

Screening Women for Intimate Partner Violence and Elderly and Vulnerable Adults for Abuse: Systematic Review to Update the 2004 U.S. Preventive Services Task Force Recommendation

Prepared for:

Agency for Healthcare Research and Quality
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Contract No. HHS-290-2007-10057-I-EPC3, Task Order No. 3

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AHRQ Publication No. 12-05167-EF-1
May 2012

This report is based on research conducted by the Oregon Evidence-based Practice Center (EPC) under contract to the Agency for Healthcare Research and Quality (AHRQ), Rockville, MD (Contract No. 290-02-0024). The investigators involved have declared no conflicts of interest with objectively conducting this research. The findings and conclusions in this document are those of the author(s), who are responsible for its content, and do not necessarily represent the views of AHRQ. No statement in this report should be construed as an official position of AHRQ or of the U.S. Department of Health and Human Services.

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Acknowledgements: The authors acknowledge Shelley Selph, MD, MPH, Oregon Health & Science University, and Laurie Hoyt Huffman, MS, for their contributions to the report. We also acknowledge Tracy Dana, MLS, Oregon Health & Science University, for conducting literature searches. We thank the Medical Officer for this project, Charlotte Mullican, BSW, MPH, AHRQ; U.S. Preventive Services Task Force leads David Grossman, MD, MPH, Bernadette Melnyk, PhD, RN, and Adelita Gonzales Cantu, PhD, RN; and Mary Barton, MD, MPP.

Suggested Citation: Nelson HD, Bougatsos C, Blazina I. Screening Women for Intimate Partner Violence and Elderly and Vulnerable Adults for Abuse: Systematic Review to Update the 2004 U.S. Preventive Services Task Force Recommendation. Evidence Synthesis No. 92. AHRQ Publication No. 12-05167-EF-1. Rockville, MD: Agency for Healthcare Research and Quality; May 2012.

Structured Abstract

Background: Intimate partner violence (IPV) and abuse of elders and vulnerable persons is common in the United States and often undetected. Screening individuals without obvious signs of abuse in health care settings could identify those at risk and lead to interventions that reduce exposure to violence and abuse and improve health outcomes.

Purpose: To update the previous 2004 evidence report on screening for IPV and abuse of elders and vulnerable persons for the U.S. Preventive Services Task Force (USPSTF).

Data Sources: We reviewed the Cochrane Central Register of Controlled Trials and Cochrane Database of Systematic Reviews through the fourth quarter of 2011, and MEDLINE and PsycINFO from 2002 to January 9, 2012, for relevant English-language studies, systematic reviews, and meta-analyses. Reference lists of papers and citations of key studies were reviewed manually and by using Scopus.

Study Selection: The screening population included adults who have no obvious signs or symptoms of abuse who interact with health care providers in a number of health care settings. Studies were selected based on preestablished selection criteria using randomized, controlled trials to determine the effectiveness of screening and interventions to reduce abuse and improve health outcomes; studies of diagnostic accuracy to evaluate the ability of screening instruments to identify abused individuals; and studies of any design to determine harms of screening and interventions.

Data Extraction: For studies of screening and interventions, information about the patient populations, study designs, screening methods, types of interventions, followup, methods of analysis, and results were abstracted. For studies of screening instruments, details about the study designs, instruments, reference standards, populations, methods of administration, and results were abstracted. Predefined criteria developed by the USPSTF were used to rate the quality of studies as good, fair, or poor.

Data Synthesis: For IPV, a randomized, controlled trial comparing IPV screening versus no screening in Canadian health care settings indicated that both groups had reductions in IPV recurrence, post-traumatic stress disorder symptoms, and alcohol problems, as well as improvements in scores for quality of life, depression, and mental health after 18 months of followup; however, differences between groups were not statistically significant for these outcomes. Six instruments with 1 to 8 items demonstrated sensitivity and specificity >80 percent in clinical populations of asymptomatic women; results varied between studies and across instruments. A trial of pregnant women reported decreased violence and improved birth outcomes with counseling versus usual care. Two trials of home visitation versus no visitation for young mothers resulted in improved outcomes with visitation. Counseling resulted in decreased pregnancy coercion and resolution of unsafe relationships versus usual care in one trial. Two trials of counseling showed improved outcomes in intervention and control groups without differences between them (counseling vs. referral cards, nurse management vs. usual care in pregnancy).

For abuse of elder and vulnerable adults, few studies met inclusion criteria. A descriptive study of elderly abused veterans who were identified in primary care clinics and referred to case management found that 5 percent were reported to Adult Protective Services and 6 percent required nursing home placement or conservatorship arrangements. A single instrument, the Elder Abuse Suspicion Index, was evaluated for diagnostic accuracy and had sensitivity and specificity of 9 to 47 percent and 75 to 97 percent, respectively, depending on the number of positive responses to specific questions.

Limitations: Studies of IPV were limited by heterogeneity, lack of true control groups, high and/or differential loss to followup, self-reported measures, inadequate power, recall bias, missing data, Hawthorne effect among control participants, and reference standards that were not credible or replicable in diagnostic accuracy studies. Studies of elder and vulnerable adult abuse were lacking.

Conclusions: A trial of screening showed reductions in IPV recurrence and improvement in related outcomes for both screening and comparison groups, but interpretations are limited by high attrition and the Hawthorne effect. Trials of IPV interventions for pregnant women and young mothers showed improved outcomes for the intervention versus usual care groups. Several instruments have been developed for IPV screening; six instruments with 1 to 8 items demonstrated sensitivity and specificity >80 percent in clinical populations of asymptomatic women, although results varied between studies and across instruments. Studies were lacking to address screening elderly and vulnerable adults for abuse.

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CHAPTER 1. INTRODUCTION

Purpose of Review and Prior USPSTF Recommendation

This systematic evidence review is an update for the U.S. Preventive Services Task Force (USPSTF) recommendation on screening women for intimate partner violence (IPV) and elderly and vulnerable adults for abuse and neglect. The USPSTF defines screening as obtaining information about abuse from individuals in health care settings who do not have complaints or obvious signs of abuse, such as physical injuries. This information would be obtained from surrogates for individuals who are unable to provide it themselves. Individuals with signs, symptoms, or complaints of IPV or abuse or neglect would undergo evaluations outside the scope of screening recommendations. (Abbreviations are listed in **Appendix A**.)

In 2004, based on results of a previous review,¹⁻³ the USPSTF found insufficient evidence to recommend for or against routine screening of women for IPV or of older adults or their caregivers for elder abuse (I Statement).^{4,5} The USPSTF could not determine the balance between the benefits and harms of screening because of the lack of critical evidence, particularly the lack of trials of the effectiveness of screening in health care settings and the effectiveness of interventions to reduce harm from abuse. The USPSTF reviewed several existing screening instruments that demonstrated adequate internal consistency and were validated with longer instruments. However, none were evaluated against measurable violence or health outcomes. Also, despite reviewing an extensive literature on IPV, few studies provided data on screening and management to guide clinicians in practice, and there was little to no evidence from studies of elder abuse or neglect.

This update focuses on new studies and evidence gaps that were unresolved at the time of the 2004 recommendation.

Condition Definitions

Intimate Partner Violence

The Centers for Disease Control and Prevention (CDC)⁶ recognizes four categories of IPV, including physical violence, sexual violence, threat of physical or sexual violence, and psychological or emotional abuse.⁷

Physical violence is the intentional use of physical force with the potential for causing death, disability, injury, or harm. Physical violence includes, but is not limited to, scratching, pushing, shoving, throwing, grabbing, biting, choking, shaking, slapping, punching, burning, use of a weapon, and use of restraints or one's body, size, or strength against another person.

Sexual violence is divided into three categories: 1) use of physical force to compel a person to engage in a sexual act against his or her will, whether or not the act is completed; 2) attempted or

completed sex act involving a person who is unable to understand the nature or condition of the act, to decline participation, or to communicate unwillingness to engage in the sexual act (e.g., because of illness, disability, or the influence of alcohol or other drugs or because of intimidation or pressure); and 3) abusive sexual contact.

Threats of physical or sexual violence use words, gestures, or weapons to communicate the intent to cause death, disability, injury, or physical harm.

Psychological or emotional violence involves trauma to the victim caused by acts, threats of acts, or coercive tactics. Psychological or emotional abuse can include, but is not limited to, humiliating the victim, controlling what the victim can and cannot do, withholding information from the victim, deliberately doing something to make the victim feel diminished or embarrassed, isolating the victim from friends and family, and denying the victim access to money or other basic resources. In addition, stalking is often included among the types of IPV. Stalking generally refers to harassing or threatening behavior that an individual engages in repeatedly, such as following a person, appearing at a person's home or place of business, making harassing phone calls, leaving written messages or objects, or vandalizing a person's property."⁸

Abuse and Neglect of Elderly and Vulnerable Adults

For this review, abuse and neglect of vulnerable adults is also considered with elder abuse. A vulnerable adult is a person age 18 years or older whose ability to perform the normal activities of daily living or to provide for his or her own care or protection is impaired due to a mental, emotional, long-term physical, or developmental disability or dysfunction, or brain damage.⁹ Definitions vary by State, and sometimes included in the definition is the receipt of personal care services from others. Types of elder abuse that also apply to vulnerable adults include physical abuse, sexual abuse, emotional or psychological abuse, neglect, abandonment, financial or material exploitation, and self neglect.¹⁰⁻¹² Elder abuse is defined in various ways for research as well as for legal purposes.¹³ The CDC provides the following specific definitions.¹²

Physical abuse occurs when an individual is injured (e.g., scratched, bitten, slapped, pushed, hit, or burned), assaulted or threatened with a weapon (e.g., knife, gun, or other object), or inappropriately restrained.

Sexual abuse or abusive sexual contact is any sexual contact against an individual's will. This includes acts in which the elderly person is unable to understand the act or is unable to communicate. Abusive sexual contact is defined as intentional touching (either directly or through the clothing) of the genitalia, anus, groin, breast, mouth, inner thigh, or buttocks.

Psychological or emotional abuse occurs when an elder experiences trauma after exposure to threatening acts or coercive tactics. Examples include humiliation or embarrassment, controlling behavior (e.g., prohibiting or limiting access to transportation, telephone, or money or other resources), social isolation, disregarding or trivializing needs, or damaging or destroying property.

Neglect is the failure or refusal of a caregiver or other responsible person to provide for an elder's basic physical, emotional, or social needs, or failure to protect an elder from harm. Examples include not providing adequate nutrition, hygiene, clothing, shelter, or access to necessary health care, or failure to prevent exposure to unsafe activities and environments. *Abandonment* is the willful desertion of an elderly person by a caregiver or other responsible person.

Financial abuse or exploitation is the unauthorized or improper use of an elder's resources for monetary or personal benefit, profit, or gain. Examples include forgery, misuse or theft of money or possessions, use of coercion or deception to surrender finances or property, or improper use of guardianship or power of attorney.

Prevalence and Health Burden

Intimate Partner Violence

Estimates of the prevalence of IPV range widely, due to nonstandardized definitions, variations in reporting, and undisclosed or undiagnosed abuse. Annual estimates for women in the United States range from 1.3 to 5.3 million annually.^{14,15} The prevalence of lifetime history of IPV for women was reported as 23.6 percent in the 2005 Behavioral Risk Factor Surveillance System dataset for 18 States (N=10,243).¹⁶ Among pregnant women in the United States during 2008, physical abuse during the 12 months prior to becoming pregnant varied by State, from 1.8 to 6.0 percent, and rates for physical abuse during pregnancy ranged from 1.3 to 4.6 percent.¹⁷ Among postmenopausal women from the Women's Health Initiative study, 11 percent reported abuse during the prior year, of which 2.1 percent was physical abuse, 89.1 percent was verbal abuse, and 8.8 percent was both physical and verbal abuse (N=91,749).¹⁸ Among patients at the Group Health Cooperative, a large nonprofit health maintenance organization serving a predominantly white, middle-class population, Thompson and colleagues reported prevalence of IPV of 7.9 percent in the preceding year and 14.7 percent in the preceding 5 years.¹⁹

These estimates likely underrepresent the true rates of abuse because it is often underreported for many reasons,²⁰ including shame, fear, and reprisal.²¹ For example, only 35.6 percent of women injured during their most recent rape and 30.2 percent of women injured during their most recent physical assault received medical treatment.¹⁴

Health consequences of IPV include immediate effects, such as injuries²² and death²³ from physical and sexual assault, as well as long-term effects. IPV increases sexually transmitted infections, including HIV,²⁴ pelvic inflammatory disease,²⁵ and unintended pregnancy.²⁶ Assaults during pregnancy adversely affect the health of pregnant women and newborns,^{27,28} and IPV is associated with preterm birth, low birth weight, and decreased mean gestational age.²⁹⁻³¹

Chronic mental health conditions related to IPV include post-traumatic stress disorder (PTSD), depression, anxiety disorders, substance abuse, and suicide.³²⁻³⁶ Physical conditions resulting from IPV include chronic pain, neurological disorders resulting from injuries, gastrointestinal disorders such as irritable bowel syndrome, migraine headaches, and other disabilities.^{34,37,38}

Physical and sexual abuse during adolescence and young adulthood have been associated with poor self-esteem, alcohol and drug abuse, eating disorders, obesity, risky sexual behaviors, teen pregnancy, depression, anxiety, suicidality, and other conditions.^{39,40}

Abuse and Neglect of Elderly and Vulnerable Adults

The prevalence of abuse and neglect among elderly and vulnerable adults is unknown because of the nonstandardized definitions of abuse and neglect, differences in reporting, and undisclosed or undiagnosed abuse.⁴¹ A recent study estimated that 14 percent of noninstitutionalized older adults had experienced physical, psychological, or sexual abuse; neglect; or financial exploitation during the past year.⁴² In a survey, 52 percent of family caregivers of individuals with dementia reported abusive behavior towards them.⁴³ Women with disabilities are four times more likely to experience sexual assault in the past year than women without disabilities.⁴⁴ A comprehensive literature review utilizing studies of self-report, caregiver and professional support, and objective measures found that overall, one in four vulnerable elders are at risk for abuse, but only a small proportion are identified.⁴⁵

Elder abuse is associated with higher mortality. In a large, long-term prospective cohort study in New Haven, Connecticut, mistreated elders had an increased risk for death compared with nonmistreated elders (odds ratio [OR], 3.1 [95% CI, 1.4–6.7]) after adjustment for demographic characteristics, chronic diseases, functional status, social networks, cognitive status, and depression.⁴⁶

Risk Factors

Intimate Partner Violence

The CDC lists a broad array of risk factors for victimization or perpetration of IPV, categorized by individual, relationship, community, and societal factors.⁴⁷ The CDC's individual risk factors apply predominantly to perpetrators. Relationship risk factors include marital conflict, tension, and other struggles; marital instability, including divorces or separations; dominance and control of the relationship by one partner over the other; economic stress; and unhealthy family relationships and interactions. Community risk factors include poverty and associated factors such as overcrowding; low social capital such as lack of institutions, relationships, and norms that shape a community's social interactions; and weak community sanctions against IPV. Societal risk factors include traditional gender norms, such as women staying at home, not entering the workforce, and being submissive, while men support the family and make the decisions. In a large observational study of Kaiser Permanente members, the highest predictor of undiagnosed IPV for women was violence that occurred during the 5 years prior to the patient visit for health care (OR, 7.8 [95% CI, 5.3–11.4]).⁴⁸ In this study, complications during pregnancy was another predictor for pregnant women.

Abuse and Neglect of Elderly and Vulnerable Adults

The CDC also categorizes risk for elder abuse by individual, relationship, community, and societal levels.⁴⁹ Individual risk factors apply mostly to perpetrators, who are often caregivers, and include mental illness, alcohol abuse, hostility, poor or inadequate preparation or training for caregiving responsibilities, assumption of caregiving responsibilities at an early age, inadequate coping skills, and exposure to maltreatment as a child.

The CDC's relationship risk factors include high financial and emotional dependence upon a vulnerable elder, past experience of disruptive behavior, and lack of social support. Community risk factors include limited, inaccessible, or unavailable supportive services, such as respite care for caregivers. Societal risk factors include cultures in which there is high tolerance and acceptance of aggressive behavior; health care personnel, guardians, and other agents are given greater freedom in routine care provision and decisionmaking; family members are expected to care for elders without seeking help from others; persons are encouraged to endure suffering or remain silent regarding their pains; and there are negative beliefs about aging and elders.

Risk factors for victims of elder abuse determined from research studies include dementia, living in a care facility, advanced age, female sex, widowed marital status, physical and mental disabilities, behavioral problems, substance abuse, psychological factors, economic factors, dependency, and social isolation.^{13,18,50,43}

Rationale for Screening

Routine screening among asymptomatic individuals for IPV and elder and vulnerable adult abuse and neglect could identify abuse not otherwise known, prevent future abuse from occurring, and reduce morbidity and mortality. Because of fear, intimidation, and lack of support, many individuals do not disclose abuse unless directly questioned, and many who are directly questioned will not disclose. Prevention, identification, and stopping abuse is important to avert both short- and long-term serious health outcomes.^{15,51-53}

Screening for IPV by health care professionals is generally acceptable to women under conditions that are perceived as private and safe, and when questions are asked in a comfortable manner. There is no consensus regarding the most acceptable screening setting or modality.⁵⁴ While screening is generally acceptable to the majority of women surveyed,⁵⁴ some patients may experience feelings of being judged by care providers, and may have increased anxiety, feelings of intrusion, and disappointment in provider responses.⁵⁵ Some women also raise concerns about increased risk for abuse associated with both screening and mandatory reporting.⁵⁶ Studies suggest that victims of elder abuse and neglect may not tell anyone about their experiences.^{57,58} Many victims do not seek help from the police, Adult Protective Services (APS), or social and health service providers, especially when the perpetrators are their children.^{57,59-61} Some victims may view abuse as normal behavior,⁶¹ and some may blame themselves for the abusive situation.^{58,60,62,63}

Interventions

Intimate Partner Violence

There are several types of services for women subjected to IPV that vary by community and accessibility. These include hotlines, shelters, inpatient services, counseling, and advocacy programs. Identification of IPV in health care settings can lead to a referral to social services to help identify appropriate resources or a direct referral to services, or it can provide an opportunity to present information and discuss options for future consideration.

Some States require physicians to report abuse to legal authorities, and most require reporting of injuries resulting from firearms, knives, or other weapons.⁶⁴ By federal law, through the passage of the 1994 Violence Against Women Act and the 2005 reauthorization,⁶⁵ shelter workers and other advocates are not mandatory reporters, unless they hold a clinical license that otherwise requires them to report abuse, thereby making it easier for women to seek refuge from abuse without fear of losing their children. There is significant controversy in the field over whether legal reporting for IPV should be mandatory to assure victim safety.

Abuse and Neglect of Elderly and Vulnerable Adults

In cases of suspected or known elder abuse, health care workers are required to contact their local APS office, Area Agency on Aging office, or another social service for further investigation. The Social Security Act of 1974 authorized States to create APS offices. The Older Americans Act established local Ombudsman offices and other agencies dedicated to protecting the rights of elderly Americans. Mandatory reporting laws and regulations of elder abuse by physicians and other licensed individuals vary by State; however, most require reporting.⁶⁶ If abuse is found, interventions vary and could include services such as advocacy, counseling, money management, out-of-home placement, or conservatorship, among others. Cases of abuse and interventions for vulnerable adults are also handled by local APS offices or other social services, and interventions are implemented on a case-by-case basis.

Current Clinical Practice

Intimate Partner Violence

Screening practices are inconsistent for several reasons, including the existence of a variety of screening instruments, a lack of consensus on which instrument to use, the nonspecificity of risk factors, lack of training, lack of effectiveness studies about what to do if IPV is identified, discomfort with screening, and time constraints. While screening protocols have been implemented in some health systems, screening practices are low in others. While 43 to 85 percent of women considered screening for abuse acceptable when surveyed, only one third of physicians and half of emergency department nurses favored screening.⁶⁷

Abuse and Neglect of Elderly and Vulnerable Adults

Current screening practices for elder and vulnerable adult abuse and neglect are also limited for many reasons.⁵⁰ These include varying definitions of abuse, the wide variety of types of elder abuse, lack of an agreed-upon screening method, wide-ranging risk factors, lack of training, unclear guidance about who to screen and what to do if abuse is identified, physician discomfort with screening, uncertainty about the ramifications of identifying abuse or making allegations, lack of physician control or ability to decide what is in the best interest of the patient,⁶⁸ and time constraints. Also, in a recent survey of U.S. physicians, only a quarter were aware that the American Medical Association has guidelines on screening for elder abuse.⁶⁹ Identifying abuse and neglect for elderly or vulnerable adults also raises legal issues about mandatory reporting.

Recommendations of Other Groups

Intimate Partner Violence

Recommendations of other groups about screening for IPV in health care settings are summarized in **Table 1**. The Canadian Task Force on Preventive Health Care found insufficient evidence to recommend for or against screening women for IPV.⁷⁰ A report by the Health Technology Assessment Program in the United Kingdom also concluded that evidence is insufficient to implement a screening program for partner violence against women either in health services generally or in specific clinical settings.⁵⁴

The American Medical Association recommends that physicians routinely inquire about physical, sexual, and psychological abuse as part of the medical history, and consider abuse as a factor in the presentation of medical complaints because patients' experiences with interpersonal violence or abuse may adversely affect their health status.⁷¹ The Institute of Medicine recently recommended screening and counseling for interpersonal and domestic violence for women and adolescent girls,⁷² and this recommendation was incorporated into the Affordable Care Act as a preventive health service. The American Congress of Obstetricians and Gynecologists recommends that physicians screen all patients for IPV, and that screening should occur during routine visits and over the course of pregnancy.⁷³ The American Academy of Pediatrics also recommends screening, stating that pediatricians are in a position to recognize abused women in pediatric settings.⁷⁴ Other groups, such as Futures Without Violence (formerly the Family Violence Prevention Fund),⁷⁵ Council of International Neonatal Nurses,⁷⁶ Emergency Nurses Association,⁷⁷ and American College of Emergency Physicians⁷⁸ also recommend that health care providers screen patients for IPV. The American Academy of Family Physicians⁷⁹ also suggests that physicians be aware of signs of IPV during each patient encounter.

Abuse and Neglect of Elderly and Vulnerable Adults

Recommendations of other groups about screening for elder abuse in health care settings are summarized in **Table 2**. The American Medical Association,⁸⁰ American College of Emergency Physicians,⁷⁸ and Emergency Nurses Association⁷⁷ specifically suggest screening for elder abuse.

The American Congress of Obstetricians and Gynecologists,⁷³ American Academy of Pediatrics,⁷⁴ Emergency Nurses Association,⁷⁷ Council of International Neonatal Nurses,⁷⁶ and Futures Without Violence⁷⁵ all recommend in more general statements that care providers screen patients for family violence (**Table 1**).

CHAPTER 2. METHODS

Key Questions and Analytic Framework

Based on evidence gaps identified from the previous review¹⁻³ and using the methods of the USPSTF,⁸¹ the USPSTF and Agency for Healthcare Research and Quality (AHRQ) determined Key Questions for this review. Investigators created an analytic framework incorporating the Key Questions and outlining patient populations, interventions, outcomes, and harms of the screening process (**Figures 1 and 2**).

Key Questions for IPV (**Figure 1**) include:

1. Does screening asymptomatic women in health care settings for current, past, or increased risk for IPV reduce exposure to IPV, physical or mental harms, or mortality?
2. How effective are screening techniques in identifying asymptomatic women with current, past, or increased risk for IPV?
3. What are the adverse effects of screening for IPV?
4. For screen-detected women with current, past, or increased risk for IPV, how well do interventions reduce exposure to IPV, physical or mental harms, or mortality?
5. What are the adverse effects of interventions to reduce harm from IPV?

Key Questions for elder and vulnerable adult abuse and neglect (**Figure 2**) include:

1. Does screening asymptomatic elderly and vulnerable adults in health care settings for current, past, or increased risk for abuse and neglect reduce exposure to abuse and neglect, physical or mental harms, or mortality?
2. How effective are screening techniques in identifying asymptomatic elderly and vulnerable adults with current, past, or increased risk for abuse and neglect?
3. What are the adverse effects of screening for abuse and neglect of elderly and vulnerable adults?
4. For screen-detected elderly and vulnerable adults with current, past, or increased risk for abuse and neglect, how well do interventions reduce exposure to abuse and neglect, physical or mental harms, or mortality?
5. What are the adverse effects of interventions to reduce harm from abuse and neglect?

The target populations for screening are individuals presenting for health care, including adult women for IPV screening and elderly and vulnerable adults for screening for abuse and neglect. Screening is defined as obtaining information about abuse from individuals in health care settings who do not have complaints relating to abuse or obvious signs of abuse, such as physical injuries. This information is obtained from surrogates for individuals who are unable to provide it themselves. Individuals with signs, symptoms, or complaints of abuse or neglect undergo evaluations outside the scope of screening recommendations.

Health care settings include primary care clinics, emergency departments, and student health centers, among others. Screening techniques include self-administered (e.g., computer-enabled

tool or patient self-report) as well as person-to-person (e.g., clinician to patient) methods.

Outcomes include both reduction in exposure to IPV or abuse (e.g., decreasing levels of violence or abuse, leaving an unsafe situation), as well as reduction in mortality and physical or mental harms (e.g., physical trauma; unwanted pregnancy and sexually transmitted diseases; emotional trauma, social isolation, and its repercussions such as depression, anxiety, and nightmares; quality of life; and chronic medical conditions).

