

# ***Evidence Synthesis***

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## **Number 241**

### **Screening for Intimate Partner Violence and Caregiver Abuse of Older and Vulnerable Adults: An Evidence Review for the U.S. Preventive Services Task Force**

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## Structured Abstract

**Purpose:** To systematically review the evidence on screening for intimate partner violence (IPV) and caregiver abuse of older or vulnerable adults.

**Data Sources:** PubMed/Medline, the Cochrane Library, and EMBASE through December 14, 2023; reference lists of retrieved articles; outside experts; and reviewers, with surveillance of the literature May 24, 2024.

**Study Selection:** Two investigators independently selected English-language studies using a priori criteria. Eligible studies included randomized, clinical trials (RCTs) of screening or treatment for adolescents or adults experiencing abuse, studies evaluating test accuracy, and cohort studies with a concurrent control group assessing the harms of screening or treatment for abuse.

**Data Extraction:** One investigator extracted data and a second investigator checked accuracy. Two reviewers independently rated quality for all included studies using predefined criteria.

**Data Synthesis:** Thirty-five studies were included (n=18,358). Three RCTs (n=3,759) compared IPV screening with no screening; none found statistically significant reduction in IPV, or improvement in quality of life (QoL) or other eligible outcomes over 3 to 18 months, and two (n=935) reported no harms of screening. Seventeen included studies (n=6,119) assessed the accuracy of 14 different IPV screening tools. Nine studies reported on the accuracy of nine different tools to detect past-year IPV among women; sensitivity ranged from 26 to 87 percent, and specificity ranged from 80 and 97 percent. Six studies reported on the accuracy of a tool for detecting ongoing or current relationship abuse; accuracy varied widely, with sensitivity ranging from 12 to 94 percent, and specificity ranged from 38 to 100 percent.

Thirteen RCTs (n=7,425) evaluated an IPV intervention among populations with screen-detected IPV or populations considered at risk for IPV. Seven (n=2,644) enrolled populations from prenatal or perinatal care settings; of these, two RCTs (n=882) assessed the benefit of multiple home visits during the perinatal period, one found a larger reduction in mean Conflict Tactics Scale-2 scores from baseline associated with the intervention at 2 years (mean difference in change from baseline scores: -4.95,  $p < 0.001$ ) and the other found a lower rate of IPV at 3 years associated with the intervention, but the difference between groups was not statistically significant. Four RCTs evaluated brief clinic-based counseling. Of these, three assessed a counseling intervention specific to IPV; two found no difference between groups for overall rates of IPV and one reported on subtypes of IPV only and found mixed results. One RCT assessed a clinic-based behavioral counseling intervention for women with one or more risk factors (IPV, depression, smoking, environmental tobacco exposure) and reported on outcomes among the subgroup that had IPV at baseline (n=306); women in the intervention group had fewer recurrent episodes of IPV during pregnancy and postpartum (odds ratio, 0.48 [95% CI, 0.29 to 0.80]) and fewer very preterm neonates ( $\leq 33$  weeks) (2 vs. 9 women;  $p = 0.03$ ). One RCT enrolling new parents (n=368 couples) with a history of verbal abuse found no statistically significant difference between groups randomized to a skills-based relationship education intervention or wait-list control for any measure of IPV victimization at 15 or 24 months. Six RCTs enrolling nonpregnant women measured IPV incidence; four found no statistically significant difference

between groups in rates of overall IPV or combined physical and sexual violence, and one reported on subtypes of violence only and found mixed results. Results for other outcomes, including QoL and depression were mixed. Five RCTs (n=1,413) reported on harms of interventions. No trial found increased IPV among the intervention group or other harms attributed to the intervention.

No studies evaluated benefits or harms of screening or interventions for caregiver abuse of older and vulnerable adults or accuracy of tests designed to detect abuse among vulnerable adults. Two studies assessed the accuracy of different screening tools to detect abuse among adults age 65 years or older. One study enrolled participants presenting for routine dental care and found poor accuracy for the Hwalek-Sengstock Elder Abuse Screening Test (sensitivity 46% and specificity 73% for detecting physical or verbal abuse). The second study enrolled participants presenting to multiple U.S. emergency departments (EDs) who were not critically ill and found that the Emergency Department Senior Abuse Identification screening tool had a sensitivity of 94 percent and a specificity of 84 percent.

