have sex.	7	6	5	4	3	2	1
14. My partner badly hurts me while we are having sex.	7	6	5	4	3	2	1
15. My partner injures my breast or genitals.	7	6	5	4	3	2	1

* Based on reference 56. To score the Index of Spouse Abuse—Physical Scale, sum the responses, subtract the number of questions actually answered ($n = 15$), and multiply by 100, then divide by 90. Scores > 2 indicate physical interpersonal violence.

A study with a rating of “fair” is recent and relevant, without major apparent selection or diagnostic work-up bias, but with a response rate less than 80% or attention to some but not all important confounding variables.

A study with a rating of “poor” has major selection or diagnostic work-up biases, a response rate less than 50%, or inattention to confounding variables.

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Appendix Figure 1. Screening instruments for intimate partner violence against women.

The Partner Abuse Interview (49)

"Many people, at one time or another, get physical with their partner when they're angry. For example, some people threaten to hurt their partners, some push or shove, and some slap or hit. I'm going to ask you about a variety of common behaviors, and I'd like you to tell me if your partner did these during the past year."

For each behavior answered "no," put a "zero" in the appropriate box and ask if the patient was bruised or injured in any other way.

If the answer is "yes," code "1" for no injury, "2" for possible injury, and "3" for injury.

Has your partner...	Yes/No	Injury Codes
1. Thrown something at you	()	1 2 3
2. Pushed, grabbed, or shoved you	()	1 2 3
3. Slapped you	()	1 2 3
4. Kicked, bit, hit you with a fist	()	1 2 3
5. Hit or tried to hit you with an object	()	1 2 3
6. Beat you up	()	1 2 3
7. Threatened you with a gun or knife	()	1 2 3
8. Used a gun or knife	()	1 2 3
9. Forced you to have sex when you didn't want to	()	1 2 3
10. Other	()	1 2 3

Ask the following question if the answer to any of the above questions is anything other than "zero."

11. "Some people are afraid that their partners will physically hurt them if they argue with their partners or do something their partners don't like. How much would you say you are afraid of this happening to you?"
- () Not at all (1)
() A little (2)
() Quite a bit/Very afraid (3)

Screening Questions for Domestic Violence (50)

Have any of the following ever happened to you? Answer yes or no.

1. Has your male partner (husband, boyfriend) hit, slapped, kicked, or otherwise physically hurt you?
2. If you are pregnant, has your male partner hit, slapped, kicked, pushed, or otherwise physically hurt you since you've been pregnant?
3. Has your male partner forced you to have sexual activities?
4. Are you afraid of your male partner?

A "yes" response to any question is considered positive for partner violence.

Domestic Abuse Assessment Questionnaire (51)

Answer "yes" or "no."

1. Have you ever been emotionally or physically abused by your partner or someone important to you?
2. Within the last year, have you been hit, slapped, kicked, or otherwise physically hurt by someone?
3. Since your pregnancy began, have you been hit, slapped, kicked, or otherwise physically hurt by someone?
4. Within the last year, has anyone forced you to have sexual activities?
5. Are you afraid of your partner or anyone else?

A "yes" response on any question is considered positive for partner violence.

Abuse Assessment Screen (AAS) for Use in Pregnancy (52)

1. Have you ever been emotionally or physically abused by your partner or someone important to you? Yes No
 2. Within the last year, have you been hit, slapped, kicked, or otherwise physically hurt by someone? Yes No
If yes, by whom? (circle all that apply)
Husband Ex-husband Boyfriend Stranger Other Multiple No. of times
 3. Since you've been pregnant, have you been hit, slapped, kicked, or otherwise physically hurt by someone? Yes No
If yes, by whom? (circle all that apply)
Husband Ex-husband Boyfriend Stranger Other Multiple No. of times
- Mark the area of injury on the body map (map included).
Score the most severe incident to the following scale:
- 1 = Threats of abuse including use of a weapon
 - 2 = Slapping, pushing; no injuries and/or no lasting pain
 - 3 = Punching, kicking, bruises, cuts, and/or continuing pain
 - 4 = Beaten up, severe contusions, burns, broken bones
 - 5 = Head, internal, and/or permanent injury
 - 6 = Use of weapon, wound from weapon
4. Within the past year, has anyone forced you to have sexual activities? Yes No
If yes, who? (circle all that apply)
Husband Ex-husband Boyfriend Stranger Other Multiple No. of times
 5. Are you afraid of your partner or anyone you listed above? Yes No

Responses are recorded on a data collection form. No other scoring information was provided.

Partner Violence Screen (PVS) (53)

1. Have you been hit, kicked, punched, or otherwise hurt by someone within the past year? If so, by whom?
 2. Do you feel safe in your current relationship?
 3. Is there a partner from a previous relationship who is making you feel unsafe now?
- A "yes" response on any question is considered positive for partner violence.

The HITS Scale (54)

The HITS scale is a paper-and-pencil instrument that is made up of the following 4 items: "How often does your partner physically Hurt you, Insult you or talk down to you, Threaten you with harm, and Scream or curse you?"

Patients respond to each of these items with a 5-point frequency format: never, rarely, sometimes, fairly often, and frequently. Score values could range from a minimum of 4 to a maximum of 20.

Emergency Department Domestic Violence Screening Questions (55)

1. Does anyone in your family have a violent temper?
2. During an argument at home, have you ever worried about your safety or the safety of your children?
3. Many women who present to the emergency department with similar injuries or complaints are victims of violence at home. Could this be what has happened to you?
4. Would you like to speak to someone about this?
5. Were any of the previous visits to the emergency department prompted by an injury or symptom suffered as a victim of violence at home?