Possible screening harms include stigma, labeling, clinicians' negative attitudes, psychological distress, escalation of abuse and family tension, loss of personal residence and financial resources, erosion of established family structure, loss of autonomy for the victim, and lost time from work, among others. Abused women and/or their children can become the target of retaliation, which can lead to homicide.⁸²

Search Strategies

We searched the Cochrane Central Register of Controlled Trials and Cochrane Database of Systematic Reviews through the fourth quarter of 2011, and MEDLINE and PsycINFO from 2002 to January 9, 2012, for relevant studies and systematic reviews. Search strategies and additional details are described in **Appendix B1**. We also reviewed reference lists of papers and citations of key studies manually and by using Scopus. Studies published in 2003 or later were eligible for inclusion in this update.

Study Selection

We selected studies on the basis of inclusion and exclusion criteria developed for each Key Question (**Appendix B2**). **Appendix B3** shows the results of our literature search and selection process. For all studies, we included research conducted in the United States or in other populations similar to the screening populations targeted in this review that received services and interventions applicable to U.S. medical practice.

For Key Questions 1 and 4, we included randomized, controlled trials (RCTs) of the effectiveness of screening (Key Question 1) or interventions (Key Question 4) for IPV or elder abuse in reducing exposure to abuse and health outcomes as defined by the Key Questions. Studies of screening or referral rates, attitudes about screening, plans or intentions, or reporting other types of intermediate outcomes were not included.

For Key Question 2, we included studies of the diagnostic accuracy of screening techniques in identifying asymptomatic women and elderly/vulnerable adults in health care settings with current or past violence and abuse or at high risk for violence and abuse. Screening tests were included if they were used in or were applicable to U.S. primary care settings. These included self-administered, computer-enabled, or patient self-report instruments, as well as clinician-to-patient methods. Instruments were included if they were feasible for use for screening (i.e., brief, easy to interpret, acceptable to patients and clinicians). We included studies of diagnostic

accuracy reporting sensitivity, specificity, area under the curve, or other characteristics (**Table 3**). We excluded studies lacking a validated reference standard, examining instruments that are not feasible for screening in health care settings, or evaluating instruments in populations different than the target populations for this review. Studies of externally validated techniques, particularly if utilizing large and/or multiple samples, were preferred over studies of internally validated or nonvalidated techniques.

For Key Questions 3 and 5, we included studies on adverse effects of screening and interventions. Consistent with other reviews, inclusion criteria were broadened to include studies of multiple designs to describe potential adverse effects. Studies included for Key Questions 1 and 4 were reviewed for outcomes relevant to Key Questions 3 and 5.

Existing relevant systematic reviews were obtained and included if the individual studies within the review meet inclusion criteria; otherwise, we included the relevant individual studies. We excluded studies examining patient or physician education and methods of increasing screening or disclosure rates. We also excluded studies about the use of services or referral for services if they did not also include health outcomes, and the perceptions and attitudes of physicians and nurses on screening for IPV or elder abuse. Excluded studies are listed in **Appendix B4**.

Data Abstraction and Quality Rating

We abstracted details about the patient population, study design, analysis, followup, and results. USPSTF quality criteria were used to determine the quality of individual studies.⁸¹ Two investigators rated the quality of studies (good, fair, poor) and resolved discrepancies by consensus (described in **Appendixes B5 and B6**).^{81,83-86} Studies with designs that lack quality criteria were qualitatively described.

Data Synthesis

We assessed the aggregate internal validity (quality) of the body of evidence for each Key Question (good, fair, poor) using methods developed by the USPSTF based on the number, quality, and size of studies, consistency of results between studies, and directness of evidence.⁸¹ No quantitative analysis, such as meta-analysis, was conducted.

External Review

The draft report was reviewed by content experts, USPSTF members, AHRQ Project Officers, and collaborative partners (**Appendix B7**).

CHAPTER 3. RESULTS

Screening for Intimate Partner Violence

Key Question 1. Does Screening Asymptomatic Women in Health Care Settings for Current, Past, or Increased Risk for Intimate Partner Violence Reduce Exposure to Violence? Reduce Physical or Mental Harms or Mortality?

Summary. A large cluster RCT of the effectiveness of screening for IPV in clinical settings included 6,743 Canadian women randomized to screening or nonscreening groups.⁸⁷ The primary outcomes were exposure to abuse and quality of life in the 18 months after screening. Secondary outcomes included depression, PTSD, alcohol and drug abuse, global mental and physical health, and use of health and social services. Women in both the screened and nonscreened groups had reductions over time in IPV recurrence, PTSD symptoms, and alcohol problems, as well as improvements in scores for quality of life, depression, and mental health. These outcomes were not significantly different between women in the screened versus nonscreened groups.

Limitations of the trial, rated fair quality, include high loss to followup, and the women lost to followup had higher IPV scores and more risk factors for IPV than women retained in the study. Differences between screened and nonscreened groups were also compromised by the absence of a specific intervention, low number of screen-positive women actually having discussions about IPV with their clinicians during their clinic visits, and lack of differences between groups in accessing additional services during followup. Women randomized to the nonscreening group were provided with information cards of locally available resources for women with IPV, and underwent extensive questioning about IPV that could have increased their awareness and influenced outcomes of the trial.

Evidence. A large cluster RCT of the effectiveness of screening for IPV in clinical settings met inclusion criteria for Key Question 1 (**Appendixes C1 and C2**).⁸⁷ The trial included 6,743 English-speaking women between the ages of 18 and 64 years randomized to screening or nonscreening groups. The primary outcomes were exposure to abuse and quality of life in the 18 months after screening. Secondary outcomes included depression, PTSD, alcohol and drug abuse, global mental and physical health, and use of health and social services. Harms of screening were actively monitored.

Participants were recruited when they presented for a health care visit at one of 12 primary care, 11 acute care, and three obstetrics/gynecology clinic sites in Ontario, Canada. The units of randomization were days or shifts for sites using shifts, and the screening and nonscreening units were balanced across different times of the day and days of the week. Clinicians at all study sites received standardized training in responding to IPV prior to the beginning of the trial. All women had universal access to health care in accordance with local practice. Women were eligible for the trial if they were ages 18 to 64 years, had a male partner at some time during the previous 12

months, presented for their own health care visit, were able to separate themselves from anyone else accompanying them, lived within 120 km of the clinic site, could speak and read English, were not too ill to participate, and were able to provide informed consent.

On screening days, before seeing their clinicians for the intended health care visit, participants provided baseline information and self-completed the Women Abuse Screening Tool (WAST). The WAST is an eight-item instrument measuring physical, sexual, and emotional abuse in the last 12 months. A score of ≥ 4 was considered positive in the trial. Results of the WAST were provided to the clinicians prior to the health care visit for women with positive scores. Discussion of positive findings, referrals, or treatment was left to the discretion of the treating clinician according to usual practice. After their visits and regardless of their WAST scores, all women completed the Composite Abuse Scale (CAS). The CAS is a 30-item validated research instrument to measure IPV. A score of ≥ 7 indicates exposure to IPV. The same procedures were followed for nonscreening days, except that participants completed both the WAST and CAS at the end of the visit; however, clinicians could inquire about abuse during the clinic visit if there were indications to do so.

Women with positive scores on both the WAST and CAS in the screened and nonscreened groups were followed for 18 months. Interviewers blinded to group assignment met with participants within 14 days of the initial clinic visit for a baseline interview, and again at 6, 12, and 18 months. At followup, participants self-completed several instruments, including the CAS; World Health Organization (WHO) Quality of Life–BREF; Center for Epidemiologic Studies Depression Scale; SPAN (Startle, Physiological Arousal, Anger, and Numbness) instrument to measure PTSD; alcohol abuse and dependency tool (TWEAK); Drug Abuse Severity Test; Short-Form 12-Item Health Survey, Version 2; Consequences of Screening Tool (COST); and modified version of the Health and Social Service Utilization Questionnaire. Additional services included visits to physicians, nurses, psychologists, or social workers or use of crisis phone lines, sexual assault crisis centers, advocacy or counseling services, women’s shelters, or other type of services.

The 12-month prevalence of IPV at the initial clinic visit was 13 percent in the screened group and 12 percent in the nonscreened group. During the initial clinic visit, 44 percent of screened women and 8 percent of nonscreened women discussed IPV with their clinician. Women in both the screened and nonscreened groups had reductions over time in IPV recurrence, PTSD symptoms, and alcohol problems, and improvements in scores for quality of life, depression, and mental health.

Outcomes for women in the screened versus nonscreened groups at 18 months included statistically nonsignificant reduction in risk for IPV recurrence (OR, 0.82 [95% CI, 0.32–2.12]), more rapid improvement in quality of life (3.74 points higher [95% CI, 0.47–7.00]), and reduced depressive symptoms (-2.32 [95% CI, -4.61 to -0.03]). Results for quality of life and depression were not statistically significant using multiple imputation analysis, and other secondary outcomes were not different between groups. No measures of harm were associated with screening in women with or without IPV exposure.

The trial met criteria for fair quality because loss to followup was high (43 percent of screened

and 41 percent of nonscreened participants). Importantly, women lost to followup had lower levels of education, higher scores on the WAST and CAS, and were more likely to be married compared with those retained in the trial. Women lost to followup in the screened group had the highest WAST and CAS scores among trial participants.

Significant differences in major outcomes between screened and nonscreened groups may have been attenuated for several reasons, including the absence of a specific intervention, low number of screen-positive women actually having discussions about IPV with their clinicians during their clinic visits, and lack of differences between groups in accessing additional services during followup. Most women in the trial had contact with at least one additional service during the course of the trial, despite their screening group, indicating that referral and access to services may be a generally accepted practice among women in a universal health care system. Also, in this trial, women randomized to the nonscreening group were provided with information cards of locally available resources for women with IPV—itsself an IPV intervention in other studies. In addition, women in the nonscreening group underwent extensive questioning about IPV by completing the WAST, CAS, and other instruments over the 18 months of the trial. These experiences could increase their awareness of IPV in their own lives, affect their utilization of services, and influence outcomes of the trial creating a substantial Hawthorne effect (i.e., the phenomenon that study participants change their behavior as a result of being involved in the study).

Key Question 2. How Effective Are Screening Techniques in Identifying Asymptomatic Women With Current, Past, or Increased Risk for Intimate Partner Violence?

Summary. Fifteen studies that evaluated the diagnostic accuracy of 13 screening instruments for identifying IPV in asymptomatic adult women in health care settings met inclusion criteria. Most instruments assessed current and/or past abuse rather than risk factors for future abuse, including the Abuse Assessment Screen (AAS); Partner Violence Screen (PVS); Hurt, Insult, Threaten, Scream (HITS); WAST; Humiliation, Afraid, Rape, Kick (HARK); Ongoing Abuse Screen/Ongoing Violence Assessment Tool (OAS/OVAT); Slapped, Threatened, and Throw (STaT); Childhood Trauma Questionnaire–Short Form (CTQ-SF); Secure, Accepted, Family, Even, Talk Survey (SAFE-T); Parent Screening Questionnaire (PSQ); one personal safety question; and five items with nongraphic language.

Screening instruments demonstrating the highest sensitivity and specificity in the included diagnostic accuracy studies include the HITS (English version, 86 percent sensitivity and 99 percent specificity; Spanish version, 100 percent sensitivity and 86 percent specificity), OVAT (93 percent sensitivity, 86 percent specificity), STaT (89 percent sensitivity, 100 percent specificity), HARK (81 percent sensitivity, 95 percent specificity), modified CTQ-SF (85 percent sensitivity, 88 percent specificity), and WAST (88 percent sensitivity, 89 percent specificity). Positive responses on the PVS significantly predicted verbal aggression and violence during the 4 months after screening. Two instruments specifically evaluated in pediatric settings had relatively low sensitivity but high specificity (PSQ, 19 to 29 percent sensitivity and 91 to 93 percent specificity; Zink five questions, 40 percent sensitivity and 91 percent specificity). Sensitivity, specificity, and other measures varied between studies and across instruments.

Evidence. Fifteen studies that evaluated the diagnostic accuracy of 13 screening instruments for identifying IPV in asymptomatic adult women in health care settings met inclusion criteria (**Tables 4 and 5, Appendixes C3 and C4**). Most instruments assessed current and/or past abuse rather than risk factors for future abuse. Screening instruments included the AAS,⁸⁸ PVS,^{89,90} HITS,⁹¹ WAST,⁹⁰⁻⁹² HARK,⁹³ OAS/OVAT,^{94,95} StaT,^{96,97} CTQ-SF,⁹⁸ SAFE-T,⁹⁹ PSQ,¹⁰⁰ one personal safety question,¹⁰¹ and five items with nongraphic language.¹⁰² Five instruments and their modifications were used as reference standards, including the Index of Spouse Abuse (ISA),^{91,94,95,97} WAST,⁹¹ Conflict Tactics Scale (CTS),^{88,89,100-102} PVS,⁹⁹ and CAS.^{90,92,93} Structured⁹⁸ and semi-structured interviews⁹⁶ were used as reference standards in two studies. Additional descriptions of these instruments are provided in **Table 4**.

Three studies met criteria for good quality,^{90,92,98} and 12 for fair quality.^{88,89,93-96,97,99,100,101-103} The most common methodologic limitations of these studies include patient spectrum was too narrow or had limited applicability (e.g., single site, not community based, not United States or Canada); sampling method was not random or consecutive, or not described; reference standard was not credible; or dissimilar groups at baseline, high rates of attrition, and lack of information regarding whether the reference standard was independently interpreted. Details of the quality ratings are described in **Appendix C4**.

Four systematic reviews of screening instruments for IPV were identified by the searches.^{54,104-106} Reviews provided descriptive summaries of screening instruments; however, many studies were not included in this update because their publication dates predated 2003.^{54,104-106} Also, inclusion criteria for individual studies differed from this update by including studies of men,^{104,106} instruments designed to identify perpetrators,¹⁰⁶ studies that did not report screening test performance outcomes,^{54,105,106} studies comparing instruments with unclear or inadequate reference standards,^{54,105} or instruments intended for research settings.⁵⁴

Instruments Evaluated in Maternity, Emergency, or Primary Care Clinical Settings. The AAS, a four-item instrument that considers sexual coercion, lifetime abuse, current abuse, and abuse during pregnancy, was evaluated in two studies.^{88,94} When compared with the Conflict Tactics Scale 2 (CTS2) among mothers of premature infants in maternity wards, sensitivity and specificity were 32 and 99 percent for minor violence, 61 and 98 percent for severe violence, and 32 and 99 percent for both.⁸⁸ In a prospective study comparing the AAS and the OAS/OVAT with the ISA as the reference standard in a population of men and women presenting to an emergency department, the AAS had a sensitivity and specificity of 93 and 55 percent.⁹⁴

The OAS, a five-item instrument measuring current and past abuse, had sensitivity and specificity of 60 and 90 percent when compared with the ISA in emergency department patients.⁹⁴ After factor analysis, this instrument was edited to a four-item version (OVAT) that demonstrated sensitivity and specificity of 93 and 86 percent in the same population.⁹⁴ A subsequent study comparing OVAT with the ISA among patients presenting to an emergency department also reported high sensitivity and specificity (86 and 83 percent).⁹⁵

Two studies evaluated the three-item PVS, which measures past physical violence and perceived personal safety.^{89,90} A prospective study screened women presenting to an emergency department with the PVS and contacted them by telephone 4 months later to administer the CTS.⁸⁹

Participants who screened positive on the PVS had increased risks for verbal aggression (relative risk [RR], 7.25 [95% CI, 3.2–16.2]) and physical violence (RR, 11.3 [95% CI, 5.0–26.3]) compared with those with negative screens. These findings were similar when a single item from the PVS was used (“Have you been hit, kicked, punched, or otherwise hurt by someone?”). This study reported significant findings despite high loss to followup (53.2 percent) and differences in baseline abuse prevalence rates between participants retained and lost to followup (9.4 vs. 21.8 percent).

Results of the PVS and the WAST were compared with the CAS for 2,461 women presenting to family practice, emergency department, and women’s health clinics in Canada.⁹⁰ Sensitivity and specificity were 49 and 94 percent for the PVS and 47 and 96 percent for the WAST. In a subsequent study of a larger sample of women from the same Canadian clinics, the WAST demonstrated higher sensitivity (81 to 88 percent) and specificity (89 percent) using the CAS again as the reference standard.⁹² The WAST identified a 12-month IPV prevalence rate of 22 percent, while the CAS found 14 percent.

English and Spanish versions of the four-item HITS instrument were compared with the ISA and the Spanish-version of the WAST in a cross-sectional study.⁹¹ In a sample of women attending a family practice clinic, the sensitivity and specificity of the English-version HITS was maximized at a cut-point score of 10.5 (86 and 99 percent) and 5.5 for the Spanish-version HITS (100 and 86 percent).

The three-item STaT instrument was evaluated among women presenting to primary care clinics in two studies. Compared with a semi-structured interview, STaT demonstrated sensitivity and specificity of 96 and 75 percent for ≥ 1 positive responses, 89 and 100 percent for ≥ 2 , and 64 and 100 percent for ≥ 3 .⁹⁶ In a larger sample using the ISA as the reference standard, STaT had sensitivity and specificity of 95 and 37 percent for ≥ 1 positive responses, 85 and 54 percent for ≥ 2 , and 62 and 66 percent for ≥ 3 .⁹⁷

The four-item HARK instrument was compared with the CAS among women presenting to primary care in London.⁹³ For a positive response on any question, the sensitivity and specificity were 81 and 95 percent.

The SAFE-T instrument includes five questions about a woman’s relationship with her partner (secure at home, accepted by partner, family likes partner, disposition of partner, and talks with partner to resolve differences). A comparison of responses from SAFE-T with one item from the PVS among women in emergency departments indicated sensitivity and specificity of 54 and 81 percent.⁹⁹ Responses on one personal safety question were compared to those on the modified CTS among women in an urban family medicine clinic.¹⁰¹ Sensitivity and specificity were 9 and 91 percent.

Two items from the CTQ-SF, an instrument designed to detect a history of physical or sexual abuse in childhood, were compared with the Evaluation of Lifetime Stressors structured interview among women in a health maintenance organization.⁹⁸ Using a single item from the CTQ-SF, sensitivity and specificity were 70 and 94 percent for physical abuse and 82 and 89 percent for sexual abuse. Using two items to screen for physical or sexual abuse resulted in

sensitivity and specificity of 85 and 88 percent.

Instruments Evaluated in Pediatric Clinical Settings. The PSQ, which contains three questions about current and lifetime physical abuse and safety, was compared with the CTS2 in a study of mothers of children <6 years old in a pediatric community clinic.¹⁰⁰ Sensitivity and specificity were 19 and 93 percent for physical assault, 29 and 91 percent for injury, and 27 and 92 percent for psychological aggression.

A five-item screening instrument was designed for administration in pediatric settings by presenting questions with nongraphic language (e.g., “How do you and your partner work out arguments?”).¹⁰² Sensitivity and specificity were 40 and 91 percent when compared with the CTS2 in a cohort of women with children presenting to pediatric clinics or family practices in Ohio.

Key Question 4. For Screen-Detected Women With Current, Past, or Increased Risk for Intimate Partner Violence, How Well Do Interventions Reduce Exposure to Intimate Partner Violence? Reduce Physical or Mental Harms or Mortality?

Summary. Six RCTs reported in eight publications met inclusion criteria, including three trials of interventions targeted to pregnant and postpartum women^{29,30,107-109} and three trials of women enrolled without regard to pregnancy status.¹¹⁰⁻¹¹²

The National Institutes of Health–District of Columbia (NIH-DC) Initiative to Reduce Infant Mortality in Minority Populations is a randomized trial of counseling interventions to reduce multiple risks factors during pregnancy and postpartum compared with usual care.^{29,30,109} Screening for cigarette smoking, environmental tobacco smoke exposure, depression, and IPV with the AAS was done using an anonymous computer interview. Results indicated that compared with usual care, women in the counseling intervention group had significantly fewer recurrent episodes of IPV during pregnancy and postpartum, and better birth outcomes, including fewer very preterm neonates (≤ 33 weeks’ gestation), lower rates of very low birth weight neonates ($< 1,500$ g), and increased mean gestational age.

A randomized trial of home visitation enrolled women in Hawaiian hospitals who gave birth to an infant evaluated as at risk for maltreatment.¹⁰⁷ Primary outcomes were mothers’ IPV victimization and perpetration towards their domestic partners over the subsequent 9 years of followup. Women randomized to the intervention group received home visitation by paraprofessionals for 3 years. During the program, the intervention group had lower rates of IPV victimization that were of borderline statistical significance, and lower rates of IPV perpetration. Results were similar for physical assault victimization and perpetration. Long-term followup rates of overall IPV victimization and perpetration decreased with nonsignificant between-group differences, although rates of verbal abuse suggest an increase for victimization and perpetration among the intervention group.

A cluster randomized trial of pregnant women and mothers of children ≤ 5 years old evaluated

the effectiveness of mentor support versus usual care in reducing IPV and depression.¹¹² The trial enrolled women in primary care clinics in Australia who disclosed IPV or had behavioral symptoms suggestive of abuse. Results indicated that abuse scores were significantly reduced in the intervention versus usual care group, the odds of experiencing violence at followup when adjusted for baseline abuse was reduced, and other differences were not significant (e.g., depression, physical wellbeing, mental wellbeing, parenting stress).

A cluster randomized trial evaluated a counseling intervention compared with usual care in reducing abuse related to pregnancy coercion. Coercion is defined as a lack of control over a woman's reproductive health, including compromised decisionmaking or limited ability to enact contraceptive use and family planning, and fear of condom negotiation.¹¹¹ Results indicated that women randomized to the intervention who reported recent IPV at baseline had decreased pregnancy coercion at followup compared with usual care. Women in the intervention group were also more likely to discontinue an unhealthy or unsafe relationship compared with women in the usual care group, regardless of recent IPV status.

A randomized, two-arm trial compared use of a wallet-sized referral card with a nurse management protocol in reducing IPV.¹¹⁰ Two years after the interventions, both groups reported fewer threats of abuse, assaults, danger risks for homicide, and events of work harassment, and there were no significant differences between groups.

Evidence. Five systematic reviews of studies evaluating interventions for IPV have been published since 2003 and were reviewed for this update.^{54,105,113-115} Many of the studies cited in the reviews did not meet inclusion criteria because they were either originally published before 2003 or were outside the scope of Key Question 4.

Six RCTs reported in eight publications met inclusion criteria for Key Question 4 (**Table 6; Appendixes C5 and C6**).^{29,30,107-112} Three trials evaluated interventions targeted to pregnant and postpartum women,^{29,30,107-109} and three trials enrolled women without regard to pregnancy status and were conducted in primary care,^{110,112} Women, Infants, and Children (WIC) clinics,¹¹⁰ and family planning clinics.¹¹¹ One trial met criteria for good quality,³⁰ while two other publications of this trial were rated fair quality.^{29,109} Four additional trials met criteria for fair quality^{107,110-112} and one for poor quality.¹⁰⁸ Trials were limited primarily by enrollment of dissimilar groups at baseline, high and/or differential loss to followup, lack of power, analysis was not intention-to-treat or not described, use of self-reported measures, recall bias, missing data, lack of blinding, and lack of true control groups, since asking about abuse is itself an intervention. Trials included narrowly-defined patient populations that may not be applicable to broader populations. Although these limitations are important in the interpretation and application of the study results, many are unavoidable in this field of research. The good- and fair-quality rated studies are described below.

Interventions for Pregnant and Postpartum Women. The NIH-DC Initiative to Reduce Infant Mortality in Minority Populations is a randomized trial of counseling interventions during pregnancy and postpartum compared with usual care.^{29,30,109} This trial enrolled 1,044 women at six prenatal care sites in the District of Columbia. Women were eligible for the trial if they were African American, at least 18 years old, ≤ 28 weeks pregnant, a District of Columbia resident,

and English speaking. Screening for cigarette smoking, environmental tobacco smoke exposure, depression, and IPV with the AAS was done using an anonymous computer interview. Additional and followup information was collected by a telephone interviewer blinded to randomization group designations at baseline, 22–26 weeks' gestation, 34–38 weeks' gestation, and at an average of 10.3 weeks postpartum. Exposure to IPV was determined using scores from the CTS, which was also used to categorize women as having minor or severe and physical or sexual IPV. These designations were further defined by the study. Birth outcomes were determined by reviewing participants' medical charts.

Women randomly assigned to the intervention group received prenatal behavioral counseling for two to eight sessions, with up to two postpartum sessions provided by professional counselors. The intervention was delivered during routine prenatal care visits at the clinics by social workers or psychologists trained to respond specifically to each identified risk. The intervention sessions averaged 35 minutes in length. Counseling for IPV emphasized danger assessment, safety behaviors, and information on community resources. Smoking and depression were also specifically addressed for participants with these problems.

At baseline, 32 percent of women reported IPV in the previous year, and rates were similar for intervention and usual care groups. The mean age of participants was 24.5 years, participants initiated prenatal care at an average of 13 weeks' gestation, most were single, 68 percent had at least a high school education, and 79 percent were enrolled in Medicaid. Regarding other risk factors, 22 percent of participants smoked, 78 percent had environmental smoke exposure, 62 percent were depressed, 32 percent used alcohol, and 17 percent used illicit drugs.