**Limitations:** RCTs of IPV screening and treatment interventions were heterogeneous in terms of setting, intervention content, and intensity, limiting the ability to assess consistency. No RCTs assessed screening or treatment for caregiver abuse among older and vulnerable adults. Most screening tools were assessed in only one study; several that enrolled participants from ED settings may have unclear applicability to primary care settings.

**Conclusions:** Although available screening tools may reasonably identify women experiencing IPV, trials of IPV screening did not show a reduction in IPV or improvement in QoL over 3 to 18 months. Limited evidence suggested that home visiting and behavioral counseling interventions that address multiple risk factors may lead to reduced IPV among pregnant or postpartum women. No studies assessed screening among vulnerable adults, or treatment for caregiver abuse among older and vulnerable adults.

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# Chapter 1. Introduction

## Scope and Purpose

The U.S. Preventive Services Task Force (USPSTF) will use this report to update its recommendation on screening for intimate partner violence (IPV) and abuse of older and vulnerable adults. In 2018, the USPSTF concluded with moderate certainty that screening for IPV in women of reproductive age and providing or referring women who screen positive to ongoing support services has moderate net benefit. The USPSTF recommended that clinicians screen for IPV in women of reproductive age and provide or refer women who screen positive to ongoing support services.<sup>1</sup>

## Condition Definition

IPV refers to physical violence, sexual violence, psychological aggression (including coercive tactics), and stalking by a person with whom one has a close personal relationship, such as a current or former partner, dating partner, ongoing sexual partner, or spouse (including a nonmarried domestic partner).<sup>2</sup> **Appendix A Table 1** shows the categories of IPV recognized by the Centers for Disease Control and Prevention (CDC).<sup>2</sup>

The CDC defines elder abuse as “an intentional act or failure to act by a caregiver or another person in a relationship involving an expectation of trust that causes or creates a serious risk of harm to an older adult” among those age 60 years or older.<sup>3</sup> The terminology used to refer to abuse of older persons has evolved over time. Through efforts such as the Reframing Aging Initiative<sup>4</sup> and others, the use of age-inclusive language such as “older” instead of “elderly” is increasingly promoted to address ageism and avoid negative images of aging.

For this topic, abuse and neglect of vulnerable adults is also considered with abuse of older adults. These populations are not mutually exclusive (e.g., older persons may also have similar physical or mental disabilities that would categorize younger persons as “vulnerable”). The similarity in older and younger vulnerable adults is the need for family, healthcare, or community care services because of a disability (mental or other), age, or illness and the risk of being abused or neglected by those in a caregiving role. Vulnerable adults include those age 18 years or older who are dependent on others for their care because of a physical or mental disability.<sup>5</sup> Unlike IPV or abuse of older adults, there is no consistent definition or terminology used for vulnerable adults in ongoing surveillance or research. Official definitions of “vulnerable adult” vary by state in terms of the criteria used for when individuals are required to report suspected abuse.<sup>6</sup> Some states use the term “dependent,” “at-risk,” or “disabled” person rather than vulnerable, and some definitions are inclusive of aging. **Appendix A Table 1** shows the CDC’s definitions for categories of abuse of older adults, which also apply to abuse of vulnerable adults.

# Prevalence

## Intimate Partner Violence

National estimates of IPV prevalence vary because of a variety of factors including nonstandardized definitions and differences in reporting requirements, and estimates are believed to underestimate rates of abuse because of underreporting.<sup>7</sup> Among respondents to the most recent (2016/2017) National Intimate Partner and Sexual Violence Survey (NISVS), approximately 47 percent of women and 44 percent of men age 18 years or older reported experiencing some form of IPV (contact sexual violence, physical violence, or stalking) in their lifetime.<sup>8</sup> The prevalence of IPV in the previous 12 months was similar among male and female respondents (7%). Similarly, prevalence of lifetime psychological aggression is similar among men and women (45% and 49%, respectively) as is 12-month psychological aggression (7% for both men and women).<sup>8</sup> Women, however, experience higher rates of lifetime contact sexual violence than men (20% vs. 8%, respectively) as well as past 12-month contact sexual violence (3% vs. 1%, respectively), and among those reporting any lifetime IPV, women are more likely to report adverse health and social consequences associated with experiencing IPV than men (87% vs. 60%), including physical injury, post-traumatic stress disorder (PTSD) symptoms, concern for safety, fear, needing help from law enforcement, and missing at least one day of work.<sup>8</sup>