A "yes" response to question 3 or "yes" to questions 1 or 2 and 4 would classify a person as being a victim of partner violence. A "yes" response to question 1 or 2 or both would classify a person as probably being a victim of partner violence. A "yes" response to question 5 would classify the person as having been a victim of partner violence.

Woman Abuse Screening Tool (WAST) (57)

1. In general, how would you describe your relationship?
a lot of tension some tension no tension
2. Do you and your partner work out arguments with ...
great difficulty some difficulty no difficulty
3. Do arguments ever result in you feeling put down or bad about yourself?
often sometimes never
4. Do arguments ever result in hitting, kicking, or pushing?
often sometimes never
5. Do you ever feel frightened by what your partner says or does?
often sometimes never
6. Has your partner ever abused you physically?
often sometimes never
7. Has your partner ever abused you emotionally?
often sometimes never
8. Has your partner ever abused you sexually?
often sometimes never

To score this instrument, the responses are assigned a number. For the first question, "a lot of tension" gets a score of 1 and the other 2 get a 0. For the second question, "great difficulty" gets a score of 1 and the other 2 get 0. For the remaining questions, "often" gets a score of 1, "sometimes" gets a score of 2, and "never" gets a score of 3.

Domestic Violence Screening Tool (58)

1. Have you ever been threatened, hit, punched, slapped, or injured by a husband, boyfriend, or significant other you had at any point in the past?
2. Have you ever been hurt or frightened so badly by a husband, boyfriend, or significant other that you were in fear for your life?
3. Have you been hit, punched, slapped, or injured by a husband, boyfriend, or significant other within the last month?
4. Are you currently involved in a close relationship with a husband, boyfriend, or significant other?
5. Are you here today for injuries received from your husband, boyfriend, or significant other?
6. Do you often feel stressed due to fear of threats or violent behavior from your current husband, boyfriend, or significant other?
7. Has your current husband, boyfriend, or significant other ever hit, punched, slapped, or injured you?
8. Do you think it is likely that your husband, boyfriend, or significant other will hit, slap, punch, kick, or otherwise hurt you in the future?
9. Do you think you will be safe if you go back home to your husband, boyfriend, or significant other at this time?

A "yes" response to any question is considered positive for partner violence.

Appendix Figure 2. Screening instruments for elder abuse and neglect.

Brief Abuse Screen for the Elderly (BASE) (59)

Please respond to every question (as well as you can estimate) concerning all clients ___ years or over who are caregivers (give regular help of any kind) or care receivers:

1. Is the client an older person or caregiver? Yes___ No___
2. Is the client a caregiver of an older person? Yes___ No___
3. Do you suspect abuse? (see also #4 and #5) Yes___ No___
 - i) By caregiver (comments)_____

1	2	3	4	5
no, not at all	only slightly, doubtful	possibly, probably, somewhat	yes, quite likely	definitely

 - ii) By care receiver or other (comments)_____

1	2	3	4	5
no, not at all	only slightly, doubtful	possibly, probably, somewhat	yes, quite likely	definitely
4. If any answer for #3 except "no, not at all," indicate what kind(s) of abuse(s) is (are) suspected.
 - i) physical___
 - ii) psychosocial___
 - iii) financial___
 - iv) neglect___ (includes passive and active)
5. If abuse is suspected, about how soon do you estimate that intervention is needed?

1	2	3	4	5
immediately	within 24 hrs	24–72 hrs	1 week	2 or more weeks

Scoring information was not provided.

Hwalek–Sengstock Elder Abuse Screening Test (HSEAST) (60)

Violation of Personal Rights or Direct Abuse

1. Does someone else make decisions about your life — like how you should live or where you should live?
2. Does someone in your family make you stay in bed or tell you you're sick when you know you're not?
3. Has anyone forced you to do things you didn't want to do?
4. Has anyone taken things that belong to you without your OK?
5. Has anyone close to you tried to hurt or harm you recently?

Characteristics of Vulnerability

6. Do you have anyone who spends time with you, taking you shopping or to the doctor?
7. Are you sad or lonely often?
8. Can you take your own medication and get around by yourself?

Potentially Abusive Situations

9. Are you helping to support someone?
10. Do you feel uncomfortable with anyone in your family?
11. Do you feel that nobody wants you around?
12. Does anyone in your family drink a lot?
13. Do you trust most of the people in your family?
14. Does anyone tell you that you give them too much trouble?
15. Do you have enough privacy at home?

A response of "no" to items 6, 8, 13, and 15 and a response of "yes" to all other items score in the abused direction.

The Caregiver Abuse Screen (Reis–Nahmiash CASE) (61)

Please answer the following questions as a helper or caregiver with yes or no:

1. Do you sometimes have trouble making (___) control his/her temper or aggression?
2. Do you often feel you are being forced to act out of character or do things you feel bad about?
3. Do you find it difficult to manage (___'s) behavior?
4. Do you sometimes feel that you are forced to be rough with (___)?
5. Do you sometimes feel you can't do what is really necessary or what should be done for (___)?
6. Do you often feel you have to reject or ignore (___)?
7. Do you often feel so tired and exhausted that you cannot meet (___ 's) needs?
8. Do you often feel you have to yell at (___)?

Scoring information was not provided.