Results indicated that women in the intervention group had significantly fewer recurrent episodes of IPV during pregnancy and postpartum (adjusted OR, 0.48 [95% CI, 0.29–0.80]).^{29,30} Further analysis showed that reduction in IPV was confined to minor physical violence, but not severe or sexual violence. Alcohol use and depression at baseline were significantly associated with recurrent episodes of IPV (alcohol use: OR, 1.85 [95% CI, 1.09–3.12]; depression: OR, 1.90 [95% CI, 1.11–3.25]).³⁰

Women in the intervention group also had better birth outcomes, including fewer very preterm neonates (≤ 33 weeks) (1.5 vs. 6.6 percent; $p=0.03$), lower rates of very low birth weight neonates (<1500 g) (0.8 vs. 4.6 percent; $p=0.52$), and increased mean gestational age (38.2 vs. 36.9 weeks; $p=0.016$). A later publication of this trial also reported fewer very preterm neonates (2.2 vs. 5.0 percent in intervention vs. usual care groups; OR, 0.43 [95% CI, 0.20–0.95]; number needed to treat, 36 mothers).²⁹ The trial also evaluated other risk factors for adverse pregnancy outcomes and found that smoking and environmental smoke exposure were the only other risk factors to decrease in the intervention group.¹⁰⁹ It is unclear how modification of these risk factors influenced birth outcomes reported in the subsequent publications.^{29,30}

A randomized trial of home visitation enrolled 685 English-speaking mothers in Oahu, Hawaii hospitals who gave birth to an infant evaluated as at risk for maltreatment.¹⁰⁷ Primary outcomes were mothers' IPV victimization and perpetration towards their domestic partners. Newborn risk was determined by chart review and score on the Kempe's Family Stress Checklist for screening. Eligible families were not involved with Child Protective Services.

Women randomized to the intervention group received home visitation by paraprofessionals for 3 years. The content of home visits was designed to promote child health and decrease child maltreatment by linking families to appropriate community services, teaching about child development, role modeling positive parenting and problem-solving strategies, and offering emotional support. The intervention was offered by three community agencies and participants averaged 13.6 visits in the first year.

Outcome measures were obtained by interviewers blinded to the group assignment. These occurred within 1 week postpartum, annually during the intervention period when the child was 1 to 3 years old, and annually during the followup period when the child was 7 to 9 years old. Measures included the CTS at baseline and the CTS2 at subsequent data points, with four sexual coercion questions omitted. Additional outcomes were measured by the Mental Health Index for anxiety and depressive symptoms, and questions about alcohol and drug use.

During the program, the intervention group had lower rates of IPV victimization that were of borderline statistical significance (incidence rate ratio [IRR],¹¹⁶ 0.86 [95% CI, 0.73–1.01]), and lower rates of perpetration towards their domestic partners (IRR, 0.83 [95% CI, 0.72–0.96]). Results were similar for physical assault (victimization IRR, 0.85 [95% CI, 0.71–1.00]; perpetration IRR, 0.82 [95% CI, 0.70–0.96]). Long-term followup rates of overall IPV victimization and perpetration decreased with nonsignificant between-group differences. Rates of verbal abuse suggest an increase for victimization (IRR, 1.14 [95% CI, 0.97–1.34]) and perpetration (IRR, 1.08 [95% CI, 0.92–1.26]) among the intervention group. Sexual violence and injury were not significantly associated with group assignment, although low prevalence rates of self-reported sexual abuse and injury may have limited the comparisons.

Results were likely influenced by several factors. Characteristics of participants at baseline differed between groups. In the intervention group, fewer participants used alcohol and had poor mental health, and more were employed. The specific elements relating to IPV in the intervention were minimal and varied by the needs of the family. Participation in the intervention decreased over time (70 percent at 6 months, 49 percent at 12 months, 25 percent at 36 months). Although >85 percent of participants completed the final interview when the child was 9 years old, women lost to followup differed from women retained in the trial (women lost to followup were more likely to be Asian, less likely to be Native Hawaiian). Also, IPV improved for both intervention and control groups as the children aged, consistent with epidemiologic data indicating IPV prevalence is highest for young women.^{117,118}

Interventions for Women Regardless of Pregnancy Status. A cluster randomized trial of pregnant women and mothers of children ≤5 years old evaluated the effectiveness of mentor support versus usual care in reducing IPV and depression.¹¹² The trial enrolled 215 English or Vietnamese speaking women in primary care clinics in Melbourne, Australia who disclosed IPV or had behavioral symptoms suggestive of abuse. Symptoms included depression, anxiety, frequent attendance without obvious causes, and other signs indicative of abuse. Methods of IPV disclosure were not described, except that participating clinicians underwent 6 hours of training to improve their capacity to identify, respond to, and refer women with IPV or at risk for IPV to community-based services.

Women randomized to the intervention received 12 months of weekly home visitation from trained nonprofessional mentors offering advocacy, parenting support, and referrals. Outcome measures obtained at baseline and at 12 months included abuse measured by the CAS, depression (Edinburgh Postnatal Depression Scale), wellbeing (Short-Form 36-Item Health Survey, Parenting Stress Index–Short Form), and social support (Medical Outcomes Study–Short Form) at baseline and followup.

Results indicated that abuse scores from the CAS were significantly reduced in the intervention compared with usual care groups (adjusted difference, -8.67 [95% CI, -16.2 to -1.15]); the odds of experiencing violence at followup when adjusted for baseline abuse was 0.47 (95% CI, 0.21–1.05). Other differences were not significant (depression, physical wellbeing, mental wellbeing, parenting stress). Results of the trial were influenced by low recruitment numbers, imbalance in recruitment to the intervention and usual care arms, dissimilar characteristics of participants at baseline (more depression and parenting stress in the intervention group), and drop off in participation with mentoring. Also, the CAS was developed as a categorical outcome, not as a measure of change along a continuum. The implications of changes in scores are unclear.

A cluster randomized trial evaluated a counseling intervention compared with usual care in reducing abuse related to pregnancy coercion.¹¹¹ Coercion is defined as a lack of control over a woman's reproductive health, including compromised decisionmaking or limited ability to enact contraceptive use and family planning, and fear of condom negotiation.¹¹¹ The trial enrolled 906 English or Spanish speaking women ages 16 to 29 years in urban family planning clinics in California. All women in the participating clinics were screened for IPV using two questions on an intake form, with a standard clinic protocol as part of usual care. For the trial, the intervention clinics also provided a counseling intervention that educated patients about reproduction coercion and provided information about local IPV and sexual assault resources. Measures included items from the CTS2 and Sexual Experiences Survey, questions about awareness and recent use of IPV services, and relationship changes from baseline. Outcome measures were obtained by computer-assisted followup surveys between 12 to 24 weeks after the baseline survey.

Results indicated that women randomized to the intervention who reported recent IPV at baseline had decreased pregnancy coercion at followup compared with usual care (adjusted OR, 0.29 [95% CI, 0.09–0.91]). Women in the intervention group were also more likely to discontinue an unhealthy or unsafe relationship compared with the usual care group ($p=0.013$), regardless of recent IPV status. The trial was limited by its small sample size (four clinics), underpowered to assess additional outcomes, and restricted in its applicability. Also, followup was short term and demographic characteristics of clinics differed.

A randomized, two-arm trial compared use of a wallet-sized referral card with a nurse management protocol in reducing IPV over the subsequent 2 years.¹¹⁰ A total of 360 English or Spanish speaking women ages 18 to 45 years who reported physical or sexual abuse in the past 12 months were recruited to the study from urban primary care public health clinics and WIC clinics in the United States. A positive response to either of the two questions on the AAS was used to determine IPV exposure. Women were randomized to receive either a wallet-sized referral card with a safety plan and resources for IPV services or a 20-minute nurse case

management protocol (March of Dimes). This protocol includes a brochure with a 15-item safety plan, supportive care, anticipatory guidance, and guided referrals.

Measures were obtained by interviews at baseline and at 6, 12, 18, and 24 months post-baseline using the Safety Behavior Checklist, Community Resources Checklist, Severity of Violence Against Women Scale, Danger Assessment Scale, and Employment Harassment Questionnaire. Two years after the interventions, both groups reported fewer threats of abuse ($p < 0.001$), assaults, danger risks for homicide, and events of work harassment, and there were no significant differences between groups. Compared with baseline, both groups adopted more safety behaviors by 24 months, and community resource use declined for both groups ($p < 0.001$), with no significant differences between groups. Interpretation of the effectiveness of the counseling intervention is limited by the lack of a true control group, although ethical issues required addressing IPV in an acceptable usual care arm. The counseling intervention did not demonstrate superiority in reducing IPV compared with the information card in this trial. The trial was also limited by its small size and restricted applicability.

Key Questions 3 and 5. What Are the Adverse Effects of Screening for Intimate Partner Violence and Interventions to Reduce Harm From Intimate Partner Violence?

Summary. Harms related to IPV screening and interventions were reported in three studies included for Key Questions 1 and 4, and in 11 descriptive studies identified by search strategies and systematic reviews.^{54,115}

Harms were actively monitored in a randomized trial of 6,743 women that evaluated screening versus no screening in Canadian primary care, acute care, and specialty care sites.⁸⁷ Results of the analysis of a measure developed to monitor harms for this study indicated no differences in reported harms for screened women who were either exposed or not exposed to IPV, and no harms were associated with screening for either group. A randomized trial of a 3-year home visitation intervention for at-risk newborns and their mothers suggested increased verbal abuse victimization and perpetration in the intervention group over long-term followup.¹⁰⁷ A randomized, two-arm trial of women receiving either a wallet-sized referral card or a 20-minute nurse management protocol to address IPV found no adverse effects as a result of the intervention.¹¹⁰

Descriptive studies generally indicated low levels of harm related to IPV screening and interventions, but study populations and methods varied widely. Some women indicated discomfort with screening, particularly among those with prior IPV; infringement of privacy; worries about increasing abuse by disclosing IPV; feelings of sadness and depression; and general concerns with IPV screening. These issues were voiced by a minority of respondents in the various surveys and interviews.

Evidence. Harms related to IPV screening and interventions were reported in three studies included for Key Questions 1 and 4^{87,107,110} and in 11 descriptive studies^{55,119-128} identified by search strategies and systematic reviews^{54,115} (**Table 7**). Most studies could not be rated for quality because USPSTF criteria do not apply to descriptive studies.

Harms Reported in Trials of Screening and Interventions. Harms were addressed in a randomized trial of 6,743 women that evaluated screening versus no screening in Canadian primary care, acute care, and specialty care sites.⁸⁷ Harms were actively monitored using the COST instrument administered to the screening group at baseline. COST is a multidimensional questionnaire developed for the study that measures the effect of being asked IPV screening questions. Results of the analysis of the Effects on Quality of Life subscale indicated no differences in reported harms for screened women who were either exposed or not exposed to IPV, and no harms were associated with screening for either group.

A randomized trial of a 3-year home visitation intervention for at-risk newborns and their mothers indicated nonsignificantly increased rates of verbal abuse victimization (adjusted IRR, 1.14 [95% CI, 0.97–1.34]) and perpetration (IRR, 1.08 [95% CI, 0.92–1.26]) in the intervention group over long-term followup.¹⁰⁷ However, this study also found decreased rates of IPV during the 3 years of the program. A randomized, two-arm trial of women receiving either a wallet-sized referral card or a 20-minute nurse management protocol to address IPV found no adverse effects as a result of the intervention.¹¹⁰

Harms Reported in Descriptive Studies of Screening and Interventions. A prospective, observational study screened 3,083 male and female emergency department patients for IPV, provided resources and information for those who screened positive, and subsequently assessed them for IPV exposure, safety, and use of resources.¹¹⁹ Screening was administered using the Universal Violence Prevention Screening Protocol on a touch screen kiosk. None of the participants reported safety issues in the emergency department after participating in screening, whether or not they disclosed IPV. Two of the 216 participants who screened positive for IPV reported safety concerns or emotional distress related to the screening in followup, and one of the 65 telephone interview participants reported an adverse issue related to screening. No additional safety issues or increases in injuries, violence, or calls to the police were reported as a result of participating in screening or followup.

Five studies were based on surveys of women in health care settings. In a study of 198 women receiving services in an urban emergency department in the United Kingdom, responses on a modified WHO Multi-Country Domestic Violence Study questionnaire indicated that 24 percent felt uncomfortable when asked about IPV.¹²⁴ Women with prior abuse had higher levels of discomfort. Some women commented on the need for privacy and safety and had concerns about direct IPV questions. In a study of 95 women in a trauma center who completed a survey about IPV screening, 18 percent thought screening infringed upon their privacy, but most (90 percent) felt it was appropriate to ask about IPV.¹²⁵ Approximately 25 percent of abused women thought reporting would increase their chances of further harm. A survey of 645 women ages 15 to 24 years in U.S. family planning clinics indicated that most women (90 percent) thought universal IPV screening is a good idea, but 36 percent of younger women (ages 15 to 18 years) had concerns.¹²⁶ Although most women felt positive after IPV screening in a retrospective survey of screened women in Australia, 6 percent (7/119) of participants indicated sadness or depression, and one woman experienced further abuse as a result of her disclosure.¹²⁰ A survey of adults in Canada found that only 10 percent thought it would be inappropriate to ask all women visiting the emergency department about violent or threatening behavior at home.¹²⁷

Five studies were based on data collected from interviews. In a study of 36 women interviewed several weeks after IPV screening in New Zealand, 97 percent perceived it as nonthreatening and safe, and none experienced increased risks.¹²¹ Interviews of 27 abused women in the United States indicated no instances of harmful disclosure in any health care setting (emergency department, obstetrics and gynecology clinics, or primary care clinics), although some disclosures were viewed as not helpful to the women.¹²² A study of 519 women used anonymous computer interviews in maternity units that asked about IPV screening and interventions, past disclosure, preferences about screening, and violence during pregnancy. Most women (97 percent) had no feelings of anger or embarrassment and were not offended when screened for IPV.¹²³ Focus group interviews with women who had experienced IPV described potential negative consequences of screening as feeling judged by the health care provider, increased anxiety about the unknown, feeling that the intervention protocol was cumbersome or intrusive, and disappointment in the health care provider's response to disclosure.⁵⁵ Although no one described adverse effects from IPV screening in a study based on interviews of women followed up after disclosing abuse, 40 percent thought it had minimal impact.¹²⁸

Screening for Abuse and Neglect of Elderly and Vulnerable Adults

Key Question 1. Does Screening Asymptomatic Elderly and Vulnerable Adults in Health Care Settings for Current, Past, or Increased Risk for Abuse and Neglect Reduce Exposure to Abuse and Neglect? Reduce Physical or Mental Harms or Mortality?

No RCTs or controlled observational studies of screening for abuse and neglect in elderly or vulnerable adults were identified or met inclusion criteria for this review.

Key Question 2. How Effective Are Screening Techniques in Identifying Asymptomatic Elderly and Vulnerable Adults With Current, Past, or Increased Risk for Abuse and Neglect?

Summary. One study evaluating the diagnostic accuracy of the Elder Abuse Suspicion Index (EASI), a six-item dichotomous screening instrument, met inclusion criteria for the systematic review. The EASI was evaluated in a study of elderly men and women in primary care clinics in Canada. Compared with a comprehensive evaluation by a social worker, the sensitivity and specificity of the EASI varied from 9 to 47 percent and from 75 to 97 percent, respectively, depending on the number of positive responses to specific questions.

Evidence. One study evaluating the diagnostic accuracy of the EASI met inclusion criteria for the systematic review as well as criteria for fair quality (**Appendixes C7 and C8**).¹²⁹ The EASI is a six-item dichotomous screening instrument that measures dependence on assistance for activities such as bathing or shopping; withholding food, care, or other needs; verbal aggression; financial exploitation; physical harm; and physician assessment of visible signs of abuse or

neglect during the preceding 12 months. Its use for screening was evaluated in a cohort of 953 elderly men and women in Montreal, Canada.¹²⁹ Patients were seen in university-affiliated teaching family medicine clinics and a government community-based health and social service center. Patients were eligible for the study if they were age ≥ 65 years, spoke English or French, scored ≥ 24 on the Mini Mental Status Exam, and were capable of providing informed consent. The EASI was administered by physicians during the course of the clinic visit. Screening took < 2 minutes for most participants.

The reference standard was an evaluation by social workers from the Elder Abuse Center using a 1.5- to 3-hour interview protocol for elder abuse assessment that was considered the community standard. Social workers in the study underwent training on the use of the interview protocol to ensure consistency. Social workers were blinded to the results of the EASI when they conducted their interviews, which occurred within 3 weeks of the EASI in the participants' homes or other locations chosen by the participants. If social workers identified elder abuse in the course of their interviews, they followed a protocol to refer study participants to appropriate services for help. A total of 66 percent of enrolled participants completed both the EASI and social work interview; characteristics of participants retained in the study and lost to followup were similar.

Compared with the evaluation by a social worker, the EASI had sensitivity and specificity of 47 and 75 percent with ≥ 1 positive responses on questions 1 to 6, 32 and 89 percent with ≥ 1 positive responses on questions 2 to 6, 14 and 96 percent with ≥ 2 positive responses on questions 1 to 6, and 9 and 97 percent with a positive response to question 1 and ≥ 1 positive responses on questions 2 to 6. Nearly one third of the 663 participants who completed all evaluations gave positive responses to at least one question on the EASI.

Key Question 4. For Screen-Detected Elderly and Vulnerable Adults With Current, Past, or Increased Risk for Abuse and Neglect, How Well Do Interventions Reduce Exposure to Abuse and Neglect? Reduce Physical or Mental Harms or Mortality?

Summary. No RCTs or controlled observational studies of interventions for abuse and neglect in elderly or vulnerable adults were identified or met inclusion criteria for this review. One descriptive retrospective study included predominantly male veterans ≥ 65 years old who received health care services from the West Los Angeles Veterans Affairs (VA) Medical Center. Veterans were identified as possibly exposed to abuse or neglect, referred by their primary care providers to the Geriatric Research, Education, and Clinical Center's (GRECC's) Outpatient Clinic, and received social work services. Of 575 veterans evaluated, 41 incidents or situations of elder abuse and neglect among 31 veterans (5.4 percent) were identified and reported to APS over a 3-year period, and 33 veterans received specific services after case management, such as nursing home placement or conservatorship arrangements.

Evidence. No RCTs or controlled observational studies of interventions for abuse and neglect in elderly or vulnerable adults were identified or met inclusion criteria for this review.

One descriptive retrospective study of predominantly male (96 percent) veterans ages 65 to 103

years evaluated outcomes resulting from social work interventions (**Appendix C9**).²⁰ The study included veterans who received services from the West Los Angeles VA Medical Center, were identified as possibly exposed to abuse or neglect, and referred by their primary care providers to the GRECC Clinic. It is unclear how patients were identified as abused, and whether individuals identified by primary care physicians had symptoms relating to abuse. Forty-eight percent of the veterans had dementia and 35 percent had depression. At the GRECC Clinic, a social worker (case manager) and APS staff provided individualized services as needed. Outcomes included type of abuse, moving from unsafe living situations to nursing homes or board and care facilities, and implementation of conservatorship arrangements.

Of 575 veterans, 41 incidents or situations of elder abuse and neglect among 31 veterans (5.4 percent) were identified and reported to APS over a 3-year period. Abuse was classified as physical (five incidents), psychological (five incidents), neglect (seven incidents), financial (12 incidents), and self-neglect (12 incidents). After case management, four individuals received conservatorship arrangements, six received conservatorship —plus dter,” eight were moved to a nursing home and three to board and care/assisted living, seven remained at home with services, five refused services, and six outcomes were unknown.

Key Questions 3 and 5. What Are the Adverse Effects of Screening for Abuse and Neglect of Elderly and Vulnerable Adults and Interventions to Reduce Harm From Abuse and Neglect?

No studies of the harms of screening or interventions for abuse and neglect in elderly or vulnerable adults were identified or met inclusion criteria for this review. Potential harms include shame, guilt, self-blame, and fear of retaliation by perpetrators.²⁰

CHAPTER 4. DISCUSSION

Summary of Review Findings

Screening for Intimate Partner Violence

Table 8 summarizes the evidence reviewed for this update. For Key Question 1 addressing the effectiveness of screening in reducing exposure to violence, physical and mental harms, and mortality, a fair-quality, cluster RCT of screening for IPV in clinical settings met inclusion criteria. This trial included 6,743 Canadian women randomized to screening or nonscreening groups.⁸⁷ The primary outcomes were exposure to abuse and quality of life in the 18 months after screening, and secondary outcomes included depression, PTSD, alcohol and drug abuse, global mental and physical health, and use of health and social services. Women in both the screened and nonscreened groups had reductions over time in IPV recurrence, PTSD symptoms, and alcohol problems, as well as improvements in scores for quality of life, depression, and mental health. Outcomes for these measures were not significantly different between women in the screened compared with nonscreened groups. However, differences were significant for intermediate outcomes, such as initiating discussions about abuse with clinicians (44 percent screened vs. 8 percent nonscreened women).

Limitations of the trial limit its interpretation, however. The study had high loss to followup, and the women lost to followup had more risk and exposure to IPV than women retained in the study. Most importantly, women randomized to the nonscreening group were provided with information cards of locally available resources for women with IPV, and underwent extensive questioning about IPV over 18 months of followup that could increase their awareness, influence their behavior, and affect outcomes of the trial (i.e., Hawthorne effect).

For Key Question 2 regarding the effectiveness of screening techniques in identifying asymptomatic women with IPV, 15 studies rated fair and good quality that evaluated the diagnostic accuracy of 13 screening instruments met inclusion criteria. Screening instruments demonstrating the highest sensitivity and specificity in the included diagnostic accuracy studies include the HITS, OVAT, STaT, HARK, modified CTQ-SF, and WAST. Positive responses on the PVS significantly predicted verbal aggression and violence during the 4 months after screening. Two instruments specifically evaluated in pediatric settings had relatively low sensitivity but high specificity. Results varied between studies and across instruments.

For Key Question 4 evaluating the effectiveness of interventions in reducing exposure to violence, physical and mental harms, and mortality, one good-, four fair-, and one poor-quality RCTs met inclusion criteria. A trial of pregnant women reported decreased IPV and improved birth outcomes with a counseling intervention compared with usual care.^{29,30,109} Two trials of home visitation for young mothers resulted in improved IPV outcomes compared with no visitation.^{107,112} Compared with usual care, counseling resulted in decreased pregnancy coercion and resolution of unsafe relationships in another trial.¹¹¹ Two trials of counseling showed improved outcomes in intervention and control groups, without differences between them

(counseling vs. referral cards,¹¹⁰ nurse management vs. usual care in pregnancy¹⁰⁸).

For Key Questions 3 and 5 relating to harms of screening and interventions, three studies included for Key Questions 1 and 4 and 11 descriptive studies identified by search strategies and systematic reviews were reviewed. Harms were actively monitored in a randomized trial of 6,743 women that evaluated screening versus no screening in Canadian primary care, acute care, and specialty care sites.⁸⁷ Results of the analysis of a measure developed to monitor harms for this study indicated no differences in reported harms for screened women who were either exposed or not exposed to IPV, and no harms were associated with screening for either group. A randomized trial of a 3-year home visitation intervention for at-risk newborns and their mothers suggested nonsignificant increases in verbal abuse victimization and perpetration in the intervention group over long-term followup.¹⁰⁷ In this study, participants also experienced less physical abuse, so it is possible that perpetrators exchanged physical abuse for verbal abuse. A randomized, two-arm trial of women receiving either a wallet-sized referral card or a 20-minute nurse management protocol to address IPV found no adverse effects as a result of the intervention.¹¹⁰

Descriptive studies generally indicated low levels of harm related to IPV screening and interventions, but study populations and methods varied widely. Some women indicated discomfort with screening, particularly among those with prior IPV; infringement of privacy; worries about increasing abuse by disclosing IPV; feelings of sadness and depression; and general concerns with IPV screening. These issues were voiced by a minority of respondents in the various surveys and interviews.

The results of these studies indicate that IPV screening in health care settings can provide benefits that vary depending on the population screened and the outcome measured, while potential harms of screening have minimal impact on most women. Several screening instruments designed for health care settings demonstrate high sensitivity and specificity, providing standardized approaches to screening. How well the results of these studies translate to clinical practice is not clear, although most studies were conducted in settings and populations drawn from clinical practices. The positive predictive value of screening, as well as potential effects of interventions, would be expected to be greatest in populations with high prevalence of IPV.

Screening for Abuse and Neglect of Elderly and Vulnerable Adults

Table 9 summarizes the evidence reviewed for this update. For screening for abuse and neglect in elderly and vulnerable adults, no RCTs or controlled observational studies of screening, interventions, or harms were identified or met inclusion criteria for this review. One fair-quality study evaluating the diagnostic accuracy of the EASI, a six-item dichotomous screening instrument, met inclusion criteria for the systematic review. Compared with a comprehensive evaluation by a social worker, the sensitivity and specificity of the EASI varied from 9 to 47 percent and from 75 to 97 percent, depending on the number of positive responses to specific questions. One retrospective study described outcomes of predominantly male elderly veterans who were identified as possibly exposed to abuse or neglect, referred for detailed evaluations, and received social work services. Approximately 5 percent were identified and reported to APS over a 3-year period, and 6 percent received specific services after case management, such as

nursing home placement or conservatorship arrangements.

Limitations

Limitations of this review include using only English-language articles and studies applicable to U.S. screening populations and clinical practice. Although these inclusion criteria improve applicability to practice in the United States, they also exclude important research. Also, the inclusion criteria targeted specific study designs and health outcomes that disqualified most of the research in this field. RCTs provide the gold standard for evaluating efficacy and effectiveness, but IPV research does not readily fit this standard because of its unique methodological challenges and ethical issues.