In terms of specific populations, reported IPV rates vary by race and ethnicity, sexual orientation, gender identity, and socioeconomic status. Based on the 2016/2017 NISVS, the estimated lifetime prevalence of IPV among Hispanic women was 64 percent, and approximately 54 to 58 percent among women who identify as Multiracial, American Indian or Alaska Native, and Black. Rates were slightly lower among those identifying as White (48%) and among Asian and Pacific Islander women (27%).<sup>8</sup> Similar patterns by race/ethnicity were observed among men.<sup>8</sup> Adults with a disability experience higher rates of victimization compared with those without disabilities based on findings from the 2005–2007 Colorado Behavioral Risk Factor Surveillance System (BRFSS) (27.9% vs. 17.7%, respectively), and women with disabilities reported a higher lifetime prevalence of IPV (25%) compared with men with disabilities (14.4%).<sup>9</sup> Additional background related to prevalence of specific types of violence and specific populations is summarized in **Appendix A**.

IPV during adolescence is often referred to as “dating violence.”<sup>8</sup> The 2019 Youth Risk Behavior Surveillance System (YRBSS) found that approximately 9 percent of girls and 7 percent of boys in high school reported experiencing physical dating violence, and 13 percent of girls and 4 percent of boys reported experiencing sexual dating violence.<sup>10</sup> Prevalence of specific types of violence and dating violence among groups defined by sexual orientation are summarized in **Appendix A**.

## Abuse and Neglect of Older and Vulnerable Adults

Estimates of abuse and neglect among older and vulnerable adults vary for a variety of factors, including inconsistent definitions, differences in sampling (both settings and how participants were selected), differences in age ranges of the enrolled population, and differences in reporting



requirements (for those that rely partially on reported cases). For example, some studies estimate prevalence based on populations sampled from specific settings (e.g., data collection limited to emergency departments [EDs]),<sup>11</sup> exclude those who are cognitively impaired,<sup>12</sup> or rely on self-reported data,<sup>12</sup> which can be affected by fear or the inability to report abuse.<sup>11</sup>

Based on data from the National Elder Mistreatment Study, an estimated 11 percent of U.S. adults age 60 years or older experienced at least one form of abuse in the past year.<sup>13</sup> The most common forms of violence experienced were emotional mistreatment, potential neglect, and financial mistreatment by family (estimated prevalence of each was 5%); less prevalent forms of violence include physical mistreatment (1.6%) and sexual mistreatment (0.6%).<sup>13</sup> An analysis based on the same survey data found that approximately 12 percent of older adults reported experiencing a single type of abuse and 2 percent reported experiencing multiple types of abuse in their lifetimes.<sup>14</sup> Among those experiencing a single form of abuse, financial exploitation was the most common (35%), followed by neglect (34%), emotional abuse (27%), physical abuse (7%), and sexual abuse.<sup>14</sup> For those reporting multiple types of abuse, the most commonly endorsed included emotional abuse (72%), neglect (58%), and physical abuse (44%).<sup>14</sup> Approximately 60 percent of cases of abuse and neglect in older adults is perpetrated by a family member and two thirds of those cases are adult children or spouses.<sup>15</sup> Older adults are more likely to be abused by nonintimate partners (56%) than by intimate partners (23%), and some report being victimized by both intimate and nonintimate partners (21%).<sup>16</sup>

Vulnerable adults experience a higher prevalence of violent victimization and maltreatment compared with adults without disabilities, regardless of age.<sup>17, 18</sup> Based on a sample from noninstitutionalized settings from the 2017–2019 National Crime Victimization Survey, the rate of violent victimization (violent crime, rape/sexual assault, robbery, aggravated assault, and simple assault) against persons with disabilities older than age 12 years was approximately 46 per 1,000 compared with 12 per 1,000 for those without a disability.<sup>17</sup> Persons with cognitive disabilities had the highest rate of victimization (83 per 1,000), followed by those with disabilities related to vision (48 per 1,000), independent living (38 per 1,000), self-care (37 per 1,000), ambulatory difficulty (35 per 1,000), and hearing (24 per 1,000).<sup>17</sup> In addition, 59 percent of violent victimizations against persons with disabilities were perpetrated by intimate partners, other relatives (e.g., parents, children, and other relatives), and well-known acquaintances.<sup>17</sup> **Appendix A** provides additional details related to prevalence of abuse based on type of vulnerability and disability.