Studies of IPV were limited by enrollment of dissimilar groups at baseline, high and/or differential loss to followup, lack of power, recall bias, missing data, and unclear application of the reference standard in diagnostic accuracy studies. Importantly, key studies provided screening and information services to women in control groups that could also be considered interventions, rather than true control conditions. Although designed this way for ethical reasons, this approach reduces measureable differences between intervention and control groups and creates a Hawthorne effect (i.e., the phenomenon that study participants change their behavior as a result of being involved in the study).

The most important limitation of studies of screening elderly and vulnerable adults for abuse and neglect were that they were generally lacking.

Emerging Issues and Future Research

Several emerging issues are likely to influence research about IPV screening and interventions. The use of alternative screening modalities, such as audio- and computer-assisted screening instrument delivery, has gained interest.¹³⁰ Computerized screening has been found to increase rates of domestic violence discussion, disclosure, and service provision.¹³⁰⁻¹³² Furthermore, computerized screening has been found to be more acceptable for patients.^{133,134} Use of an audio questionnaire has also been perceived by patients as more private and less likely to increase risk of abuse.¹³⁵ Further evaluation of the accuracy, as well as efficiency and acceptability, of these methods could improve screening processes.

Studies of the diagnostic accuracy of screening instruments are limited by the lack of accepted reference standards. Further development and/or validation of an accepted standard would allow more accurate assessment of performance measures and allow instruments to be more readily compared with each other. The broad and inconsistent definitions of abuse pose challenges for creating screening instruments, especially for detecting abuse and neglect in elderly and vulnerable populations.

Research evaluating health system approaches to screening could improve quality, standardization, and rates of screening compared with approaches that depend on implementation

on an individual clinic or practitioner basis. Methods could include using diagnostic codes to guide screening in emergency department settings¹³⁶ or providing screening in the context of the hospital admissions process, for example. Coupled with the systems approach to screening, systems-based protocols for further evaluation and referral for individuals with positive screening results could increase screening effectiveness. Studies that evaluate the feasibility, acceptability, and outcomes of these approaches would provide valuable guidance to health systems interested in implementing them.

Additional studies are needed to evaluate the effectiveness of interventions once IPV has been identified through screening or other processes. Few studies provide these types of evaluations currently, and they are limited by enrolling small numbers of participants from narrowly defined populations. Nonetheless, intervention studies suggest benefits despite their shortcomings and challenges in this field of research. Additional work in this area demonstrating effective interventions once women are identified with IPV through screening could potentially change practice.

All types of studies are needed to improve research for screening elderly and vulnerable adults for abuse and neglect. No RCTs of screening or interventions have been done. Studies of screening instruments are lacking, and most existing instruments remain to be validated. Screening and interventions for this population may be similar in many ways to child abuse because many elderly and vulnerable adults may not have sufficient physical, mental, or financial abilities to engage in screening or interventions. For these situations, instruments need to be framed around third party responses.^{45,137} Additional challenges to this research include the legal requirements related to disclosure, underlying medical conditions of patients—particularly cognitive impairments for elderly persons, and dependence on the perpetrator, among other issues.

Conclusions

A trial of screening for IPV in 6,743 women seen in primary, acute, and specialty care clinics in Canada showed reductions in IPV recurrence and improvement in related outcomes for both screening and comparison groups, with no significant between-group differences for major outcomes after 18 months of followup. However, interpretations are limited by overall high and differential attrition and a substantial Hawthorne effect among the control group, bringing to question the feasibility of evaluating the effectiveness of IPV screening using a RCT design. Trials of IPV interventions for pregnant women and young mothers showed improved IPV outcomes for the intervention versus usual care groups, including improved birth outcomes for women provided with multiple-risk factor intervention. Several instruments have been developed for IPV screening, and their diagnostic accuracy has been evaluated in studies of different populations using various reference standards. Six instruments with 1 to 8 items demonstrated sensitivity and specificity >80 percent in clinical populations of asymptomatic women; results varied between studies and across instruments. Studies are generally lacking to address screening elderly and vulnerable adults for abuse.

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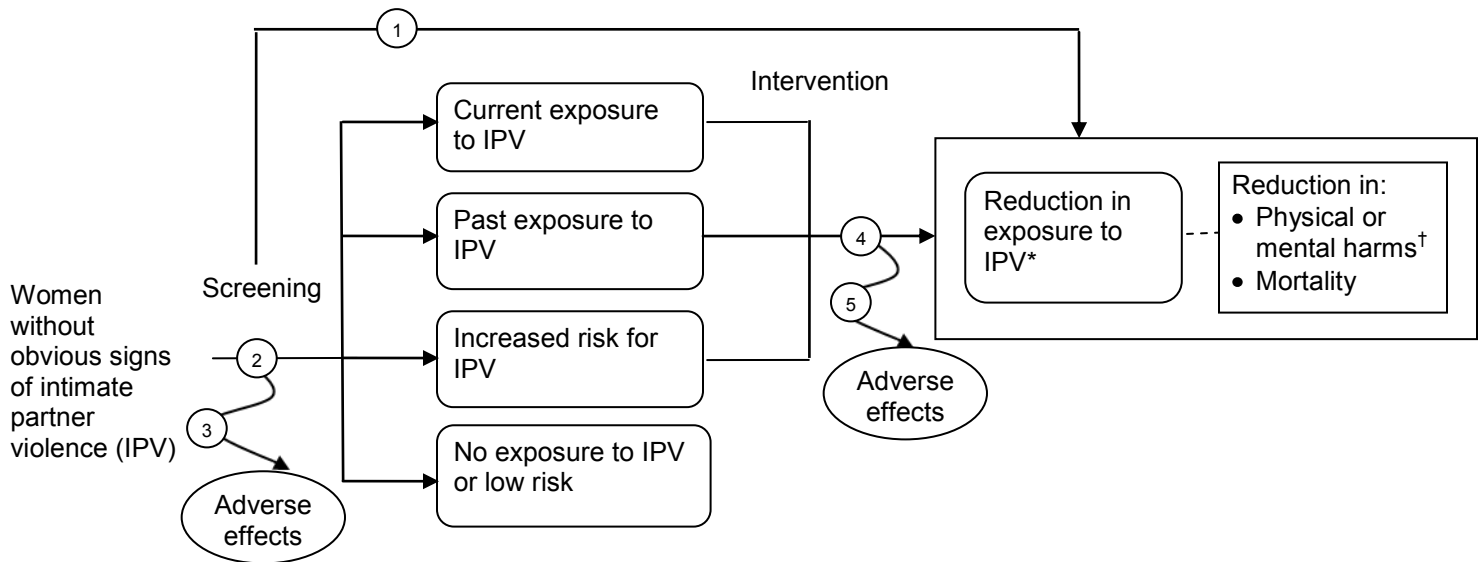
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Figure 1. Analytic Framework and Key Questions for Screening Women for Intimate Partner Violence



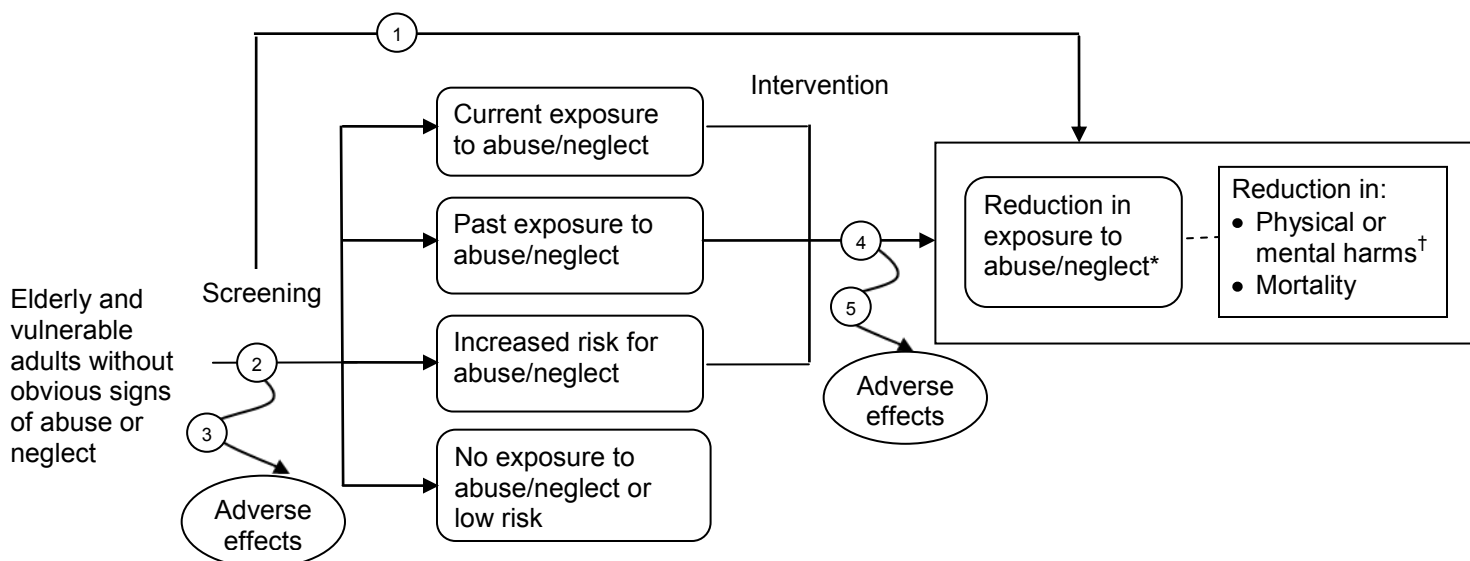
* Includes reduction in the level of violence or abuse or leaving an unsafe situation.

† Includes physical trauma (e.g., fractures, dislocations, brain injury); unwanted pregnancy and sexually transmitted diseases; mental trauma and its repercussions, such as depression, anxiety, post-traumatic stress disorder; social isolation; quality of life; and chronic medical conditions, among others.

Key Questions

1. Does screening asymptomatic women in health care settings for current, past, or increased risk for intimate partner violence (IPV) reduce exposure to IPV, physical or mental harms, or mortality? (Health care settings include primary care clinics, emergency departments, and student health centers, among others.)
2. How effective are screening techniques in identifying asymptomatic women with current, past, or increased risk for IPV? (Techniques include self-administered [e.g., computer-enabled tool or patient self-report] as well as person-to-person [e.g., clinician to patient] methods.)
3. What are the adverse effects of screening for IPV?
4. For screen-detected women with current, past, or increased risk for IPV, how well do interventions reduce exposure to IPV, physical or mental harms, or mortality?
5. What are the adverse effects of interventions to reduce harm from IPV?

Figure 2. Analytic Framework and Key Questions for Abuse and Neglect of Elderly and Vulnerable Adults



* Includes reduction in the level of violence or abuse or leaving an unsafe situation.

† Includes physical trauma (e.g., fractures, dislocations, brain injury); unwanted pregnancy and sexually transmitted diseases; mental trauma and its repercussions, such as depression, anxiety, post-traumatic stress disorder; social isolation; quality of life; and chronic medical conditions, among others.

Key Questions

1. Does screening asymptomatic elderly and vulnerable adults in health care settings for current, past, or increased risk for abuse and neglect reduce exposure to abuse and neglect, physical or mental harms, or mortality? (Health care settings include primary care clinics, emergency departments, and others.)
2. How effective are screening techniques in identifying asymptomatic elderly and vulnerable adults with current, past, or increased risk for abuse and neglect? (Techniques include self-administered [e.g., computer-enabled tool or patient self-report] as well as person-to-person [e.g., clinician to patient] methods.)
3. What are the adverse effects of screening for abuse and neglect in elderly and vulnerable adults?
4. For screen-detected elderly and vulnerable adults with current, past, or increased risk for abuse and neglect, how well do interventions reduce exposure to abuse and neglect, physical or mental harms, or mortality?
5. What are the adverse effects of interventions to reduce harm from abuse and neglect?

Table 1. Screening Recommendations for Intimate Partner Violence

Organization, year	Recommendation
American Academy of Family Physicians, 2011 ⁷⁹	Family physicians should be aware of the prevalence of violence in all sectors of society, be alert for risk factors as well as signs of family violence with each patient encounter, be capable of providing an appropriate response when these issues are identified, and be able to work to prevent violence in patients who are at risk within their practices and communities. Family physicians are encouraged to offer referral to anyone involved in a violent relationship of any kind to appropriate community and mental health resources.
American Academy of Pediatrics, 2010 ⁷⁴	Pediatricians are in a position to recognize abused women in pediatric settings. Intervening on behalf of battered women is an active form of child abuse prevention. Questions about family violence should become part of anticipatory guidance. Pediatricians must understand the dynamics of abusive relationships.
American College of Emergency Physicians, 2011 ⁷⁸	Emergency personnel should assess patients for intimate partner violence and child and elder maltreatment and neglect. Emergency physicians should be familiar with signs and symptoms of intimate partner violence and child and elder maltreatment and neglect.
American Congress of Obstetricians and Gynecologists, 2011 ⁷³	Physicians should screen all patients for intimate partner violence. For women who are not pregnant, screening should occur at routine ob-gyn visits, family planning visits, and preconception visits. For women who are pregnant, screening should occur at various times over the course of the pregnancy, including at the first prenatal visit, at least once per trimester, and at the postpartum checkup.
American Medical Association, 2008 ⁷¹	Physicians should routinely inquire about physical, sexual, and psychological abuse as part of the medical history. Physicians should also consider abuse as a factor in the presentation of medical complaints because patients' experiences with interpersonal violence or abuse may adversely affect their health status or ability to adhere to medical recommendations.
Canadian Task Force on Preventive Health Care, 2003 ⁷⁰	<ul style="list-style-type: none"> • There is insufficient evidence to recommend for or against screening for violence in nonpregnant or pregnant women (I Recommendation). This is distinct from the need for clinicians to include questions about exposure to domestic violence as part of their diagnostic assessment of women. This information is important in caring for the patient, and may influence assessment and treatment of other health problems. • There is insufficient evidence to recommend for or against any specific interventions for women exposed to violence (I Recommendation), other than referral to post-shelter advocacy counseling (B recommendation), although suitable programs may not be available in Canada. • The effectiveness of shelters in preventing violence against women is unknown (I Recommendation). • Primary care practitioners may also be asked, either by their male patients or the partners of their male patients, about the effectiveness of programs for male batterers. The group concludes that there is conflicting evidence regarding the effectiveness of batterer interventions (with or without partner participation) in reducing rates of further domestic violence (C Recommendation).
Council of International Neonatal Nurses, 2010 ⁷⁶	<ul style="list-style-type: none"> • Recommends promotion of positive health outcomes for neonates via routine screening for intimate partner violence among women of childbearing age to prevent fetal loss, fetal injury, and premature birth associated with intimate partner violence, in addition to promoting the overall health of the family. • Recommends use of the Family Violence Prevention Fund's "National Consensus Guidelines on Identifying and Responding to Domestic Violence Victimization," which incorporates the use of the Abuse Assessment Screening instrument and the Danger Assessment tool.
Emergency Nurses Association, 2006 ⁷⁷	Emergency nurses should be involved in the development, implementation, and use of routine protocols and procedures for the assessment, identification, and referral of victims of family and intimate partner violence, maltreatment, and neglect.
Futures Without Violence (formerly Family Violence Prevention Fund), 2004 ⁷⁵	All health care providers should provide intimate partner violence assessment as part of routine patient care in public health, private practice, and managed care settings.

Table 1. Screening Recommendations for Intimate Partner Violence

Organization, year	Recommendation
Institute of Medicine, 2011 ⁷²	Screening and counseling for interpersonal and domestic violence is recommended, and involve elicitation of information from women and adolescents about current and past violence and abuse in a culturally sensitive and supportive manner to address current health concerns, safety, and future health problems.
United Kingdom Health Technology Assessment Program, 2009 ⁵⁴	Evidence is insufficient to implement a screening program for partner violence against women either in health services generally or in specific clinical settings.

Table 2. Screening Recommendations for Elder Abuse and Neglect

Organization, year	Recommendations
American College of Emergency Physicians, 2011 ⁷⁸	Emergency personnel should assess patients for intimate partner violence and child and elder maltreatment and neglect. Emergency physicians should be familiar with signs and symptoms of intimate partner violence and child and elder maltreatment and neglect.
American Medical Association, 2007 ⁷¹	Physicians should make all efforts to address violence and abuse of patients, including elder abuse.
Emergency Nurses Association, 2006 ⁷⁷	Emergency nurses should be involved in the development, implementation, and use of routine protocols and procedures for the assessment, identification, and referral of victims of family and intimate partner violence, maltreatment, and neglect. This is extended to elder abuse in the position statement.

Table 3. Measures of Diagnostic Accuracy

Term	Definition	Interpretation
Sensitivity	The proportion of patients with a condition that test positive.	Sensitivity, specificity, PPV, and NPV are expressed as percentages; the higher the percentage, the better the accuracy of the test.
Specificity	The proportion of patients without a condition that test negative.	
Positive Predictive Value (PPV)	The proportion of patients with positive tests that have the condition.	
Negative Predictive Value (NPV)	The proportion of patients with negative tests that do not have the condition.	
Positive Likelihood Ratio (LR+)	Likelihood ratios use sensitivity and specificity to determine if a test result usefully changes the probability that a condition exists. LR+ is the odds of having a condition when the test is positive.	<ul style="list-style-type: none"> ● If results >1, then test results are related to the condition. ● If results <1, results are associated with absence of the condition. ● If results are close to 1, the test is not helpful for screening purposes.
Negative Likelihood Ratio (LR-)	The odds of not having a condition when the test is negative.	
Area Under the Receiver Operating Characteristic Curve (AUC)	The receiver operating characteristic curve is a graphical plot of sensitivity (or true positive rate) versus 1-specificity (or false positive rate). AUC provides an estimate of the discriminatory accuracy of the test.	<ul style="list-style-type: none"> ● If results ≤ 0.50, discriminatory accuracy is no better than a coin toss. ● If results range between 0.50–0.70, there is moderate accuracy. ● If results >0.70, the test may be clinically useful.

Table 4. Instruments Used in Studies of Intimate Partner Violence Screening

Abbreviation	Name	Scales	Scoring	Description
AAS ⁸⁸	Abuse Assessment Screen	5 items, dichotomous	0–5	5-item instrument, designed for clinician-administered interviews, assesses sexual coercion, lifetime abuse, current abuse, and abuse during pregnancy. Any affirmative response is considered a positive screen.
CAS ^{90,92,93}	Composite Abuse Scale	30 items, 6-point Likert scale	0–150	Self-report scale measuring four dimensions of intimate partner violence in the preceding 12 months (severe combined abuse, emotional abuse, physical abuse, and harassment).
CTQ-SF ⁹⁸	Childhood Trauma Questionnaire–Short Form	28 items, 5-point Likert scale	Positive response if any answer except “never”	Self-report instrument for adults that assesses abuse and neglect in childhood and includes separate scales for physical and sexual abuse.
CTS2 ^{88,89,100-102}	Conflict Tactics Scale–Revised	78 items, 8-point Likert scale; various revisions have fewer items	Prevalence, frequency, severity level, or mutuality	Self-report or interview scale, with half of the questions pertaining to the respondent’s behavior and half to the respondent’s partner. The scale includes dimensions of negotiation, psychological aggression, physical assault, sexual coercion, and injury.
HARK ⁹³	Humiliation, Afraid, Rape, Kick	4 items, dichotomous	0–4	4-item self-report survey, adapted from the AAS.
HITS ⁹¹	Hurt, Insult, Threaten, Scream	4 items, 5-point Likert scale	4–20 points	4-item self-report or clinician-administered survey; each item scored 1 (Never) through 5 (Frequently) on a Likert scale; score ≥11 maximizes differentiation between abused and nonabused respondents.
ISA ^{91,94,95,97}	Index of Spouse Abuse	30 items	0–100	Self-report scale measuring 11 types of physical abuse (ISA-P) and 19 types of nonphysical abuse perpetrated by a male partner. Higher scores indicate higher frequency of severe abuse.
OAS/OVAT ^{94,95}	Ongoing Abuse Screen/ Ongoing Violence Assessment Tool	5/4 items, dichotomous	0–5/0–4	OVAT contains 4 items assessing current abuse: “At the present time, does your partner threaten you with a weapon?” “At the present time, does your partner beat you so badly that you must seek medical help?” “At the present time, does your partner act like he or she would like to kill you?” “My partner has no respect for my feelings.”
PSQ ¹⁰⁰	Parent Screening Questionnaire	3 items, dichotomous	0–3	3 items about partner violence: “Have you ever been in a relationship in which you were physically hurt or threatened by a partner?” “In the past year, have you been afraid of a partner?” “In the past year, have you thought of getting a court order for protection?”
PVS ^{89,90}	Partner Violence Screen	3 items, dichotomous	0–3	3-item clinician-administered instrument measuring past physical violence and perceived personal safety. A score of ≥1 is considered positive for intimate partner violence.

Table 4. Instruments Used in Studies of Intimate Partner Violence Screening

Abbreviation	Name	Scales	Scoring	Description
SAFE-T ⁹⁹	Secure, Accepted, Family, Even, Talk	5 items, dichotomous	0–5	5 questions about relationship with partner: “secure at home,” “accepted by partner,” “family likes partner,” “even disposition of partner,” and “talks with partner to resolve differences.”
STaT ^{96,97}	Slapped, Threatened, and Throw	3 items, dichotomous	0–3	3-item self-report survey: “Have you ever been in a relationship where a) your partner has pushed or slapped you?; b) your partner threatened you with violence?; or c) your partner has thrown, broken, or punched things?”
WAST ⁹⁰⁻⁹²	Woman Abuse Screening Tool	8 items, 3-level responses (0=never, 1=sometimes, 2=often)	0–16	8-item instrument measuring physical, sexual, and emotional abuse in the preceding 12 months. A score of ≥ 4 indicates exposure to intimate partner violence. The WAST short form includes 2 questions about tension in the relationship and how arguments are resolved.
Zink et al, 2007 ¹⁰²	5 domestic violence questions	5 items, dichotomous	0–5	5 general domestic violence items with nongraphic language that could be administered with children present.