## Burden and Natural History

The burden of disease related to IPV and abuse of older or vulnerable adults relates to the categories of abuse experienced (e.g., physical violence, sexual violence, psychological aggression), outlined in **Appendix A Tables 1 and 2**, as well as the duration and severity of the abuse. Adverse health and social outcomes related to abuse can be immediate (e.g., acute physical injury or death, distress, concern for safety, and need for help from law enforcement), and manifest as long-term consequences (e.g., development of PTSD, physical disability, and need for housing services).<sup>8, 11</sup> Pregnant persons, in particular, experience a high burden of disease related to IPV. Homicide has been cited as a leading cause of death during pregnancy and the postpartum period, with a 16% higher prevalence in the U.S. than for nonpregnant and

nonpostpartum persons of reproductive age.<sup>19</sup> These estimates do not directly assess the involvement of IPV but do show that most pregnancy-associated homicides occurred in the home, which suggests involvement by persons who have a relationship with the victim.

There is limited information on the natural history of abuse among populations presenting for routine care in primary care settings—specifically, the proportion who will experience persistent or more severe abuse vs. a reduction or resolution of abuse over time among those who are “asymptomatic” (not seeking help for abuse or presenting with clear signs or symptoms of abuse) in the absence of universal screening. People experiencing abuse may seek help outside the healthcare system, including support from family or friends and community-based organizations.

## **Risk Factors**

### **Intimate Partner Violence**

Risk factors for IPV are often separated into four categories: individual risk factors, relationship factors, community factors, and societal factors. Many risk factors have been described for IPV across these categories, including those associated with IPV perpetration and victimization. The majority of evidence focuses on individual risk factors specific to heterosexual relationships.

A systematic review published in 2019 (391 studies) on risk factors for physical IPV victimization concluded that occurrence of other forms of violence within the relationship was the strongest risk factor for physical IPV, and mental health factors were also consistently associated with IPV victimization (PTSD, depression, fear, threats of self-harm, borderline personality disorder, and anger).<sup>20</sup> Although most physical IPV risk factors were not significantly different between men and women, alcohol use, having experienced abuse as a child, sexual IPV victimization, and depression were stronger risk factors for women; older age was a stronger protective factor for men than for women.<sup>20</sup> In another systematic review (60 studies), specific risk factors for IPV perpetrated against women include unplanned pregnancy, having parents with a low level of education (e.g., less than a high school diploma), and being young and unmarried.<sup>21</sup>

In terms of specific populations, risk factors for IPV victimization for people in same-sex relationships appear to overlap with those for people in heterosexual relationships. For example, factors with the strongest associations for IPV among those in same-sex relationships include witnessing IPV as a child, witnessing victimization in peer networks, and experiencing physical and psychological health problems.<sup>22</sup> In a meta-analysis of gender-specific IPV risk factors (24 studies) for people in same-sex relationships, risk factors for men included psychological abuse, alcohol abuse, and witnessing parental IPV; for women, risk factors included alcohol abuse, anger, and psychological abuse.<sup>23</sup>

Transgender persons may experience a disproportionate burden of IPV compared with cisgender persons. In a survey of 1,139 adult lesbian, gay, bisexual, transgender, and queer/questioning (LGBTQ) respondents, persons who identified as transgender were more likely to experience IPV compared with those who identified as cisgender (31.1% vs. 20.4%;  $p < 0.01$ ).<sup>24</sup> In a systematic review of IPV prevalence in transgender populations (74 studies,  $N = 1,273,989$

participants, n=49,966 transgender participants), transgender persons were more likely to experience any IPV (relative risk [RR], 1.7 [95% confidence interval {CI}, 1.4 to 2.0]), physical IPV (RR, 2.2 [95% CI, 1.7 to 2.9]), and sexual IPV (RR, 2.5 [95% CI, 1.6 to 3.7]) compared with cisgender persons.<sup>25</sup> IPV risks were not different based on sex assigned at birth. IPV victimization in this population was associated with a variety of risk factors including disability; homelessness; immigration status; race/ethnicity; incarceration; education level; sexual measures such as partner count, transactional sex, sexually transmitted infection, and unprotected sex; substance use; and mental health problems such as depression, PTSD, and poor coping skills.