Table 5. Studies of Diagnostic Accuracy of Screening Instruments for Intimate Partner Violence

Study, year	Screening test (reference standard)	N, Population	Administration	Accuracy measures; sensitivity/specificity; predictive values; likelihood ratios; relative risk	Other results	Quality rating
Chen et al, 2005 ⁹¹	HITS (ISA-P English and WAST Spanish)	202 women in an urban family practice clinic	Medical students	Sensitivity/Specificity English (cut-point=10.5): 86%/99% Spanish (cut-point=5.5): 100%/86% +/- Predictive Values English (cut-point=10.5): 86%/99% Spanish (cut-point=5.5): 45%/100% +/- Likelihood Ratios English (cut-point=10.5): 90/0.14 Spanish (cut-point=5.5): 7/0	NR	Fair
Dubowitz et al, 2008 ¹⁰⁰	PSQ (CTS2)	200 mothers of children <6 years old in a pediatric community clinic	Self	Sensitivity/Specificity Physical assault: 19%/93% Injury: 29%/91% Psychological aggression: 27%/92% +/- Predictive Values Physical assault: 63%/63% Injury: 38%/87% Psychological aggression: 46%/83% +/- Likelihood Ratios Physical assault: 2.5/0.88 Injury: 3.3/0.78 Psychological aggression: 3.3/0.79	NR	Fair
Ernst et al, 2004 ⁹⁵	OVAT (ISA)	211 women and 94 men in an emergency department	Self	Sensitivity/Specificity: 86%/83% +/- Predictive Values: 56%/96% +/- Likelihood Ratios: 5/0.16 Agreement: 84%	NR	Fair
Fulfer et al, 2007 ⁹⁹	SAFE-T (PVS one item)	435 women ≥ 18 years old at 3 Illinois emergency departments	Self	In validation study: Sensitivity/Specificity: 54%/81% +/- Predictive Values: range, 19–44%/ 95–86%	NR	Fair
Houry et al, 2004 ⁸⁹	PVS (CTS)	215 women ≥ 18 years old at inner city emergency department in Colorado	Interview by research staff	Prediction of future abuse: Relative risk of domestic violence during 4-mo followup, positive vs. negative screen on PVS Verbal aggression: 7.25 (95% CI, 3.2–16.2) Violence: 11.3 (95% CI, 5.0–26.3) Relative risk of domestic violence during 4-mo followup, single item from PVS ("Have you been hit, kicked, punched, or otherwise hurt by someone?") Verbal aggression: 7.06 (95% CI, 3.3–15.4) Violence: 10.9 (95% CI, 5.0–23.6)	NR	Fair

Table 5. Studies of Diagnostic Accuracy of Screening Instruments for Intimate Partner Violence

Study, year	Screening test (reference standard)	N, Population	Administration	Accuracy measures; sensitivity/specificity; predictive values; likelihood ratios; relative risk	Other results	Quality rating
MacMillan et al, 2006 ⁹⁰	PVS and WAST (CAS)	2461 women ages 18–64 in emergency departments and primary care clinics in Ontario	Self, physician, or nurse interview or computer	Sensitivity/Specificity vs. CAS PVS: 49%/94% WAST: 47%/96% +/- Predictive Values vs. CAS PVS: 47%/94% WAST: 55%/94% Accuracy vs. CAS PVS: 89% WAST: 91%	Interviews were least desired by participants and written responses had the fewest missing data.	Good
Paranjape et al, 2003 ⁹⁶	STaT (Semi-structured interview)	75 women in U.S. urban teaching hospital emergency department	Research interviewers	For 3 items: Sensitivity/Specificity ≥1 positive response: 96%/75% ≥2: 89%/100% ≥3: 64%/100%	NR	Fair
Paranjape et al, 2006 ⁹⁷	STaT (ISA)	240 women in U.S. urban public hospital urgent care clinic	Research interviewers	For 3 items: Sensitivity/Specificity ≥1 positive response: 95%/37% ≥2: 85%/54% ≥3: 62%/66% +/- Predictive Values ≥1: 42%/94% ≥2: 48%/88% ≥3: 47%/78%	Prevalence of IPV, most recent relationship (ISA): 79/240 (33%) Prevalence of IPV, current relationship (ISA): 37/240 (15%)	Fair
Peralta et al, 2003 ¹⁰¹	One personal safety question (modified CTS)	399 women ages 18-36 in urban family medicine clinic in Madison, WI	Self	Sensitivity/Specificity: 9%/91%	CTS indicated 44% experienced any violence, 44% psychological violence, and 10% physical violence during previous 90 days.	Fair
Reichenheim et al, 2004 ⁸⁸	AAS (CTS2)	748 women immediately post-delivery in maternity wards in urban Brazil	Research interviewers	Sensitivity/Specificity Minor violence: 32% (95% CI, 24–40)/ 99% (95% CI, 98–99.6) Severe violence: 61% (95% CI, 48–74)/ 98% (95% CI, 96–99) Both: 32% (95% CI, 24–40)/99% (95% CI, 98–99.7)	Prevalence during pregnancy (CTS2): Minor violence: 18% Severe violence: 8% Both: 19% Prevalence of abuse during pregnancy (AAS): 7%	Fair
Sohal et al, 2007 ⁹³	HARK (CAS)	232 women in general practice waiting rooms in London	Self	For score ≥1: Sensitivity/Specificity: 81%/95% +/- Predictive Values: 83%/94%	12-mo IPV prevalence, HARK score ≥1 vs. CAS: 49/223 (22%) vs. 53/223 (24%)	Fair

Table 5. Studies of Diagnostic Accuracy of Screening Instruments for Intimate Partner Violence

Study, year	Screening test (reference standard)	N, Population	Administration	Accuracy measures; sensitivity/specificity; predictive values; likelihood ratios; relative risk	Other results	Quality rating
Thombs et al, 2007 ⁹⁸	Modified CTQ-SF (Evaluation of lifetime stressors structured interview)	1225 women in a health management organization in Seattle	Self	Sensitivity/Specificity, one question Physical abuse: 70%/94% Sexual abuse: 82%/89% Sensitivity/Specificity, two questions Physical or sexual abuse: 85%/88% + Likelihood Ratio, one question Physical abuse: 11 Sexual abuse: 7.6 + Likelihood Ratio, two questions Physical or sexual abuse: 7	NR	Good
Wathen et al, 2008 ⁹²	WAST (CAS)	5607 women in primary care, acute care, and specialty clinics in Canada	Self	Sensitivity/Specificity: 88%/89%	12-mo prevalence of abuse, WAST vs. CAS: 22% vs. 14%	Good
Weiss et al, 2003 ⁹⁴	OAS/OVAT/AAS (ISA)	530 women and 326 men in emergency department	Self	Sensitivity/Specificity vs. ISA AAS: 93%/55% OAS: 60%/90% OVAT: 93%/86% +/- Predictive Values vs. ISA AAS: 33%/97% OAS: 58%/91% OVAT: 75%/97% +/- Likelihood Ratios vs. ISA AAS: 2/0.12 OAS: 6/0.44 OVAT: 7/0.08	NR	Fair
Zink et al, 2007 ¹⁰²	5 items with nongraphic language (CTS2)	393 mothers in pediatric and family medicine clinics in Cincinnati	Research interviewers	Sensitivity/Specificity: 40%/91% +/- Predictive Values: 38%/92%	NR	Fair

Abbreviations: AAS = Abuse Assessment Screen; CAS = Composite Abuse Scale; CI = confidence interval; CTQ-SF = Childhood Trauma Questionnaire-Short Form; CTS2 = Revised Conflict Tactics Scale; HARK = Humiliation, Afraid, Rape, Kick; HITS = Hurts, Insults, Threatens, Screams; ISA = Index of Spouse Abuse; NR = not reported; OAS/OVAT = Ongoing Abuse Screen/Ongoing Violence Assessment Tool; PSQ = Parent Screening Questionnaire; PVS = Partner Violence Screen; SAFE-T = Secure, Accepted, Family, Even, Talk; STaT = Slapped, Threatened, and Throw; WAST = Woman Abuse Screening Tool.

Table 6. Studies of Intimate Partner Violence Interventions

Author, Year	Study design	N; Population	Intervention	Assessment of outcomes	Results	Quality Rating
Bair-Merritt et al, 2010 ¹⁰⁷	Randomized trial of home visitation vs. none	685 English-speaking mothers in Oahu hospitals who gave birth to an infant evaluated as at risk for maltreatment.	Home visitation by paraprofessionals for 3 years to promote child health and decrease maltreatment by linking families to appropriate community services, teaching about child development, role modeling positive parenting and problem solving strategies, and offering emotional support. Intervention was offered by 3 community agencies (13.6 mean visits in first year).	Interviews within 1 week postpartum, annually when child was 1–3 years old, and followup annually when child was 7–9 years old. Measures include CTS1 at baseline, CTS2 at subsequent data points with 4 sexual coercion questions omitted, Mental Health Index, drug and alcohol use.	During the program, the intervention group had lower rates of IPV victimization (IRR, 0.86 [95% CI, 0.73-1.01]) and perpetration (IRR, 0.83 [95% CI, 0.72-0.96]), lower rates of physical assault victimization (IRR, 0.85 [95% CI, 0.71-1.00]) and perpetration (IRR, 0.82 [95% CI, 0.70-0.96]), and no differences in sexual violence, verbal abuse, or injury. Long-term followup rates of overall IPV victimization and perpetration decreased with no between-group differences. Rates of verbal abuse victimization (IRR, 1.14 [95% CI, 0.97-1.34]) and perpetration (IRR, 1.08 [95% CI, 0.92-1.26]) increased in the intervention group.	Fair
Curry et al, 2006 ¹⁰⁸	Randomized trial of nursing case management during pregnancy vs. none	1000 English-speaking pregnant women ages 14–46 in U.S. prenatal clinics. Risk for abuse was determined by responses from 3 questions from the AAS.	Intervention group participants were classified as low or high risk. Case management included an assessment and care plan, and women were offered an abuse video and continuing access to a nurse case manager. Both intervention and control participants were offered a card with safety and abuse recognition information with phone numbers for national and local domestic violence resources.	Women were evaluated for stress using the Prenatal Psychosocial Profile, with the first assessment prior to 23 weeks of pregnancy and the second between 32 weeks and delivery.	Total stress scores of high-risk case managed women decreased significantly (p<0.001). Stress scores of high-risk control women also decreased, and differences between intervention and control groups were not significant.	Poor

Table 6. Studies of Intimate Partner Violence Interventions

Author, Year	Study design	N; Population	Intervention	Assessment of outcomes	Results	Quality Rating
El-Mohandes et al, 2008 ¹⁰⁹ (NIH-DC Initiative to Reduce Infant Mortality in Minority Populations)	Randomized trial of counseling interventions during pregnancy and postpartum vs. usual care	1044 English-speaking, pregnant African American women at 6 prenatal care sites in the District of Columbia reporting IPV on the AAS.	Prenatal behavioral counseling for 4-8 sessions, with up to 2 postpartum sessions provided by professional counselors. IPV counseling emphasized safety behaviors and information on community resources. Smoking and depression were also addressed.	Interviews at baseline with followup interviews at 22-26 weeks' gestation, 34-38 weeks' gestation, and at an average of 10.3 weeks postpartum.	IPV declined from 36.8% to 9.9% between baseline and postpartum ($p < 0.001$), but differences between groups were not significant.	Fair
El-Mohandes et al, 2011 ²⁹ (NIH-DC Initiative to Reduce Infant Mortality in Minority Populations)	Randomized trial of counseling interventions during pregnancy and postpartum vs. usual care	1044 English-speaking, pregnant African American women at 6 prenatal care sites in the District of Columbia reporting IPV on the AAS.	Prenatal behavioral counseling for 2-7 sessions provided by professional counselors. IPV counseling emphasized safety behaviors and information on community resources. Smoking and depression were also addressed.	Interviews at baseline with followup interviews at 22-26 weeks' gestation, 34-38 weeks' gestation.	Very preterm birth: 2.2% (9/402) intervention group vs. 5.0% (21/416) usual care group (OR, 0.43 [95% CI, 0.20-0.95]; NNT=36) Very low birthweight: 1.0% (4/402) intervention group vs. 2.2% (9/415) usual care group (OR, 0.45 [95% CI, 0.14-1.48]; NNT=83) IPV recurrence: 7.9% intervention group vs. 21.6% usual care group ($p = 0.04$) Among women reporting no risks (smoking, ETSE, depression, IPV) at baseline, more women in the usual care group than the intervention group reported risks during the last followup interview ($p = 0.04$) Women randomized to the intervention group reported a significant reduction in risks if they reported 1-2 risks at baseline ($p = 0.21$), but not if they reported 3-4 risks ($p = 0.383$).	Fair

Table 6. Studies of Intimate Partner Violence Interventions

Author, Year	Study design	N; Population	Intervention	Assessment of outcomes	Results	Quality Rating
Kiely et al, 2010 ³⁰ (NIH-DC Initiative to Reduce Infant Mortality in Minority Populations)	Randomized trial of counseling interventions during pregnancy and postpartum vs. usual care	1044 English-speaking, pregnant African American women at 6 prenatal care sites in the District of Columbia reporting IPV on the AAS.	Prenatal behavioral counseling for 4-8 sessions, with up to 2 postpartum sessions provided by professional counselors. IPV counseling emphasized safety behaviors and information on community resources. Smoking and depression were also addressed.	Interviews at baseline with followup interviews at 22-26 weeks' gestation, 34-38 weeks' gestation, and at an average of 10.3 weeks postpartum.	Women in the intervention group had less recurrent episodes of IPV during pregnancy and postpartum (adjusted OR, 0.48 [95% CI, 0.29-0.80]), fewer very preterm (<33 weeks) (1.5% vs. 6.6%; p=0.03) and very low birth weight (<1500 g) (0.8% vs. 4.6%; p=0.052) neonates, and increased mean gestational age (38.2 vs. 36.9 weeks, p=0.016).	Good
McFarlane et al, 2006 ¹¹⁰	Randomized, 2-arm trial of a wallet-sized referral card vs. 20-minute nurse management protocol	360 English- or Spanish-speaking women ages 18-45 in U.S. urban primary care public health clinics and WIC clinics with physical or sexual abuse in the past 12 months using the AAS.	1) Wallet-sized referral card with a safety plan and resources for IPV services. 2) 20-minute nurse case management protocol (March of Dimes), including a brochure with a 15-item safety plan, supportive care, anticipatory guidance, and guided referrals.	Interviews at baseline and at 6, 12, 18, and 24 months post-baseline.	2 years after treatment, both groups reported fewer threats of abuse (p<0.001), assaults, danger risks for homicide, and events of work harassment, but there were no significant between-group differences. Compared with baseline, both groups adopted more safety behaviors by 24 months. Community resource use declined for both groups (p<0.001) and there were no significant between-group differences. Participants reported no adverse effects of the interventions.	Fair
Miller et al, 2011 ¹¹¹	Cluster randomized trial of counseling intervention vs. usual care	906 English- or Spanish-speaking women ages 16-29 in urban family planning clinics in California with responses to an interview suggesting pregnancy coercion.	1) Intervention clinics: counseling intervention that educates patients about reproduction coercion and provides information about local IPV and sexual assault resources. 2) Usual care clinics: usual care includes responding to 2 IPV screening questions on a routine intake form using a standard clinic protocol.	Computer-assisted followup survey 12-24 weeks after baseline survey. Surveys included items from the CTS2 and Sexual Experiences Survey, questions about awareness and recent use of IPV services, and relationship changes from baseline.	Intervention women with recent IPV had decreased pregnancy coercion at followup compared with usual care (adjusted OR, 0.29 [95% CI, 0.09-0.91]). Intervention women were also more likely to discontinue an unhealthy or unsafe relationship compared with usual care (p=0.013).	Fair

Table 6. Studies of Intimate Partner Violence Interventions

Author, Year	Study design	N; Population	Intervention	Assessment of outcomes	Results	Quality Rating
Taft et al, 2011 ¹¹² (Taft et al, 2009 protocol and methods described)	Cluster randomized trial of mentor support vs. usual care	174 English- or Vietnamese-speaking mothers of young children in primary care clinics in Melbourne, Australia who disclosed IPV or had behavioral symptoms suggestive of abuse.	1) 12 months of weekly home visits from trained nonprofessional mentors offering advocacy, parenting support, and referrals. 2) Usual care.	Abuse measured by the CAS, depression (Edinburgh Postnatal Depression Scale), wellbeing (SF-36), parenting stress (PSI-SF), and social support (MOS-SF) at baseline and followup.	Abuse scores were significantly reduced in intervention vs. comparison groups (adjusted difference, -8.67 [95% CI, -6.2 to -1.15]; adjusted OR, 0.47 [95% CI, 0.21-1.05]). Other differences were not significant (depression, physical wellbeing, mental wellbeing, parenting stress).	Fair

Abbreviations: AAS = Abuse Assessment Screen; CAS = Composite Abuse Scale; CI = confidence interval; CTS = Conflict Tactics Scale; ETSE = environmental tobacco smoke exposure; IPV = intimate partner violence; IRR = incidence rate ratio; NNT = number needed to treat; OR = odds ratio; PSI-SF = Parenting Stress Interview–Short Form; WIC = Women, Infants, and Children.

Table 7. Harms of Intimate Partner Violence Screening

Author, Year	Study description	Adverse effect outcome
Bair-Merritt et al, 2010 ¹⁰⁷	Randomized, controlled trial of 685 mothers comparing home visitation after childbirth to reduce IPV vs. no home visitation.	Verbal abuse victimization rates (IRR, 1.14 [95% CI, 0.97-1.34]) and perpetration rates (IRR, 1.08 [95% CI, 0.92-1.26]) increased in the intervention group.
Chang et al, 2003 ⁵⁵	7 semi-structured focus group interviews with 41 women in IPV support groups or battered women’s shelters.	Negative consequences of screening included feeling judged by the provider, increased anxiety about the unknown, feeling that the intervention protocol was cumbersome or intrusive, and disappointment in the provider’s response.
Houry et al, 2008 ⁸⁸	Prospective, observational study of 3083 men and women in large urban emergency department. Patients were screened using a touch-screen kiosk, and those with positive responses were provided with resources and information and subsequently assessed for IPV, safety issues, and use of resources.	None of the screened participants reported safety issues in the emergency department after screening. 2/216 of IPV positive participants had safety concerns or emotional distress related to the screening during followup. 1/65 of telephone interview participants had an issue related to screening. No increases in injuries, violence, or calls to the police were reported as a result of screening or followup.
Hurley et al, 2005 ¹²⁷	Convenience sample of 514 adults visiting the emergency department in Nova Scotia and Newfoundland.	86% thought it was appropriate for all women to be asked if they had experienced violent or threatening behavior from someone close to them; 10% thought it was inappropriate; 3% had no opinion.
Koziol-McLain et al, 2008 ¹²¹	36 women interviewed several weeks after IPV screening.	97% perceived it as nonthreatening and safe, with no risks incurred.
Liebschutz et al, 2008 ¹²²	Interviews of 27 abused women.	Women had no instances of harmful disclosure in any health care setting (emergency department, obstetrics/gynecology clinics, or primary care clinics), although some disclosures were not helpful.
MacFarlane et al, 2006 ¹¹⁰	Randomized, 2-arm trial of 360 women receiving either a wallet-sized referral card or a 20-minute nurse management protocol to address IPV.	Participants reported no adverse effects of the interventions.
MacMillan et al, 2009 ⁸⁷	Randomized, controlled trial of 6743 women comparing IPV screening and communication of positive results to clinicians vs. no screening.	Screened women reported no harms related to screening on the Consequences of Screening Tool.
Renker et al, 2006 ¹²²	519 women completing anonymous computer interviews in U.S. maternity units that asked about IPV screening and interventions, past disclosure, preferences about screening, and violence during pregnancy.	Most women (97%) had no feelings of anger or embarrassment and were not offended when screened for IPV.
Sethi et al, 2004 ¹²⁴	198 women receiving services in a U.K. urban emergency department who completed a modified WHO Multi-Country Domestic Violence Study questionnaire.	24% felt uncomfortable when asked about IPV, with higher discomfort among those with prior abuse. Some women commented on the need for privacy and safety and had concerns about direct IPV questions.
Spangaro et al, 2010 ¹²⁰	Retrospective survey of screened women in Australia, 122 disclosed abuse and 241 did not report abuse.	5/119 participants with abuse indicated sadness or depression and one woman experienced further abuse as a result of her disclosure.
Spangaro et al, 2011 ¹²⁸	Interviews of 20 women followed up 6 months after disclosing abuse in response to screening.	None of the women described adverse effects from screening; however, 8/20 thought it was unremarkable and had minimal impact.
Weinsheimer et al, 2005 ¹²⁵	95 women in a trauma center who completed a survey about IPV screening.	18% of women thought screening infringed upon their privacy, but most (90%) felt it was appropriate to ask. Approximately 25% of abused women thought reporting would increase their chances of further harm.
Zeitler et al, 2006 ¹²⁶	645 women ages 15 to 24 in U.S. family planning clinics who completed a survey.	Although most women (90%) thought universal IPV screening is a good idea, 36% of younger women (ages 15-18) had concerns.

Abbreviations: CI = confidence interval; IPV = intimate partner violence; IRR = incidence rate ratio; WHO = World Health Organization.

Table 8. Summary of Evidence for Screening for Intimate Partner Violence

Number of studies	Design	Limitations	Consistency	Applicability	Overall quality	Findings
Key Question 1. Does screening asymptomatic women in health care settings for current, past, or increased risk for IPV reduce exposure to IPV, physical or mental harms, or mortality?						
1	RCT	High attrition rates, differential loss to followup, Hawthorne effect* among control participants.	Not relevant	High	Fair	Women in both groups had reductions in IPV recurrence, PTSD symptoms, and alcohol problems, as well as improvements in scores for quality of life, depression, and mental health, but no between-group differences.
Key Question 2. How effective are screening techniques in identifying asymptomatic women with current, past, or increased risk for IPV?						
15 studies of 13 instruments for identifying IPV in health care settings	Diagnostic accuracy studies with cross-sectional and prospective data	Enrollment of dissimilar groups at baseline, high attrition rates, unclear application of the reference standard.	Consistent	High	Fair to good	6 instruments with 1 to 8 items demonstrated sensitivity and specificity >80% in clinical populations of asymptomatic women: HARK, HITS (English and Spanish versions), modified CTQ-SF, OVAT, STaT, and WAST.
Key Question 4. For screen-detected women with current, past, or increased risk for IPV, how well do interventions reduce exposure to IPV, reduce physical or mental harms, or mortality?						
6	RCT	Enrollment of dissimilar groups at baseline, high and/or differential loss to followup, recall bias, missing data, Hawthorne effect among control participants.	Consistent	Some trials used narrowly defined populations that may limit applicability.	Fair to good	1 trial of counseling vs. usual care during pregnancy reported decreased IPV and improved birth outcomes with counseling. 2 trials of home visitation vs. none for young mothers resulted in improved IPV outcomes with visitation. Counseling resulted in decreased pregnancy coercion and resolution of unsafe relationships vs. usual care in 1 trial. 2 trials showed improved outcomes in intervention and control groups without differences (counseling vs. referral cards, nurse management vs. usual care in pregnancy).
Key Questions 3 and 5. What are the adverse effects of screening for IPV and interventions to reduce harm from IPV?						
14	RCT, prospective cohort, cross-sectional	Descriptive data with variability of populations, measures, and analysis.	Consistent	Unclear, most data are descriptive and come from small samples.	Fair	3 RCTs reported no adverse effects. Descriptive studies indicated that screening has minimal adverse effects, but some women experience discomfort, loss of privacy, emotional distress, and concerns about further abuse.

Abbreviations: HARK = Humiliation, Afraid, Rape, Kick; HITS = Hurt, Insult, Threaten, Scream; IPV = intimate partner violence; CTQ-SF = Childhood Trauma Questionnaire–Short Form; OVAT = Ongoing Violence Assessment Tool; PTSD = post-traumatic stress disorder; RCT = randomized, controlled trial; STaT = Slapped, Threatened, and Throw; WAST = Woman Abuse Screening Tool.

*Hawthorn effect is when subjects modify an aspect of their behavior in response to the fact that they are being studied.

Table 9. Summary of Evidence for Screening for Abuse and Neglect of Elderly and Vulnerable Adults

Number of studies	Design	Limitations	Consistency	Applicability	Overall quality	Findings
Key Question 1. Does screening asymptomatic elderly and vulnerable adults in health care settings for current, past, or increased risk for abuse and neglect reduce exposure to abuse and neglect, physical or mental harms, or mortality?						
No studies	Not relevant	Not relevant	Not relevant	Not relevant	Not relevant	Not relevant
Key Question 2. How effective are screening techniques in identifying asymptomatic elderly and vulnerable adults with current, past, or increased risk for abuse and neglect?						
1 study	Diagnostic accuracy study with cross-sectional data	Moderate attrition; reference standard may not be replicable.	Not relevant	Low; single study of a small sample of elderly patients in Canada.	Poor	The Elder Abuse Suspicion Index had sensitivity and specificity of 9-47% and 75-97%, depending on the number of positive responses to specific questions.
Key Question 4. For screen-detected elderly and vulnerable adults with current, past, or increased risk for abuse and neglect, how well do interventions reduce exposure to abuse and neglect, physical or mental harms, or mortality?						
1 study	Descriptive study with retrospective data	Descriptive data with no comparisons; details of the population, detection of abuse, and interventions are unclear.	Not relevant	Low; single study of a small number of VA patients in Los Angeles.	Poor	Abused veterans were identified in primary care clinics and referred to case management; 5% were reported to Adult Protective Services and 6% required nursing home placement or conservatorship arrangements.
Key Questions 3 and 5. What are the adverse effects of screening for abuse and neglect of elderly and vulnerable adults and interventions to reduce harm from abuse and neglect?						
No studies	Not relevant	Not relevant	Not relevant	Not relevant	Not relevant	Not relevant

Appendix A. Abbreviations

Abbreviation	Meaning
AAS	Abuse Assessment Screen
AHRQ	Agency for Healthcare Research and Quality
APS	Adult Protective Services
AUC	Area under the curve
CAS	Composite Abuse Scale
CDC	Centers for Disease Control and Prevention
CI	Confidence interval
COST	Consequences of Screening Tool
CTQ-SF	Childhood Trauma Questionnaire–Short Form
CTS	Conflict Tactics Scale
CTS2	Conflict Tactics Scale 2
DAST	Drug Abuse Severity Test
EASI	Elder Abuse Suspicion Index
EPC	Evidence-based Practice Center
EPDS	Edinburgh Postnatal Depression Scale
GRECC	Geriatric Research, Education, and Clinical Center
HARK	Humiliation, Afraid, Rape, Kick
HITS	Hurt, Insult, Threaten, Scream
IPV	Intimate partner violence
IRR	Incidence rate ratio
ISA	Index of Spouse Abuse
MOS-SF	Medical Outcome Study–Short Form
NIH-DC	National Institutes of Health–District of Columbia
NR	Not reported
OAS/OVAT	Ongoing Abuse Screen/Ongoing Violence Assessment Tool
OR	Odds ratio
PSI-SF	Parenting Stress Index–Short Form
PSQ	Parent Screening Questionnaire
PTSD	Post-traumatic stress disorder
PVS	Partner Violence Screen
RCT	Randomized, controlled trial
RR	Relative risk
SAFE-T	Secure, Accepted, Family, Even, Talk
SAVAWS	Safety Behavior Checklist, Community Resources Checklist, Severity of Violence Against Women Scale
SF-36	36-Item Short-Form Health Survey
SPAN	Startle, Physiological Arousal, Anger, and Numbness
STaT	Slapped, Threatened, and Throw
USPSTF	U.S. Preventive Services Task Force
WAST	Women Abuse Screening Tool
WHO	World Health Organization
WHOQOL	World Health Organization Quality of Life
WIC	Women, Infants, and Children
VA	Veterans Affairs

Appendix B1. Search Strategies

Search strategies of various populations (children, elder/vulnerable individuals, and adult women) were combined into one library and reviewed concurrently; therefore, strategies for all of these populations are included below.