Pregnancy is associated with both the initiation of IPV and an increase in IPV severity,<sup>19</sup> and several pregnancy-related factors increase the risk of IPV. Among pregnant populations,<sup>26</sup> as with general population samples, both illicit drug use and alcohol use are risk factors associated with victimization in pregnant women. Unmarried status in pregnancy is associated with an almost fourfold increased risk of IPV (RR 3.8; [95% CI, not reported {NR}<sup>26</sup>]), and risk is even higher for those separated or divorced either before or during pregnancy (RR, 5.3 [CI, NR]). Additional risk factors included young age, education (less than a high school diploma), paternal uncertainty, accusations of infidelity, social isolation, and verbal abuse and psychological aggression.

## **Exposure to the COVID-19 Pandemic**

A variety of factors relating to the coronavirus disease 2019 (COVID-19) pandemic may increase the risk of new cases of or increased severity and/or frequency of IPV, in addition to a reduction of important protective factors.<sup>27</sup> For example, one survey of women and transgender/nonbinary individuals (n=1169) from Michigan found that most people experiencing IPV during COVID-19 (64.2%) experienced it in partnerships where abuse was never previously an issue (34.1%), or they experienced increases in the severity or frequency of abuse (26.6%).<sup>28</sup> Some authors suggest the public health restrictions of the pandemic have led to increased stressors (e.g., social isolation, underemployment and unemployment, financial strain, domestic crowding) that could increase the risks for IPV perpetration and victimization, as well as reduce opportunities for identification of IPV and access to supportive services such as domestic violence hotlines and shelters.<sup>27,29</sup> Stress related to COVID-19 has been associated with psychological IPV.<sup>30</sup> For example, in a survey of 510 U.S. adults conducted in April 2020, persons who lived in economically deprived areas and experienced higher COVID-19 stress experienced psychological IPV at higher rates than those with lower levels of stress or economic deprivation.<sup>30</sup>

## **Abuse and Neglect of Older and Vulnerable Adults**

Several review articles have summarized primary risk factors for abuse of older adults, which vary in terms of factors considered and primarily focus on cross-sectional studies.<sup>31-33</sup> A recent prospective cohort study of older adults living in NY state (n=628) found self-rated poor health status and Black race were significantly associated with new cases of elder abuse (any category) over a 10-year period. In the same study, a change from living with family to living alone during the study period was associated with increased risk of financial abuse.<sup>34</sup> This is consistent with evidence from existing reviews that find a consistent relationship between isolation and the lack of social support, functional impairment and poor physical health, cognitive impairment and low

income and risk of abuse.<sup>31-33</sup> There is conflicting evidence on whether risk of abuse varies based on age range.<sup>34, 35</sup> Some evidence suggests that lower income is associated with an increased risk of financial abuse, as well as emotional and physical abuse and neglect. In addition, dementia is a risk factor for financial exploitation.<sup>33</sup>

## **Rationale for Screening and Screening Strategies**

Routine screening in persons without signs or symptoms of abuse could identify abuse not otherwise known and lead to earlier interventions that may prevent future abuse and reduce associated morbidity and mortality. Because of fear, intimidation, and lack of support, many individuals do not disclose abuse unless directly questioned; however, many who are directly questioned will still not disclose the abuse for various reasons. For example, a 2021 systematic review of qualitative research (34 studies) that focused on factors associated with adult victims' disclosure of domestic violence to healthcare professionals identified several barriers to disclosure, including negative provider attitudes and victims' perceptions of safety and concerns about the consequences of disclosing.<sup>36</sup> In the same study, facilitators associated with disclosing abuse included a positive relationship with the provider, providers directly asking victims about abuse, and providers ensuring that the environment was safe and the disclosure confidential. Specific groups of women, including Black, Asian, minority ethnic and immigrant women, may experience additional barriers to seeking help for abuse as a result of institutional racism, cultural norms (acceptance of abuse), and factors associated with immigration (language barriers, unfamiliarity with laws, rights and services).<sup>37</sup>