Searches for Randomized Controlled Trials

Children

Database: EBM Reviews - Cochrane Central Register of Controlled Trials

- 1 ((domestic\$ or spous\$ or husband\$ or wife or wives or cohabitat\$ or (intimat\$ adj2 partner\$)) adj5 (violen\$ or abus\$ or batter\$ or assault\$ or attack\$ or aggressi\$ or altercat\$)).mp.
- 2 ((baby or babies or infan\$ or toddler\$ or child\$ or teen\$ or adolescen\$) adj5 (violen\$ or abus\$ or batter\$ or assault\$)).mp.
- 3 from 2 keep 1-808

Elderly

Database: EBM Reviews - Cochrane Central Register of Controlled Trials

- 1 ((domestic\$ or spous\$ or husband\$ or wife or wives or cohabitat\$ or (intimat\$ adj2 partner\$)) adj5 (violen\$ or abus\$ or batter\$ or assault\$ or attack\$ or aggressi\$ or altercat\$)).mp.
- 2 ((baby or babies or infan\$ or toddler\$ or child\$ or teen\$ or adolescen\$) adj5 (violen\$ or abus\$ or batter\$ or assault\$)).mp.
- 3 ((elder\$ or parent\$ or mother\$ or father\$) adj5 (violen\$ or abus\$ or batter\$ or assault\$ or attack\$ or aggressi\$ or altercat\$)).mp.
- 4 from 3 keep 1-396

Spouse

Database: EBM Reviews - Cochrane Central Register of Controlled Trials

- 1 ((domestic\$ or family or families or spous\$ or husband\$ or wife or wives or cohabitat\$ or (intimat\$ adj2 partner\$)) adj5 (violen\$ or abus\$ or batter\$ or assault\$ or attack\$ or aggressi\$ or altercat\$)).mp.
- 2 from 1 keep 1-387

Searches for Systematic Reviews

Children

Database: EBM Reviews - Cochrane Database of Systematic Reviews

- 1 ((domestic\$ or family or families or spous\$ or husband\$ or wife or wives or cohabitat\$ or (intimat\$ adj2 partner\$)) adj5 (violen\$ or abus\$ or batter\$ or assault\$ or attack\$ or aggressi\$ or altercat\$)).mp.
- 2 ((baby or babies or infan\$ or toddler\$ or child\$ or teen\$ or adolescen\$) adj5 (violen\$ or abus\$ or batter\$ or assault\$)).mp.
- 3 from 2 keep 1-88

Appendix B1. Search Strategies

Elderly

Database: EBM Reviews - Cochrane Database of Systematic Reviews

- 1 ((domestic\$ or family or families or spous\$ or husband\$ or wife or wives or cohabitats\$ or intimat\$ adj2 partner\$)) adj5 (violen\$ or abus\$ or batter\$ or assault\$ or attack\$ or aggressi\$ or altercat\$).mp.
- 2 ((baby or babies or infan\$ or toddler\$ or child\$ or teen\$ or adolescen\$) adj5 (violen\$ or abus\$ or batter\$ or assault\$)).mp.
- 3 ((elder\$ or parent\$ or mother\$ or father\$) adj5 (violen\$ or abus\$ or batter\$ or assault\$ or attack\$ or aggressi\$ or altercat\$)).mp.
- 4 from 3 keep 1-56

Spouse

Database: EBM Reviews - Cochrane Database of Systematic Reviews

- 1 ((domestic\$ or family or families or spous\$ or husband\$ or wife or wives or cohabitats\$ or intimat\$ adj2 partner\$)) adj5 (violen\$ or abus\$ or batter\$ or assault\$ or attack\$ or aggressi\$ or altercat\$).mp.
- 2 from 1 keep 1-59

Searches for Interventions

Domestic

Database: Ovid MEDLINE(R)

- 1 exp domestic violence/
- 2 exp battered women/
- 3 1 or 2
- 4 exp Family Practice/
- 5 exp Primary Health Care/
- 6 exp Physicians, Family/
- 7 exp Emergency Medicine/
- 8 exp Emergency Medical Services/
- 9 4 or 5 or 6
- 10 7 or 8
- 11 exp Preventive Health Services/
- 12 exp Counseling/
- 13 exp Mental Health Services/
- 14 exp "Outcome and Process Assessment (Health Care)"/
- 15 3 and 9
- 16 3 and 10
- 17 3 and 11
- 18 3 and 12
- 19 3 and 13
- 20 3 and 14
- 21 15 or 16 or 17 or 18 or 19 or 20

Appendix B1. Search Strategies

- 22 limit 21 to (english language and yr="2002 -Current")
- 23 from 22 keep 1-1687

Database: PsycINFO

- 1 exp Domestic Violence/
- 2 exp pediatrics/
- 3 (pediatrician\$ or paediatrician\$).mp. [mp=title, abstract, heading word, table of contents, key concepts]
- 4 exp gerontology/
- 5 gerontologist\$.mp. [mp=title, abstract, heading word, table of contents, key concepts]
- 6 exp Family Medicine/
- 7 exp Primary Health Care/
- 8 exp General Practitioners/
- 9 exp Family Physicians/
- 10 (primary care or family medicine or family practice or general practice or gp).mp. [mp=title, abstract, heading word, table of contents, key concepts]
- 11 exp Emergency Services/
- 12 (emergency or emergencies).mp. [mp=title, abstract, heading word, table of contents, key concepts]
- 13 2 or 3
- 14 4 or 5
- 15 6 or 7 or 8 or 9 or 10
- 16 11 or 12
- 17 1 and 13
- 18 1 and 14
- 19 1 and 15
- 20 1 and 16
- 21 17 or 18 or 19 or 20
- 22 from 21 keep 1-205

Children

Database: Ovid MEDLINE(R)

- 1 exp Child Abuse/
- 2 exp Domestic Violence/
- 3 limit 2 to "all child (0 to 18 years)"
- 4 1 or 3
- 5 exp Schools/
- 6 crime/ or exp crime victims/ or exp homicide/ or exp sex offenses/ or exp violence/
- 7 5 and 6
- 8 limit 7 to "all child (0 to 18 years)"
- 9 4 or 8
- 10 exp Family Practice/
- 11 exp Primary Health Care/
- 12 exp Physicians, Family/
- 13 pediatrician\$.mp.

Appendix B1. Search Strategies

- 14 exp Pediatrics/
- 15 exp Emergency Medicine/
- 16 exp Emergency Medical Services/
- 17 10 or 11 or 12
- 18 9 and 17
- 19 13 or 14
- 20 9 and 19
- 21 15 or 16
- 22 9 and 21
- 23 18 or 20 or 22
- 24 exp Preventive Health Services/
- 25 exp Counseling/
- 26 9 and 24
- 27 9 and 25
- 28 exp Mental Health Services/
- 29 9 and 28
- 30 limit 9 to clinical trial, all
- 31 exp "Outcome and Process Assessment (Health Care)"/
- 32 9 and 31
- 33 23 or 26 or 27 or 30 or 32
- 34 limit 33 to english language
- 35 limit 34 to yr="2002 -Current"
- 36 from 35 keep 1-1317

Database: PsycINFO

- 1 exp Child Abuse/
- 2 exp Child Neglect/
- 3 1 or 2
- 4 exp Domestic Violence/
- 5 limit 4 to (100 childhood <birth to age 12 yrs> or 200 adolescence <age 13 to 17 yrs>)
- 6 exp Physical Abuse/
- 7 exp Emotional Abuse/
- 8 exp Sexual Abuse/
- 9 6 or 7 or 8
- 10 limit 9 to (100 childhood <birth to age 12 yrs> or 200 adolescence <age 13 to 17 yrs>)
- 11 3 or 5 or 10
- 12 exp Pediatrics/
- 13 (pediatrician\$ or paediatrician\$).mp. [mp=title, abstract, heading word, table of contents, key concepts]
- 14 exp Family Medicine/
- 15 exp Primary Health Care/
- 16 exp General Practitioners/
- 17 exp Family Physicians/
- 18 (primary care or family medicine or family practice or general practice or gp).mp. [mp=title, abstract, heading word, table of contents, key concepts]
- 19 exp Emergency Services/

Appendix B1. Search Strategies

- 20 (emergency or emergencies).mp. [mp=title, abstract, heading word, table of contents, key concepts]
- 21 12 or 13
- 22 11 and 21
- 23 14 or 15 or 16 or 17 or 18
- 24 11 and 23
- 25 19 or 20
- 26 11 and 25
- 27 22 or 24 or 26
- 28 limit 27 to yr="2002 -Current"
- 29 from 28 keep 1-243

Elderly

Database: Ovid MEDLINE(R)

- 1 exp elder abuse/
- 2 exp Domestic Violence/
- 3 limit 2 to "all aged (65 and over)"
- 4 1 or 3
- 5 exp residential facilities/
- 6 crime/ or exp crime victims/ or exp homicide/ or exp sex offenses/ or exp violence/
- 7 5 and 6
- 8 limit 7 to "all aged (65 and over)"
- 9 4 or 8
- 10 exp Family Practice/
- 11 exp Primary Health Care/
- 12 exp Physicians, Family/
- 13 gerontologist\$.mp.
- 14 exp geriatrics/
- 15 exp Emergency Medicine/
- 16 exp Emergency Medical Services/
- 17 10 or 11 or 12
- 18 9 and 17
- 19 13 or 14
- 20 9 and 19
- 21 15 or 16
- 22 9 and 21
- 23 18 or 20 or 22
- 24 exp Preventive Health Services/
- 25 exp Counseling/
- 26 9 and 24
- 27 9 and 25
- 28 exp Mental Health Services/
- 29 9 and 28
- 30 limit 9 to clinical trial, all
- 31 exp "Outcome and Process Assessment (Health Care)"/

Appendix B1. Search Strategies

- 32 9 and 31
- 33 23 or 26 or 27 or 29 or 30 or 32
- 34 limit 33 to (english language and yr="2002 -Current")
- 35 from 34 keep 1-250

Database: PsycINFO

- 1 exp elder abuse/
- 2 exp Domestic Violence/
- 3 limit 2 to "380 aged <age 65 yrs and older>"
- 4 exp Physical Abuse/
- 5 exp patient abuse/
- 6 exp Emotional Abuse/
- 7 exp Sexual Abuse/
- 8 4 or 5 or 6 or 7
- 9 limit 8 to "380 aged <age 65 yrs and older>"
- 10 1 or 3 or 9
- 11 exp gerontology/
- 12 gerontologist\$.mp. [mp=title, abstract, heading word, table of contents, key concepts]
- 13 exp Family Medicine/
- 14 exp Primary Health Care/
- 15 exp General Practitioners/
- 16 exp Family Physicians/
- 17 (primary care or family medicine or family practice or general practice or gp).mp.
[mp=title, abstract, heading word, table of contents, key concepts]
- 18 exp Emergency Services/
- 19 (emergency or emergencies).mp. [mp=title, abstract, heading word, table of contents, key concepts]
- 20 11 or 12
- 21 10 and 20
- 22 13 or 14 or 15 or 16 or 17
- 23 10 and 22
- 24 18 or 19
- 25 10 and 24
- 26 21 or 23 or 25
- 27 limit 26 to yr="2002 -Current"
- 28 from 27 keep 1-63

Spouse

Database: Ovid MEDLINE(R)

- 1 Spouse Abuse/
- 2 ((spous\$ or wife or husband or boyfriend\$ or girlfriend\$ or married or marriage\$ or intimate partner\$ or common law or cohabitat\$) adj5 (abus\$ or violen\$ or attack\$ or assault\$ or batter\$)).mp.
- 3 exp Family Practice/
- 4 exp Primary Health Care/

Appendix B1. Search Strategies

- 5 exp Physicians, Family/
- 6 exp Emergency Medicine/
- 7 exp Emergency Medical Services/
- 8 3 or 4 or 5
- 9 6 or 7
- 10 exp Preventive Health Services/
- 11 exp Counseling/
- 12 exp Mental Health Services/
- 13 exp "Outcome and Process Assessment (Health Care)"/
- 14 2 and 8
- 15 2 and 9
- 16 2 and 10
- 17 2 and 11
- 18 2 and 12
- 19 2 and 13
- 20 14 or 15 or 16 or 17 or 18 or 19
- 21 limit 20 to (english language and yr="2002 -Current")
- 22 from 21 keep 1-611

Database: PsycINFO

- 1 exp partner abuse/
- 2 exp battered women/
- 3 1 or 2
- 4 exp Domestic Violence/
- 5 exp marriage/
- 6 exp marital status/
- 7 exp cohabitation/
- 8 exp spouses/
- 9 exp couples/
- 10 living arrangements/
- 11 5 or 6 or 7 or 8 or 9 or 10
- 12 4 and 11
- 13 exp Physical Abuse/
- 14 exp Emotional Abuse/
- 15 exp Sexual Abuse/
- 16 13 or 14 or 15
- 17 11 and 16
- 18 3 or 12 or 17
- 19 exp Family Medicine/
- 20 exp Primary Health Care/
- 21 exp General Practitioners/
- 22 exp Family Physicians/
- 23 (primary care or family medicine or family practice or general practice or gp).mp.
[mp=title, abstract, heading word, table of contents, key concepts]
- 24 exp Emergency Services/

Appendix B1. Search Strategies

- 25 (emergency or emergencies).mp. [mp=title, abstract, heading word, table of contents, key concepts]
- 26 19 or 20 or 21 or 22 or 23
- 27 18 and 26
- 28 24 or 25
- 29 18 and 28
- 30 27 or 29
- 31 limit 30 to yr="2002 -Current"
- 32 from 31 keep 1-148

Searches for Screening

Domestic

Database: Ovid MEDLINE(R)

- 1 exp domestic violence/
- 2 exp battered women/
- 3 1 or 2
- 4 exp Mass Screening/
- 5 3 and 4
- 6 screen\$.mp.
- 7 exp questionnaires/
- 8 exp risk assessment/
- 9 exp diagnosis/
- 10 di.fs.
- 11 9 or 10
- 12 7 and 11
- 13 3 and 6
- 14 3 and 8
- 15 3 and 12
- 16 13 or 14 or 15
- 17 limit 16 to (english language and yr="2002 -Current")
- 18 from 17 keep 1-1686

Database: PsycINFO

- 1 exp Domestic Violence/
- 2 exp Screening/
- 3 exp Screening Tests/
- 4 2 or 3
- 5 1 and 4
- 6 screen\$.mp.
- 7 1 and 6
- 8 exp Measurement/
- 9 (diagnos\$ or assess\$ or discover\$ or recogni\$).mp. [mp=title, abstract, heading word, table of contents, key concepts]
- 10 8 and 9

Appendix B1. Search Strategies

- 11 1 and 10
- 12 5 or 7 or 11
- 13 limit 12 to yr="2002 -Current"
- 14 from 13 keep 1-327

Children

Database: Ovid MEDLINE(R)

- 1 exp Child Abuse/
- 2 exp Domestic Violence/
- 3 limit 2 to "all child (0 to 18 years)"
- 4 1 or 3
- 5 exp Schools/
- 6 crime/ or exp crime victims/ or exp homicide/ or exp sex offenses/ or exp violence/
- 7 5 and 6
- 8 limit 7 to "all child (0 to 18 years)"
- 9 4 or 8
- 10 exp Mass Screening/
- 11 9 and 10
- 12 screen\$.mp.
- 13 9 and 12
- 14 exp questionnaires/
- 15 9 and 14
- 16 exp risk assessment/
- 17 9 and 16
- 18 11 or 13
- 19 exp diagnosis/
- 20 di.fs.
- 21 19 or 20
- 22 15 and 21
- 23 17 or 18 or 22
- 24 limit 23 to yr="2002 -Current"
- 25 limit 24 to english language
- 26 from 25 keep 1-1094

Database: PsycINFO

- 1 exp Child Abuse/
- 2 exp Child Neglect/
- 3 1 or 2
- 4 exp Domestic Violence/
- 5 limit 4 to (100 childhood <birth to age 12 yrs> or 200 adolescence <age 13 to 17 yrs>)
- 6 exp Physical Abuse/
- 7 exp Emotional Abuse/
- 8 exp Sexual Abuse/
- 9 6 or 7 or 8
- 10 limit 9 to (100 childhood <birth to age 12 yrs> or 200 adolescence <age 13 to 17 yrs>)

Appendix B1. Search Strategies

- 11 3 or 5 or 10
- 12 exp Screening/
- 13 exp Screening Tests/
- 14 12 or 13
- 15 11 and 14
- 16 screen\$.mp.
- 17 11 and 16
- 18 15 or 17
- 19 exp Measurement/
- 20 (diagnos\$ or assess\$ or discover\$ or recogni\$).mp. [mp=title, abstract, heading word, table of contents, key concepts]
- 21 19 and 20
- 22 11 and 21
- 23 18 or 22
- 24 limit 23 to yr="2002 -Current"
- 25 limit 24 to english language
- 26 from 25 keep 1-512

Elderly

Database: Ovid MEDLINE(R)

- 1 exp elder abuse/
- 2 exp Domestic Violence/
- 3 limit 2 to "all aged (65 and over)"
- 4 1 or 3
- 5 exp residential facilities/
- 6 crime/ or exp crime victims/ or exp homicide/ or exp sex offenses/ or exp violence/
- 7 5 and 6
- 8 limit 7 to "all aged (65 and over)"
- 9 4 or 8
- 10 exp Mass Screening/
- 11 9 and 10
- 12 screen\$.mp.
- 13 9 and 12
- 14 exp questionnaires/
- 15 9 and 14
- 16 exp risk assessment/
- 17 9 and 16
- 18 11 or 13 or 15 or 17
- 19 limit 18 to (english language and yr="2002 -Current")
- 20 from 19 keep 1-412

Database: PsycINFO

- 1 exp elder abuse/
- 2 exp Domestic Violence/
- 3 limit 2 to "380 aged <age 65 yrs and older>"
- 4 exp Physical Abuse/

Appendix B1. Search Strategies

- 5 exp patient abuse/
- 6 exp Emotional Abuse/
- 7 exp Sexual Abuse/
- 8 4 or 5 or 6 or 7
- 9 limit 8 to "380 aged <age 65 yrs and older>"
- 10 1 or 3 or 9
- 11 exp Screening/
- 12 exp Screening Tests/
- 13 11 or 12
- 14 10 and 13
- 15 screen\$.mp.
- 16 10 and 15
- 17 14 or 16
- 18 exp Measurement/
- 19 (diagnos\$ or assess\$ or discover\$ or recogni\$).mp. [mp=title, abstract, heading word, table of contents, key concepts]
- 20 18 and 19
- 21 10 and 20
- 22 17 or 21
- 23 limit 22 to yr="2002 -Current"
- 24 limit 23 to english language
- 25 from 24 keep 1-95

Spouse

Database: Ovid MEDLINE(R)

- 1 Spouse Abuse/
- 2 ((spous\$ or wife or husband or boyfriend\$ or girlfriend\$ or married or marriage\$ or intimate partner\$ or common law or cohabit\$) adj5 (abus\$ or violen\$ or attack\$ or assault\$ or batter\$)).mp.
- 3 exp Mass Screening/
- 4 2 and 3
- 5 screen\$.mp.
- 6 exp questionnaires/
- 7 exp risk assessment/
- 8 exp diagnosis/
- 9 di.fs.
- 10 2 and 5
- 11 2 and 6
- 12 2 and 7
- 13 8 or 9
- 14 11 and 13
- 15 4 or 10 or 12 or 14
- 16 limit 15 to (english language and yr="2002 -Current")
- 17 from 16 keep 1-664

Appendix B1. Search Strategies

Database: PsycINFO

- 1 exp partner abuse/
- 2 exp battered women/
- 3 1 or 2
- 4 exp Domestic Violence/
- 5 exp marriage/
- 6 exp marital status/
- 7 exp cohabitation/
- 8 exp spouses/
- 9 exp couples/
- 10 living arrangements/
- 11 5 or 6 or 7 or 8 or 9 or 10
- 12 4 and 11
- 13 exp Physical Abuse/
- 14 exp Emotional Abuse/
- 15 exp Sexual Abuse/
- 16 13 or 14 or 15
- 17 11 and 16
- 18 3 or 12 or 17
- 19 exp Screening/
- 20 exp Screening Tests/
- 21 19 or 20
- 22 screen\$.mp.
- 23 exp Measurement/
- 24 (diagnos\$ or assess\$ or discover\$ or recogni\$).mp. [mp=title, abstract, heading word, table of contents, key concepts]
- 25 23 and 24
- 26 18 and 21
- 27 18 and 22
- 28 18 and 25
- 29 26 or 27 or 28
- 30 limit 29 to yr="2002 -Current"
- 31 from 30 keep 1-366

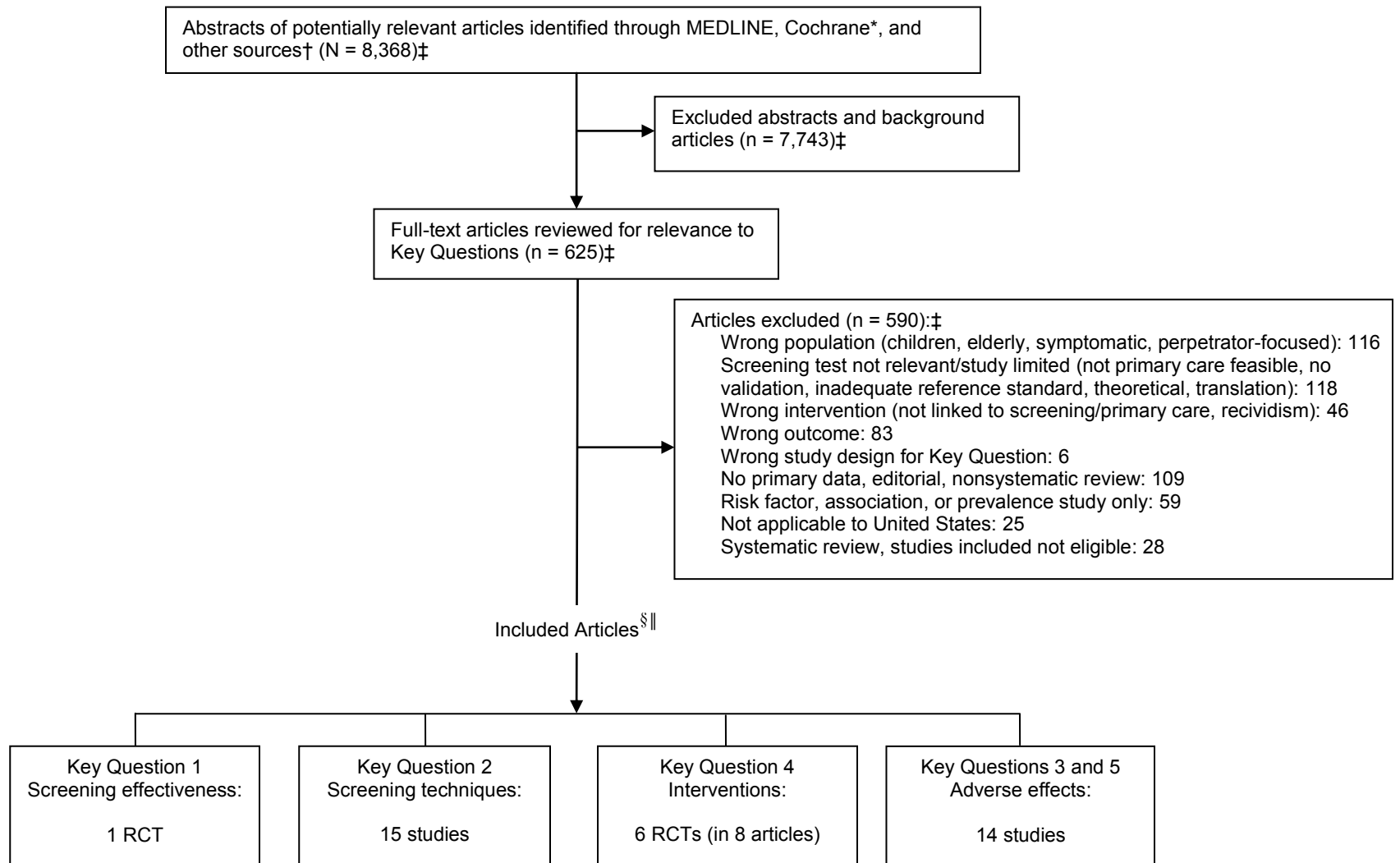
Appendix B2. Inclusion and Exclusion Criteria

	Inclusion Criteria	Exclusion Criteria
All Key Questions		
Population	Women (age ≥18 years), elderly and vulnerable adult populations, individuals presenting for primary care services.	Symptomatic individuals undergoing diagnostic evaluations for conditions related to violence and abuse (e.g., those presenting with a broken bone or signs of physical abuse in the emergency department).
Languages	Full text published in English.	Not English language.
Settings	Primary care or other settings where primary care services are offered, such as emergency departments, student health centers. Research conducted in the United States or in other populations similar to U.S. populations with services and interventions applicable to U.S. practice.	Nonclinically based settings or nonapplicable settings (e.g., prisons), populations or services/interventions not applicable to U.S. practice.
Key Question 1. Screening		
Screening tests	Screening tests used in or applicable to U.S. primary care settings. These include self-administered, computer-enabled, or patient self-report instruments, as well as clinician-to-patient methods. Instruments may be designed to detect current or past violence or abuse, or risk status for violence or abuse. Instruments must be feasible for use for screening (i.e., brief, easy to interpret, acceptable to patients and clinicians).	Screening tests not used or not applicable to U.S. primary care settings.
Outcomes	Decreasing level of violence or abuse; leaving an unsafe situation; physical trauma (fractures, dislocations, brain injury); sexual trauma, unintended pregnancy, and sexually transmitted diseases; mental trauma; social isolation; mental health repercussions such as depression, anxiety, nightmares; quality of life; and chronic medical conditions, among others.	Screening or referral rates, attitudes about screening, plans or intentions, and other intermediate outcomes.
Study designs	Randomized, controlled trials.	Nonrandomized study designs.
Key Questions 2. Screening tests		
Screening tests	Screening tests used in or applicable to U.S. primary care settings. These include self-administered, computer-enabled, or patient self-report instruments, as well as clinician-to-patient methods. Instruments may be designed to detect current or past violence or abuse, or risk status for violence or abuse. Instruments must be feasible for use for screening (i.e., brief, easy to interpret, acceptable to patients and clinicians). Instrument must be compared with an acceptable reference standard (verified or self-reported abuse or longer validated instrument of abuse).	Screening tests not applicable to U.S. primary care settings. Inadequate or no reference standard comparison.
Outcomes	Sensitivity, specificity, positive and negative predictive values, positive and negative likelihood ratios, diagnostic odds ratios, relative risks for future abuse.	Theory or survey development and validation without correlation to abuse outcomes, focus only on particular risk factors, or assessment of provider or participant attitudes toward the instrument.
Study designs	Studies of diagnostic accuracy.	Other study designs.
Key Question 3. Harms of screening		
Outcomes	False positives, false negatives, any potential effects of screening or identification such as increased abuse.	Outcomes not directly related to the screening process.
Study designs	Any.	All designs considered.

Appendix B2. Inclusion and Exclusion Criteria

	Inclusion Criteria	Exclusion Criteria
Key Question 4. Interventions		
Interventions	Services that could result from a screening assessment by a clinician; services may be implemented by nonclinicians (e.g., referral).	Public awareness campaigns without specific interventions linked to screening. Studies of other interventions that do not include a health service component (e.g., effectiveness of women's shelters, unless referred by health clinicians).
Outcomes	Decreasing level of violence or abuse; leaving an unsafe situation; physical trauma (fractures, dislocations, brain injury); sexual trauma, unintended pregnancy, and sexually transmitted diseases; mental trauma; social isolation; mental health repercussions such as depression, anxiety, nightmares; quality of life; and chronic medical conditions, among others.	Screening or referral rates, attitudes about screening, plans or intentions, and other intermediate outcomes.
Study Designs	Randomized, controlled trials.	Nonrandomized study designs.
Key Question 5. Harms of Interventions		
Interventions	Services that could result from a screening assessment by a clinician; services may be implemented by nonclinicians (e.g., referral).	Public awareness campaigns without specific interventions linked to screening. Studies of other interventions that do not include a health service component (e.g., effectiveness of women's shelters, unless referred by health clinicians).
Outcomes	Any harms that result as an effect of interventions.	Outcomes not directly related to the screening process.
Study Designs	Any.	All designs considered.

Appendix B3. Literature Flow Diagram



*Cochrane databases include the Cochrane Central Register of Controlled Trials and the Cochrane Database of Systematic Reviews.

†Identified from reference lists, suggested by experts.

‡Includes search results for child, adult, and elderly populations. Studies of children and elderly populations are included in a separate report.

§Studies that meet inclusion criteria for Key Questions.

|| Some studies apply to more than one Key Question.

Appendix B4. Excluded Studies

Wrong Population

- Armstrong KL, Fraser JA, Dadds MR, Morris J. A randomized, controlled trial of nurse home visiting to vulnerable families with newborns. *J Paediatr Child Health*. 1999;35(3):237-44.
- Ayoub CC, Milner JS. Failure to thrive: parental indicators, types, and outcomes. *Child Abuse Negl*. 1985;9(4):491-9.
- Ayranci U, Yenilmez C, Balci Y, Kaptanoglu C. Identification of violence in Turkish health care settings. *J Interpers Violence*. 2006;21(2):276-96.
- Babcock JC, Green CE, Robie C. Does batterers' treatment work? A meta-analytic review of domestic violence treatment. *Clin Psychol Rev*. 2004;23(8):1023-53.
- Barlow J, Davis H, McIntosh E, et al. Role of home visiting in improving parenting and health in families at risk of abuse and neglect: results of a multicentre randomised controlled trial and economic evaluation. *Arch Dis Child*. 2007;92(3):229-33.
- Barth RP. An experimental evaluation of in-home child abuse prevention services. *Child Abuse Negl*. 1991;15(4):363-75.
- Barth RP, Hacking S, Ash JR. Preventing child abuse: an experimental evaluation of the child parent enrichment project. *J Prim Prev*. 1988;8(41):201-17.
- Bowen E, Gilchrist E, Beech AR. Change in treatment has no relationship with subsequent re-offending in U.K. domestic violence sample: a preliminary study. *Int J Offender Ther Comp Criminol*. 2008;52(5):598-614.
- Bradford K. Screening couples for intimate partner violence. *J Fam Psychother*. 2010;21(1):76-82.
- Brownell P, Berman J, Salamone A. Mental health and criminal justice issues among perpetrators of elder abuse. *J Elder Abuse Negl*. 2000;11(4):81-94.
- Bugental DB, Ellerson PC, Lin EK, et al. A cognitive approach to child abuse prevention. *J Fam Psychol*. 2002;16(3):243-58.
- Bugental DB, Schwartz A. A cognitive approach to child mistreatment prevention among medically at-risk infants. *Dev Psychol*. 2009;45(1):284-8.
- Carbone-López K, Kruttschnitt C, Macmillan R. Patterns of intimate partner violence and their associations with physical health, psychological distress, and substance use. *Public Health Rep*. 2006;121(4):382-92.
- Carter-Visscher RM, Naugle AE, Bell KM, Suvak MK. Ethics of asking trauma-related questions and exposing participants to arousal-inducing stimuli. *J Trauma Dissociation*. 2007;8(3):27-55.
- Chaffin M, Funderburk B, Bard D, et al. A combined motivation and parent-child interaction therapy package reduces child welfare recidivism in a randomized dismantling field trial. *J Consult Clin Psychol*. 2011;79(1):84-95.
- Chaffin M, Silovsky JF, Funderburk B, et al. Parent-child interaction therapy with physically abusive parents: efficacy for reducing future abuse reports. *J Consult Clin Psychol*. 2004;72(3):500-10.
- Chaffin M, Valle LA. Dynamic prediction characteristics of the Child Abuse Potential Inventory. *Child Abuse Negl*. 2003;27(5):463-81.
- Chan E, Cavacuiti C. Gay Abuse Screening Protocol (GASP): screening for abuse in gay male relationships. *J Homosex*. 2008;54(4):423-38.

Appendix B4. Excluded Studies

- Chen W, Balaban R, Stanger V, et al. Suspected child abuse and neglect: assessment in a hospital setting. *Isr Med Assoc J.* 2002;4(8):617-23.
- Connors NA, Whiteside-Mansell L, Deere D, et al. Measuring the potential for child maltreatment: the reliability and validity of the Adult Adolescent Parenting Inventory-2. *Child Abuse Negl.* 2006;30(1):39-53.
- Cooper C, Maxmin K, Selwood A, et al. The sensitivity and specificity of the Modified Conflict Tactics Scale for detecting clinically significant elder abuse. *Int Psychogeriatr.* 2009;21(4):774-8.
- Coulthard P, Yong LS, Adamson L, et al. Domestic violence screening and intervention programmes for adults with dental or facial injury. *Cochrane Database Syst Rev.* 2010;12:CD004486.
- Coulthard P, Yong S, Adamson L, et al. Domestic violence screening and intervention programmes for adults with dental or facial injury. *Cochrane Database Syst Rev.* 2004;2:CD004486.
- DiLillo D, Tremblay GC, et al. Linking childhood sexual abuse and abusive parenting: the mediating role of maternal anger. *Child Abuse Negl.* 2000;24(6):767-79.
- Dubowitz H, Feigelman S, et al. Pediatric primary care to help prevent child maltreatment: the Safe Environment for Every Kid (SEEK) model. *Pediatrics.* 2009;123(3):858-64.
- Duggan KA, McFarlane EC, Windham AM, et al. Evaluation of Hawaii's Healthy Start Program. *Future Child.* 1999;9(1):66-90.
- Duggan A, Caldera D, et al. Impact of a statewide home visiting program to prevent child abuse. *Child Abuse Negl.* 2007;31(8):801-27.
- Duggan A, McFarlane E, et al. Randomized trial of a statewide home visiting program: impact in preventing child abuse and neglect. *Child Abuse Negl.* 2004;28(6):597-622.
- DuMont K, Mitchell-Herzfeld S, et al. Healthy Families New York (HFNY) randomized trial: effects on early child abuse and neglect. *Child Abuse Negl.* 2008;32(3):295-315.
- Easton CJ, Mandel DL, et al. A cognitive behavioral therapy for alcohol-dependent domestic violence offenders: an integrated substance abuse-domestic violence treatment approach (SADV). *Am J Addict.* 2007;16(1):24-31.
- Eckenrode J, Ganzel B, et al. Preventing child abuse and neglect with a program of nurse home visitation: the limiting effects of domestic violence. *JAMA.* 2000;284(11):1385-91.
- El-Mohandes AA, Katz KS, et al. The effect of a parenting education program on the use of preventive pediatric health care services among low-income, minority mothers: a randomized, controlled study. *Pediatrics.* 2003;111(6 Pt 1):1324-32.
- El-Mohandes AA. (2006). A psycho-behavioral intervention on African American pregnant women with a history of intimate partner violence (IPV) improves birth weight distribution of their newborns [abstract]. Proceedings of the 17th Pediatric Academic Societies Annual Meeting; 2006 Apr 29-May 2; San Francisco.
- Feigelman, S., H. Dubowitz, et al. (2009). Screening for harsh punishment in a pediatric primary care clinic. *Child Abuse Negl.* 33(5): 269-277.
- Fergusson DM, Grant H, et al. Randomized trial of the Early Start program of home visitation. *Pediatrics.* 2005;116(6):e803-9.
- Fergusson DM, Grant H, et al. Randomized trial of the Early Start program of home visitation: parent and family outcomes. *Pediatrics.* 2006;117(3):781-6.

Appendix B4. Excluded Studies

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Appendix B5. USPSTF Quality Rating Criteria for Diagnostic Accuracy Studies, Randomized Controlled Trials, and Observational Studies

Diagnostic Accuracy Studies

Criteria:

- Screening test relevant, available for primary care, adequately described
- Study uses a credible reference standard, performed regardless of test results
- Reference standard interpreted independently of screening test
- Handles indeterminate results in a reasonable manner
- Spectrum of patients included in study
- Sample size
- Administration of reliable screening test
- Random or consecutive selection of patients
- Screening cutoff predetermined
- All patients undergo the reference standard

Definition of ratings based on above criteria:

Good: Evaluates relevant available screening test; uses a credible reference standard; interprets reference standard independently of screening test; reliability of test assessed; has few or handles indeterminate results in a reasonable manner; includes large number of (more than 100) broad-spectrum patients with and without disease; study attempts to enroll a random or consecutive sample of patients who meet prestated inclusion criteria screening cutoffs.

Fair: Evaluates relevant available screening test; uses reasonable although not best standard; interprets reference standard independent of screening test; moderate sample size (50 to 100 subjects) and a “medium” spectrum of patients (i.e., applicable to most screening settings).

Poor: Has important limitation, such as: uses inappropriate reference standard; screening test improperly administered; biased ascertainment of reference standard; very small sample size of very narrow selected spectrum of patients.

Randomized Controlled Trials and Cohort Studies

Criteria:

- Initial assembly of comparable groups. Randomized controlled trials (RCTs): adequate randomization, including concealment and whether potential confounders were distributed equally among groups; cohort studies: consideration of potential confounders with either restriction or measurement for adjustment in the analysis, consideration of inception cohorts
- Maintenance of comparable groups (includes attrition, cross-overs, adherence, contamination)
- Important differential loss to followup or overall high loss to followup
- Measurements: equal, reliable, and valid (includes masking of outcome assessment)
- Clear definition of interventions
- Important outcomes considered

Appendix B5. USPSTF Quality Rating Criteria for Diagnostic Accuracy Studies, Randomized Controlled Trials, and Observational Studies

- Analysis: adjustment for potential confounders for cohort studies, or intention-to-treat analysis for RCTs; for cluster RCTs, correction for correlation coefficient

Definition of ratings based on above criteria:

- Good:** Meets all criteria: comparable groups are assembled initially and maintained throughout the study (followup at least 80 percent); 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 to confounders in analysis.
- Fair:** 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 whether some (although not major) differences occurred in followup; measurement instruments are acceptable (although not the best) and generally applied equally; some but not all important outcomes are considered; and some but not all potential confounders are accounted for.
- Poor:** Any of the following major limitations exists: groups assembled initially are not close to being comparable or maintained throughout the study; unreliable or invalid measurement instruments are used or not applied at all equally among groups (including not masking outcome assessment); and key confounders are given little or no attention.

Sources: Harris, 2001⁸¹; Leeflang, 2008⁸³; Whiting, 2003.⁸⁴

Appendix B6. Quality Rating Criteria for Systematic Reviews

Overall quality rating for each systematic review is based on the below questions. Ratings are summarized as good, fair, or poor.

- Search dates reported? *Yes or No*
- Search methods reported? *Yes or No*
- Comprehensive search? *Yes or No*
- Inclusion criteria reported? *Yes or No*
- Selection bias avoided? *Yes or No*
- Validity criteria reported? *Yes or No*
- Validity assessed appropriately? *Yes or No*
- Methods used to combine studies reported? *Yes or No*
- Findings combined appropriately? *Yes or No*
- Conclusions supported by data? *Yes or No*

Definitions of ratings based on above criteria:

Good: Meets all criteria: reports comprehensive and reproducible search methods and results; reports predefined criteria to select studies and reports reasons for excluding potentially relevant studies; adequately evaluates quality of included studies and incorporates assessments of quality when synthesizing data; reports methods for synthesizing data and uses appropriate methods to combine data qualitatively or quantitatively; conclusions supported by the evidence reviewed.

Fair: Fails to meet one or more of the above criteria, but the limitations are not judged as being major.

Poor: Has a major limitation in one or more of the above criteria.

Developed from the following publications: Harris, 2001⁸¹; National Institute for Health and Clinical Excellence, 2006⁸⁵; Oxman, 1991.⁸⁶

Appendix B7. Reviewers of the Draft Report

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Appendix C1. Randomized, Controlled Trials of Screening for Intimate Partner Violence

Author, Year	Study Design	N	Population	Setting	Duration	Screening Assessment
MacMillan et al, 2009 ⁸⁷	Cluster randomized, controlled trial comparing screening and communication of positive results to clinicians vs. no screening	8293 eligible; 6743 randomized to be screened or not; 707 had + screen results and participated in screened (347) and unscreened (360) conditions	English-speaking women aged 18 to 64 years who had a male partner at some time in the preceding 12 months	12 primary care, 11 acute care and 3 specialty care sites in Ontario, Canada	Interviews at baseline and at 6, 12, and 18 months post-baseline	Women in the screened group self-completed the Women Abuse Screening Tool (WAST); if screened as positive, this information was given to the clinician. Instruments administered at baseline, 6, 12, and 18 months: Composite Abuse Scale (CAS); World Health Organization Quality of Life (WHOQOL-BREF) instrument, psychological scale; Center for Epidemiologic Studies Depression scale; Startle, Physiological Arousal, Anger and Numbness (SPAN) instrument; TWEAK screening tool; 12-item Short-form Health Survey, Version 2; Consequences of Screening Tool (COST); and a modified version of the Health and Social Service Utilization questionnaire. Those in the nonscreened group completed the WAST and CAS after their clinical encounter, and then all subsequent measures as in the screened group.
	Recruitment	Inclusion Criteria	Intervention		Results	Quality Rating
	Women who presented at the study site for a health care visit between July 2005 and December 2006 were approached by a study recruiter to determine eligibility.	Female, aged 18 to 64 years, had a male partner at some time in the past 12 months, presented on their own for a health care visit, were able to separate themselves from those accompanying them, lived within 120 km of the site, able to speak and read English, not too ill to participate, and able to provide consent.	Women in the screened group who screened positive were seen by treating clinicians trained in responding to IPV. These clinicians were informed of the positive status prior to seeing the women and any discussion of positive findings and any further referrals or treatment were left to the discretion of the clinician according to his or her usual practice.		At 18 months (n=411), observed recurrence of IPV among screened vs. nonscreened women was 46% vs. 53% (modeled odds ratio, 0.82 [95% CI, 0.32-2.12]). Screened vs. nonscreened women had about a 0.2-SD greater improvement in quality of life scores (modeled score difference at 18 months, 3.74 [95% CI, 0.47-7.00]). When multiple imputation was used to account for sample loss, differences between groups were reduced and quality of life differences were no longer significant. Screened women reported no harms of screening.	Fair High loss to followup: 43% (148/347) in screened and 41% (148/360) in nonscreened women.

Appendix C2. Quality Ratings of Randomized, Controlled Trials of Screening for Intimate Partner Violence

Author, Year	Randomization adequate?		Allocation concealment adequate?	Groups similar at baseline?	Maintain comparable groups?	Eligibility criteria specified?	Outcome assessors masked?	Care provider masked?	Patient masked?
MacMillian et al, 2009 ⁸⁷	Yes		NR	Yes	Yes	Yes	Yes	No	Unclear
	Reporting of attrition, crossovers, adherence, and contamination?	Loss to followup differential or high	Intention-to-treat analysis	Post-randomization exclusions	Outcomes prespecified	Funding source	External validity		Quality rating
	Yes, no, yes, no	Yes, high 43% (148/347) of screened; 41% (148/360) nonscreened	Yes	No	Yes	Ontario Women's Health Council/Echo	Possible limitations: Canadian setting offers universal health care and followup care services; site conditions carefully controlled; no specific IPV intervention was provided.		Fair (high loss to followup)

Appendix C3. Studies of Screening Instruments for Intimate Partner Violence

Author, year	Study design	N	Instrument	Reference standard	Types of abuse	Subjects	Setting	Screener	Results	Quality rating
Chen et al, 2005 ⁹¹	Cross-sectional	202	HITS and WAST	English: ISA-Physical Spanish: WAST	Physical abuse	Women aged ≥18 yrs, currently involved with an intimate partner Mean age: 35.8 yrs 72.3% Hispanic	Urban family practice clinic	Medical students	Sensitivity English (cut-point=10.5): 86% Spanish (cut-point=5.5): 100% Specificity English (cut-point=10.5): 99% Spanish (cut-point=5.5): 86% Positive Predictive Value English (cut-point=10.5): 86% Spanish (cut-point=5.5): 45% Negative Predictive Value English (cut-point=10.5): 99% Spanish (cut-point=5.5): 100% Positive Likelihood Ratio English (cut-point=10.5): 90.86 Spanish (cut-point=5.5): 7.27 Negative Likelihood Ratio English (cut-point=10.5): 0.14 Spanish (cut-point=5.5): 0.00	Fair

Appendix C4. Quality Ratings of Studies of Screening Instruments for Intimate Partner Violence

Author, year	Groups similar at baseline	Representative spectrum	Random or consecutive sample	Eligibility criteria specified	Adequate sample size (>50)	Adequate attrition/attrition explained (ITT?)	Credible reference standard used	Reference standard replicable	Reference standard interpreted independently	Reference standard applied to all subjects or a random subset	Screening test adequately described	Include sensitivity/specificity/PPV/NPV	Quality rating
Chen et al, 2005 ⁹¹	No; Spanish-speaking group tended to be older (p<0.001), lower income (p<0.001), married (p<0.001), and pregnant (p<0.05)	No; approximately 70% of clinic population is Hispanic (72% of study sample)	Yes; consecutive	Yes	Yes	Yes	Yes; ISA and WAST	Yes	No	Yes; all	Yes	Yes	Fair
Dubowitz et al, 2008 ¹⁰⁰	Yes	No	Yes; random	Yes	Yes; 200	Yes	Yes; CTS2	Yes	Unclear	Yes; all	Yes	Yes	Fair
Ernst et al, 2004 ⁹⁵	No; no comparison group, no difference between responders and nonresponders	No; men and women included	Yes; consecutive enrollment in randomized time blocks	Yes	Yes; 306	Yes	Yes; ISA	Yes	Unclear	No; 10 participants did not complete ISA	Yes	Yes	Fair
Fulfer et al, 2007 ⁹⁹	Unclear	Unclear	Unclear	Yes	Yes	N/A	No	Yes	Unclear	Yes; all	Yes	Yes	Fair
Houry et al, 2004 ⁸⁹	No; no comparison group	Unclear	No; attempted to be consecutive but missed patients	Yes	Yes	No; 69% response, reasons for declining not reported	Yes; CTS	Yes	Unclear	No; only 96/215 completed 4-month followup	Yes	No; reported relative risks for future abuse based on index test	Fair
MacMillan et al, 2006 ⁹⁰	Yes	Yes	No; attempted to be consecutive but missed 1216/13767 women	Yes	Yes; 2461	Yes	Yes; CAS	Yes	Unclear	Yes; all	Yes	Yes	Good
Paranjape et al, 2003 ⁹⁶	N/A; no comparison group	No	Yes; consecutive	Yes	Yes; 75	Yes	No; semi-structured interview	No	Unclear	Yes; all	Yes	Yes	Fair

Appendix C4. Quality Ratings of Studies of Screening Instruments for Intimate Partner Violence

Author, year	Groups similar at baseline	Representative spectrum	Random or consecutive sample	Eligibility criteria specified	Adequate sample size (>50)	Adequate attrition/attrition explained (ITT?)	Credible reference standard used	Reference standard replicable	Reference standard interpreted independently	Reference standard applied to all subjects or a random subset	Screening test adequately described	Include sensitivity/specificity/PPV/NPV	Quality rating
Paranjape et al, 2006 ⁹⁷	Yes (grouped after screening); IPV-negative participants more likely to be in a relationship	No	Yes; consecutive	Yes	Yes; 240	Yes	Yes; ISA	Yes	Unclear	Yes; all	Yes	Yes	Fair
Peralta et al, 2003 ¹⁰¹	N/A; cross-sectional	No	Unclear	Yes	Yes	Yes	No	Yes	Unclear	Yes; all	Yes	Yes	Fair
Reichenheim et al, 2004 ⁸⁸	Yes; case-control	No	Yes; random	Yes	Yes; 748	Yes	Yes; CTS2	Yes	Unclear	Yes; all	Yes	Yes	Fair
Sohal et al, 2007 ⁹³	N/A (cross-sectional); no comparison group	No	Yes; consecutive	Yes	Yes; 232	Yes; includes ITT analysis	Yes; CAS	Yes	Unclear	Yes; all	Yes	Yes	Fair
Thombs et al, 2007 ⁹⁸	Yes; women who screened negative for IPV more likely to be white (p<0.01)	Yes	Yes; random	Yes	Yes; 1225	Yes	Yes; CTQ-SF	Yes	Yes	Yes; random	Yes	Yes	Good
Wathen et al, 2008 ⁹²	Yes	Yes	Yes; random	Yes	Yes; 399	Yes; includes ITT analysis	Yes; CAS	Yes	Unclear	Yes; all	Yes	Yes; reported from previous studies	Good
Weiss et al, 2003 ⁹⁴	No; no comparison group	No; includes both men and women	Yes; consecutive	Yes	Yes; 856	Yes	Yes; ISA	Yes	Unclear	Yes; all	Yes	Yes	Fair
Zink et al, 2007 ¹⁰²	N/A; grouped after screening	Unclear	Unclear	Yes	Yes; 393	Yes	Yes; CTS2	Yes	No	Yes; all	Yes	Yes	Fair

Appendix C5. Studies of Interventions for Intimate Partner Violence

Author, Year	Study design	N	Population	Setting	Duration	Screening assessment
Bair-Merritt et al, 2010 ¹⁰⁷	Randomized controlled trial comparing whether mothers receiving home visitation after giving childbirth had changes in IPV vs. those who did not receive home visitation	897 eligible; 685 randomized	English-speaking mothers in Oahu, Hawaii hospitals who gave birth to an infant evaluated as at risk for maltreatment; 33% Hawaiian/Pacific Islander, 28% Asian Filipino, 37% white	Recruitment from 6 hospitals in Oahu, Hawaii. Intervention provided in home of mother/care provider	Interviews within 1 week post-birth, annually when child was ages 1 to 3 years, and annually when child was ages 7 to 9 years	Conflict Tactics Scale 1 (CTS1) at baseline; CTS2 at subsequent data points with 4 sexual coercion questions omitted.
	Recruitment	Inclusion criteria	Intervention	Results		Quality rating
	Women at 6 hospitals in Oahu, Hawaii who gave birth between November 1994 and December 1995	Families who gave birth Nov 1994 to Dec 1995 in Oahu, had an English-speaking mother, were not involved with protective services and had an infant assessed at high risk for maltreatment	Home visitation with goal of promoting child health and decreasing child maltreatment by linking families to appropriate community services, teaching about child development, role-modeling positive parenting and problem-solving strategies, and offering emotional support. Intervention offered by 3 community agencies. Mean of 13.6 visits in first year.	During program, intervention mothers had lower rates of IPV victimization (incidence rate ratio [IRR] 0.86 [95% CI, 0.73-1.01]) and lower rates of perpetration (IRR, 0.83 [95% CI, 0.72-0.96]). Mothers receiving intervention had lower rates of physical assault victimization (IRR, 0.85 [95% CI, 0.71-1.00]) and perpetration (IRR, 0.82 [95% CI, 0.70-0.96]). Long-term followup rates of overall IPV victimization and perpetration decreased with nonsignificant between-group differences. Verbal abuse victimization rates may have increased in intervention mothers (IRR, 1.14 [95% CI, 0.97-1.34]).		Fair
Author, Year	Study design	N	Population	Setting	Duration	Screening assessment
Curry et al, 2006 ¹⁰⁸	Randomized controlled trial comparing an offer to watch an abuse video and receive 24-hour individualized nursing case management vs. no intervention control on stress levels of pregnant women at risk for or in abusive relationships	1649 eligible; 1000 randomized	English-speaking women aged 14-46 years who were 13 to 23 weeks pregnant at 2 prenatal clinics. Pacific NW HMO clinic: Caucasian 67.6%, African American 16.2%, Hispanic 4.4%, Asian/Pacific Islander 3.8%, Native American 1.2%. Rural midwestern university clinic: 82%, 12.2%, 1.4%, 2.6%, and 0%, respectively.	Prenatal clinics: 1 Pacific NW HMO, 1 rural midwestern university clinic	From early pregnancy (before week 23) to delivery. Duration data not provided; up to 7-8 months is assumed. 1st assessment prior to 23 weeks of pregnancy, 2nd between 32 weeks and delivery.	3 questions from the Abuse Assessment Screen (AAS); Prenatal Psychosocial Profile (PPP). Risk for abuse determined by response from the 3 AAS questions and to 1 PPP question asking how stressed the respondent is regarding current physical, sexual, or emotional abuse. Scores of 24 or more on the PPP stress scale were determined to indicate high risk.
	Recruitment	Inclusion criteria	Intervention	Results		Quality rating
	Pregnant adolescents and women presenting at 2 prenatal clinics from 2001 through 2003.	English-speaking adolescents and women 13 to 23 weeks pregnant who presented at 2 prenatal clinics.	Offer to view abuse video and access nurse case manager 24/7. Intervention participants were classified as low or high risk. Those who were actively case-managed received individual, comprehensive assessment to develop a care plan. Intervention categories: support, assess, educate, monitor, coordinate and coach. All were offered a card with safety and abuse recognition info, with numbers for national and local DV resources.	Total stress scores of high-risk case-managed participants decreased significantly (p<0.001). Item and total stress scores of high-risk control participants also decreased, and differences between intervention and control were not significant. For both intervention and control, only the item related to pregnancy stress increased between T1 and T2. For both groups, total scores and all item scores, except pregnancy stress, were significantly lower at T2.		Poor

Appendix C5. Studies of Interventions for Intimate Partner Violence

Author, Year	Study design	N	Population	Setting	Duration	Screening assessment
El-Mohandes et al, 2008 ¹⁰⁹ (NIH-DC Initiative to Reduce Infant Mortality in Minority Populations)	Randomized trial comparing a clinic-based individually-tailored behavioral intervention with usual care to evaluate the effectiveness of an integrated multiple-risk intervention for pregnant women in reducing risks, including IPV, postpartum	1398 eligible; 1070 randomized	English-speaking, pregnant African American women presenting at 6 prenatal care sites in the District of Columbia.	6 prenatal care sites in the District of Columbia	Interviews at baseline, presumably in the first trimester, with followup interviews at 22-26 weeks' gestation, 34-38 weeks' gestation, and at an average 10.3 weeks postpartum	Audio-Computer Assisted Survey Interview screening. For IPV, women were asked if a current or previous partner, boyfriend, husband, or the baby's father had pushed, shoved, slapped, kicked, or physically hurt them or forced them to have sexual intercourse in the last year, or if they were afraid of their current partner. The baseline interview included the Conflict Tactics Scale. IPV was confirmed if a woman reported being subjected to any of the actions on the revised Conflict Tactics Scale at least once by her partner in the last year.
	Recruitment	Inclusion criteria	Intervention		Results	Quality rating
	Pregnant African American women seeking health care at 6 prenatal care sites in the District of Columbia between July 2001 and October 2003	African American women aged ≥18 years and at 28 weeks or less of pregnancy, DC residents, English speaking, and reporting 1 of 4 designated risks: active smoking, environmental toxic smoke exposure, depression or IPV.	IPV intervention was adapted from the Parker-McFarlane structured intervention to individualized counseling. Behavioral counseling for IPV was integrated from a brochure-based approach using Dutton's empowerment theory. The intervention was intended to be delivered prenatally for a minimum of 4 sessions, with 8 sessions considered ideal. Up to 2 postpartum booster sessions were offered. The intervention was offered by Master's degree trained counselors. Prenatal sessions lasted 36±15 minutes per session, with an average of 3.9 sessions. Postpartum sessions lasted 38±13 minutes per session, with an average of 0.8 sessions. 46% of participants did not receive minimum number of intervention sessions.		IPV reduced from 36.8% to 9.9% between baseline and post-partum (p<0.001). No significant differences in change in IPV between intervention and control groups.	Fair
Author, Year	Study design	N	Population	Setting	Duration	Screening assessment
El-Mohandes et al, 2011 ²⁹ (NIH-DC Initiative to Reduce Infant Mortality in Minority Populations)	Randomized trial comparing a clinic-based individually-tailored behavioral intervention with usual care to evaluate the effectiveness of an integrated multiple-risk intervention for pregnant women in reducing risks, including IPV, postpartum	1044 randomized; 819 analyzed (live, singleton, birth outcomes available)	English-speaking, pregnant African American women Maternal age: 18-22 (43%), 23-27 (31%), 28+ (27%) Single/separated/widowed/divorced: 75% Medicaid: 79% Income <\$2000/month: 71% Prior IPV: 32%	6 prenatal care sites in the District of Columbia	Interviews at baseline, presumably in the first trimester, with followup interviews at 22-26 weeks' gestation, 34-38 weeks' gestation	Audio-Computer Assisted Survey Interview screening was used to screen for risk factors, pregnancy status, and demographic eligibility. Additional questions asked during a telephone interview.

Appendix C5. Studies of Interventions for Intimate Partner Violence

Author, Year	Recruitment	Inclusion criteria	Intervention	Results	Quality rating	
El-Mohandes et al, 2011 ²⁹ (NIH-DC Initiative to Reduce Infant Mortality in Minority Populations)	Pregnant African American women seeking health care at 6 prenatal care sites in the District of Columbia between July 2001 and October 2003.	African American women aged ≥18 years and at 28 weeks or less of pregnancy, DC residents, English speaking, and reporting 1 of 4 designated risks: active smoking, environmental toxic smoke exposure, depression or IPV.	Designed to occur during prenatal care (immediately after visits) for 8 discrete sessions lasting 35±15 minutes (actually received 1.7-7.1 sessions). IPV intervention was adapted from the Parker-McFarlane structured intervention to individualized counseling. Behavioral counseling for IPV was integrated from a brochure-based approach using Dutton's empowerment theory. Smoking and depression were also addressed.	Very preterm birth (significant): 2.2% (9/402) intervention group vs. 5.0% (21/416) usual care group (OR, 0.43 [95% CI, 0.20-0.95]; NNT=36 mothers) Very low birth weight (not significant): 1.0% (4/402) intervention group vs. 2.2% (9/415) usual care group (OR, 0.45 [95% CI, 0.14-1.48]); NNT=83 mothers) IPV recurrence: 7.9% intervention group vs. 21.6% usual care group (p=0.04) Among women reporting no risks (smoking, environmental toxic smoke exposure, depression, IPV) at baseline, more women in usual care group than intervention group reported risks during the last followup interview (p=0.04) Women randomized to intervention group reported a significant reduction in risks if they reported 1-2 risks at baseline (p=0.21), but not if they reported 3-4 risks (p=0.383).	Fair	
Author, Year	Study design	N	Population	Setting	Duration	Screening assessment
Kiely et al, 2010 ³⁰ (NIH-DC Initiative to Reduce Infant Mortality in Minority Populations)	Randomized trial of counseling interventions during pregnancy and postpartum vs. usual care for recurrent IPV	1398 eligible; 1044 randomized	English-speaking, pregnant African American women Mean age: 24.5 years % Medicaid: 79% 336 (32%) reported prior IPV	6 prenatal care sites in the District of Columbia	Interviews at baseline, presumably in the first trimester, with followup interviews at 22-26 weeks' gestation, 34-38 weeks' gestation, and 8-10 weeks postpartum	Interviews at baseline with followup interviews at 22-26 weeks' gestation, 34-38 weeks' gestation, and 8-10 weeks postpartum. Used the Abuse Assessment Screen and the Conflict Tactics Scale.
Recruitment	Inclusion criteria	Intervention	Results	Quality rating		
Pregnant African American women seeking health care at 6 prenatal care sites in the District of Columbia between July 2001 and October 2003.	African American women aged ≥18 years and at 28 weeks or less of pregnancy, DC residents, English speaking, and reporting 1 of 4 designated risks: active smoking, environmental toxic smoke exposure, depression or IPV.	Prenatal behavioral counseling for 4-8 sessions, with up to 2 postpartum sessions provided by professional counselors. IPV counseling emphasized safety behaviors and information on community resources. Smoking and depression were also addressed.	Women in the intervention group had less recurrent episodes of IPV during pregnancy and postpartum (OR, 0.48 [95% CI, 0.29-0.80]); fewer very preterm neonates (1.5% vs. 6.6%; p=0.03), and increased mean gestational age (38.2 vs. 36.9 weeks; p=0.016).	Good		

Appendix C5. Studies of Interventions for Intimate Partner Violence

Author, Year	Study design	N	Population	Setting	Duration	Screening assessment
McFarlane et al, 2006 ¹¹⁰	Randomized, 2-arm trial comparing wallet-sized referral card and 20-min nurse management protocol for prevention of IPV with 360 abused women	433 eligible; 360 randomized	English- or Spanish-speaking women aged 18 to 45 presenting for clinic care. Caucasian: 11.9% Black: 27.9% Hispanic: 59.6%	2 primary care public health clinics and 2 WIC clinics in a large urban area	Interviews at baseline and at 6, 12, 18, and 24 months post-baseline	2 questions from the Abuse Assessment Screen. Those with a positive response to item 1 or 2 were invited to participate. Outcomes were measured with the Safety Behavior Checklist (with an adjustment procedure), the Community Resource Checklist, The Severity of Violence Against Women Scale (SAVAWS), the Danger Assessment Scale, and the Employment Harassment Questionnaire. Baseline measures asked about the preceding 12 months; subsequent measures asked about the time period since the previous interview.
	Recruitment	Inclusion criteria	Intervention	Results	Quality rating	
	Women aged 18 to 45 presenting at 2 primary care and 2 WIC clinics in a large urban area from February 2001 to June 2002.	Women aged 18 to 45 assessed as positive for physical or sexual abuse in the past 12 months.	1) Wallet-sized referral card with a safety plan and sources for IPV services or 2) 20-minute nurse case management protocol (March of Dimes) including a brochure with a 15-item safety plan, supportive care, anticipatory guidance, and guided referrals.	2 years after treatment, both groups reported fewer threats of abuse ($p < 0.001$) ($M = 14.5$ [95% CI, 12.6-16.40]), assaults ($M = 15.5$ [95% CI, 13.5-17.4]), danger risks for homicide ($M = 2.6$ [95% CI, 2.1-3.0]), and events of work harassment ($M = 2.7$ [95% CI, 2.3-3.1]), but there were no significant differences between groups. Compared with baseline, both groups adopted more safety behaviors by 24 months ($M = 2.0$ [95% CI, 1.6-2.3]). Community resource use declined for both groups ($p < 0.001$; $M = -0.2$ [95% CI, -0.4 to -0.2]). There were no significant differences between groups.	Fair	
Author, Year	Study design	N	Population	Setting	Duration	Screening assessment
Miller et al, 2011 ¹¹¹	Cluster randomized trial of counseling intervention versus usual care	1337 eligible; 906 participated	English- or Spanish-speaking women aged 16-29 years. 16-24 years: 76% 25-29 years: 24% White: 22.9% Black: 27.9% Hispanic: 29.7% Asian Pacific Islander: 12.9%	4 urban family planning clinics in California	12-24 months post-intervention	Randomized to intervention or usual care via clinic attended. Computer-assisted followup survey between 12-24 weeks after baseline survey. Surveys included items from the Conflict Tactics Scales 2 and Sexual Experiences Survey, questions about awareness and recent use of IPV services, and relationship changes from baseline.
	Recruitment	Inclusion criteria	Intervention	Results	Quality rating	
	Women presenting to family planning clinics from October 2008 to May 2009	English- or Spanish-speaking women aged 16-29 years attending 4 urban family clinics in Northern California	1) Intervention clinics: counseling intervention that educates patients about reproduction coercion and provides information about local IPV and sexual assault resources. 2) Usual care clinics: includes responding to 2 IPV screening questions on a routine intake form using a standard clinic protocol.	Intervention women with recent IPV had decreased pregnancy coercion at followup compared with usual care (adjusted OR, 0.29 [95% CI, 0.09-0.91]). Intervention women were also more likely to discontinue an unhealthy or unsafe relationship compared with usual care ($p = 0.013$).	Fair	

Appendix C5. Studies of Interventions for Intimate Partner Violence

Author, Year	Study design	N	Population	Setting	Duration	Screening assessment
Taft et al, 2011 ¹¹² (Taft 2009 protocol and methods described)	Cluster randomized trial of mentor support vs. usual care	215 eligible; 174 participated	English- or Vietnamese-speaking mothers, ≥16 years, who were pregnant or had at least 1 child, who disclosed IPV or had behavioral symptoms suggestive of abuse.	Primary care clinics in Melbourne, Australia	12 months	Abuse measured by the Composite Abuse Scale (CAS), depression (Edinburgh Postnatal Depression Scale), wellbeing (SF-36), parenting stress (PSI-SF), and social support (MOS-SF) at baseline and followup.
	Recruitment	Inclusion criteria	Intervention	Results	Quality rating	
	Consecutive, eligible women presenting to primary care clinics in Melbourne from January 2006 to December 2007, recruited by clinicians	English- or Vietnamese-speaking mothers, ≥16 years, who were pregnant or had at least 1 child, who disclosed IPV or had behavioral symptoms suggestive of abuse. Serious mental illness excluded.	1) 12 months of weekly home visits from trained nonprofessional mentors offering advocacy, parenting support, and referrals. 2) Usual care.	Abuse scores were significantly reduced in intervention vs. comparison groups (adjusted difference, -8.67 [95% CI, -16.2 to -1.15]). Other differences were not significant (depression, physical wellbeing, mental wellbeing, parenting stress).	Fair	

Abbreviations: A-CASI = audio-computer assisted survey interview; AAS = Abuse Assessment Screen; CAS = Composite Abuse Scale; CI = confidence interval; CTS = Conflict Tactics Scale; DV = domestic violence; HMO = health maintenance organization; IPV = intimate partner violence; IRR = incidence rate ratio; NW = northwest; OR = odds ratio; PPP = Prenatal Psychosocial Profile; PSI-SF = Parenting Stress Interview-Short Form; SAVAWS = Severity of Violence Against Women Scale; WIC = Women, Infants, and Children.

Appendix C6. Quality Ratings of Studies of Interventions for Intimate Partner Violence

Author, Year	Randomization adequate?	Allocation concealment adequate?	Groups similar at baseline?	Maintain comparable groups?	Eligibility criteria specified?	Outcome assessors masked?	Care provider masked?	Patient masked?
Bair-Merritt et al, 2010 ¹⁰⁷	Yes	Yes	No	Yes	Yes	Yes	No	No
	Reporting of attrition, crossovers, adherence, and contamination	Loss to follow-up differential/high	Intention-to-treat analysis	Post-randomization exclusions	Outcomes prespecified	Funding source	External validity	Quality rating
	Yes; no; adherence and contamination unclear	Yes, high 280/373 participating families discontinued intervention in year 1	Unclear; adjusted analyses used to address some confounders	Yes; no; unclear	Yes	Federal Maternal & Child Health Bureau, Robert Wood Johnson Foundation, David and Lucile Packard Foundation, Hawaii State Department of Health, NIH, National Institute of Child Health & Human Development		Fair
Author, Year	Randomization adequate?	Allocation concealment adequate?	Groups similar at baseline?	Maintain comparable groups?	Eligibility criteria specified?	Outcome assessors masked?	Care provider masked?	Patient masked?
Curry et al, 2006 ¹⁰⁸	Method NR	NR	No; differ by age, income, and education	No	Yes	No	No	No
	Reporting of attrition, crossovers, adherence, and contamination	Loss to follow-up differential/high	Intention-to-treat analysis	Post-randomization exclusions	Outcomes prespecified	Funding source	External validity	Quality rating
	Yes; yes; yes; no	Unclear	No	Unclear	Yes	NR		Poor
Author, Year	Randomization adequate?	Allocation concealment adequate?	Groups similar at baseline?	Maintain comparable groups?	Eligibility criteria specified?	Outcome assessors masked?	Care provider masked?	Patient masked?
El-Mohandes et al, 2008 ¹⁰⁹ (NIH-DC Initiative to Reduce Infant Mortality in Minority Populations)	Method NR	NR	Yes	Yes	Yes	Yes	No	No
	Reporting of attrition, crossovers, adherence, and contamination	Loss to follow-up differential/high	Intention-to-treat analysis	Post-randomization exclusions	Outcomes prespecified	Funding source	External validity	Quality rating
	Yes; no; yes; no	Yes, high Intervention: 350/529 (34%) lost to follow-up Control: 373/541 (31%) lost to follow-up	No	Yes	Yes	National Institute of Child Health & Human Development, National Center on Minority Health & Health Disparities	Restricted to high-risk urban African American women	Fair
Author, Year	Randomization adequate?	Allocation concealment adequate?	Groups similar at baseline?	Maintain comparable groups?	Eligibility criteria specified?	Outcome assessors masked?	Care provider masked?	Patient masked?
El-Mohandes et al, 2011 ²⁹ (NIH-DC Initiative to Reduce Infant Mortality in Minority Populations)	Yes	Yes	Yes	Yes	Yes	Yes	No	No
	Reporting of attrition, crossovers, adherence, and contamination	Loss to follow-up differential/high	Intention-to-treat analysis	Post-randomization exclusions	Outcomes prespecified	Funding source	External validity	Quality rating
	Yes; no; yes; no	No	Yes	Yes	Yes	National Institute of Child Health and Human Development, National Center on Minority Health and Health Disparities	Restricted to high-risk urban African American women	Fair

Appendix C6. Quality Ratings of Studies of Interventions for Intimate Partner Violence

Author, Year	Randomization adequate?	Allocation concealment adequate?	Groups similar at baseline?	Maintain comparable groups?	Eligibility criteria specified?	Outcome assessors masked?	Care provider masked?	Patient masked?
Kiely et al, 2010 ³⁰ (NIH-DC Initiative to Reduce Infant Mortality in Minority Populations)	Yes	Yes	Yes	Yes	Yes	Yes	NR	No
	Reporting of attrition, crossovers, adherence, and contamination	Loss to follow-up differential/high	Intention-to-treat analysis	Post-randomization exclusions	Outcomes prespecified	Funding source	External validity	Quality rating
	Yes; no; yes; no	No	Yes	Yes	Yes	Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Center on Minority Health and Health Disparities	Analysis restricted to women with prior IPV; study restricted to high-risk urban African American women	Good
Author, Year	Randomization adequate?	Allocation concealment adequate?	Groups similar at baseline?	Maintain comparable groups?	Eligibility criteria specified?	Outcome assessors masked?	Care provider masked?	Patient masked?
McFarlane et al, 2006 ¹¹⁰	Yes	Yes	No	Yes	Yes	No	No	No
	Reporting of attrition, crossovers, adherence, and contamination	Loss to follow-up differential/high	Intention-to-treat analysis	Post-randomization exclusions	Outcomes prespecified	Funding source	External validity	Quality rating
	Yes; no; no; no	No	No	No	Yes	Agency for Healthcare Research and Quality	Restricted to primarily urban minority women aged 18-44 in public primary care clinics who disclosed abuse when assessed by a nurse.	Fair
Author, Year	Randomization adequate?	Allocation concealment adequate?	Groups similar at baseline?	Maintain comparable groups?	Eligibility criteria specified?	Outcome assessors masked?	Care provider masked?	Patient masked?
Miller et al, 2011 ¹¹¹	Unclear; clinics were randomized (N=4)	Yes	No, intervention clinics had more Hispanic/Latina participants who were born outside of U.S.; control clinics had more black participants (p<0.001)	Unclear	Yes	Unclear	No	No
	Reporting of attrition, crossovers, adherence, and contamination	Loss to follow-up differential/high	Intention-to-treat analysis	Post-randomization exclusions	Outcomes prespecified	Funding source	External validity	Quality rating
	Yes; yes; yes; no	No	Yes	No	Yes	National Institute of Child Health and Human Development, UC Davis Health System Research Award, Building Interdisciplinary	At risk of IPV	Fair

Appendix C6. Quality Ratings of Studies of Interventions for Intimate Partner Violence

						Research Careers in Women's Health Award		
Author, Year	Randomization adequate?	Allocation concealment adequate?	Groups similar at baseline?	Maintain comparable groups?	Eligibility criteria specified?	Outcome assessors masked?	Care provider masked?	Patient masked?
Taft et al, 2011 ¹¹² (Taft et al 2009 protocol and methods described)	Clinics were randomized	Yes	Imbalance of women recruited in trial arms; intervention group had higher level of probable depression; adjustments made	Unclear	Yes	No	No	No
	Reporting of attrition, crossovers, adherence, and contamination	Loss to follow-up differential/high	Intention-to-treat analysis	Post-randomization exclusions	Outcomes prespecified	Funding source	External validity	Quality rating
	Yes; yes; yes; no	No	Yes	No	Yes	National Health and Medical Research Council, VicHealth, Victorian Government Community Support Fund Grant Program, Beyondblue.	At risk for IPV	Fair

Abbreviations: NR = not reported.

Appendix C7. Studies of Screening Instruments for Elder Abuse and Neglect

Author, year	Study design	N	Instrument	Reference standard	Types of abuse	Subjects	Setting	Screener	Results	Quality rating
Yaffe et al, 2008 ¹²⁹	Cohort	953	Elder Abuse Suspicion Index (EASI)	Social work evaluation	Physical abuse and neglect, emotional abuse, financial abuse	Patients ages ≥65, English or French speaking, scores ≥24 on Mini Mental Status Exam Mean age: 75.6 years	2 university-affiliated family medicine centers and 1 government community-based health center in Montreal, Canada.	Physicians	<p>Proportion of subjects with at least 1 positive response, EASI 184/663 (28.5%)</p> <p>Sensitivity, EASI vs. social work evaluation ≥1 on Q. 1-6: 0.47 ≥1 on Q. 2-6: 0.32 ≥2 on Q. 1-6: 0.14 Q1 and ≥1 on Q. 2-6: 0.09</p> <p>Specificity, EASI vs. social work evaluation ≥1 on Q. 1-6: 0.75 ≥1 on Q. 2-6: 0.89 ≥2 on Q. 1-6: 0.96 Q1 and ≥1 on Q. 2-6: 0.97</p>	Fair

Appendix C8. Quality Ratings of Studies of Screening Instruments for Elder Abuse and Neglect

Author, year	Groups similar at baseline	Representative spectrum	Random or consecutive sample	Eligibility criteria specified	Adequate sample size (>50)	Adequate attrition/attrition explained (ITT?)	Credible reference standard used
Yaffe et al, 2008 ¹²⁹	Yes	Yes	Yes; attempted consecutive but only approached 2133/2832 potentially eligible patients	Yes	Yes; 953	Yes; include ITT	Yes; social work evaluation
	Reference standard replicable	Reference standard interpreted independently	Reference standard applied to all subjects or a random sub-set		Screening test adequately described	Include sensitivity/specificity/PPV/NPV	Quality rating
	Yes	Yes	Unclear		Yes	Yes	Fair

Appendix C9. Studies of Interventions for Elder Abuse and Neglect

Author, year	Study design	N	Population	Setting	Duration	Screening assessment
Moon et al, 2006 ²⁰	Retrospective cohort study, no comparison group (medical chart review of years 1998, 2001–April 25, 2002)	575	Veterans Ages 65-103 years 96% (n=552) male 45% (n=261) white, 27% (n=155) black, 14% (n=79) Asian/Pacific Islander, 3% (n=18) Hispanic, 0.2% (n=1) Native American, 11% (n=61) unknown Dementia and clinical depression not excluded	Veterans who received services from the West Los Angeles Veterans Affairs Medical Center and were subsequently referred to the Geriatric Research, Education, and Clinical Center's Outpatient Clinic; United States	3 years	Primary care provider identified suspected abuse (screening details NR)
				Prevalence of abuse Diagnosis of dementia, depression		Outcomes of social worker intervention (N=31)
				Intervention		
	Patients with medical records flagged with abuse or neglect were referred by a primary care provider to the GRECC Outpatient Clinic, where a social worker (case manager) and Adult Protective Services could assist the patient as needed (intervention details NR)		41 incidents of elder abuse/neglect among 31 veterans (5.4% of total population) were identified and reported to Adult Protective Services. Types of abuse Financial: 29% (12 incidents) Self-neglect: 29% (12 incidents) Neglect: 17% (7 incidents) Physical: 12% (5 incidents) Psychological: 12% (5 incidents) Diagnosis Dementia: 48% (15 individuals) Depression: 35% (11 individuals)		Abuse results NR Individuals Conservatorship only: 4 Conservatorship plus other: 6 Nursing home: 8 Board and care, assisted living: 3 Remained at home with services: 7 Refused services and remained at home: 5 Unknown: 6	