In general, screening for IPV involves use of brief questionnaires assessing the presence of current or recent (past-year) abuse. Several IPV screening questionnaires are available that could be used in primary care settings, including the Humiliation, Afraid, Rape, Kick (HARK);<sup>38</sup> Hurt, Insult, Threaten, Scream (HITS);<sup>39</sup> and Woman Abuse Screening Tool (WAST).<sup>40</sup> Questionnaires may be administered via interview or self-report using paper- or tablet-based questionnaires before or during visits. The previous review of this topic identified only one eligible screening tool to detect abuse of older adults, the Hwalek-Sengstock Elder Abuse Screening Test (H-S/EAST), which had poor accuracy.<sup>41</sup> In addition, there is uncertainty about how to conduct routine screening in older adults when they may be accompanied by caregivers or family members (who may be perpetrators) and potentially unable to answer questions themselves due to a physical or cognitive disability.

Although screening for IPV in healthcare settings has been shown to be acceptable under conditions that are perceived as private and safe and when questions are asked in a comfortable manner, some evidence suggests that women may feel they are being judged by care providers and may experience increased anxiety, feelings of intrusion, and disappointment in their providers in response to screenings.<sup>42, 43</sup> Some women also raise concerns about increased risk for abuse associated with both screening and mandatory reporting.<sup>44</sup> Prior to the COVID-19 pandemic, screening for IPV in healthcare settings was primarily conducted during in-person visits; however, delivering care during the pandemic has raised new concerns about potential harms of screening via virtual visits. Although IPV screening conducted virtually could detect persons experiencing IPV, it also has the potential to increase harm. For example, a partner may become angry or suspicious by overhearing responses to screening questionnaires or discussions

about IPV, either by unexpectedly walking into the room or using abusive tactics such as recording or monitoring phone calls.

Healthcare workers are required by law to contact their local adult protective services (APS) office, Area Agency on Aging office, or another social service for further investigation if abuse or neglect of older or vulnerable adults is suspected. The Social Security Act of 1974 authorized states to create APS offices; however, the specifics of mandatory reporting laws and regulations, including those specific to detection by healthcare workers, vary by state.

## Treatment Approaches

Interventions for victims of IPV generally fall into one of two categories: those focused on advocacy or supportive services and those that are more psychotherapeutic in nature.<sup>45, 46</sup> Advocacy interventions often involve providing nondirective support to a victim of IPV, identifying referrals to community resources (e.g., shelters), and engaging in harm reduction approaches like safety planning. Many of the more psychotherapeutic approaches are centered on addressing psychiatric symptoms, including depression, PTSD, and illicit substance use. Interventions typically include cognitive behavioral therapy, cognitive processing therapy (for PTSD), motivational interviewing, and dialectical behavioral therapy.

Interventions that address abuse of older or vulnerable adults vary depending on the target of the intervention, including victims of abuse or healthcare professionals.<sup>47</sup> Interventions targeted toward victims of abuse are often multidisciplinary and involve some aspect of law enforcement in collaboration with local organizations that advocate for and provide resources for victims (e.g., a local Alzheimer's association<sup>48</sup>). Other interventions geared toward victims include in-home visits, case management, and social services.<sup>47, 49</sup> A subset of interventions focus on healthcare providers, including physicians, nurses, social workers, and other allied health professionals. These interventions provide education to participants regarding screening for abuse and reporting protocols relevant to the provider's clinical training and location.<sup>47, 49</sup>

## Current Clinical Practice

We did not identify any recent (published since 2018), nationally representative estimates of screening rates for IPV or abuse of older or vulnerable adults in U.S. primary care settings. However, some existing evidence suggests screening rates vary. For example, a recent retrospective cohort study of patients presenting for annual examinations at four primary care clinics in Florida (n=400) found that IPV screening occurred less frequently (8.5%) compared with anxiety (37.3%) and depression (71.3%) screenings, based on results of screening documented in electronic health records.<sup>50</sup> In addition, 64.7 percent of attempted screenings for abuse resulted in "patient refusal to answer related questions" based on the chart review; however the reasons patients may have declined IPV screening were not reported. A 2018 review of records across five primary care clinics in Northern California found that the overall frequency of screening for IPV was 22 percent and that screening practices varied widely across clinics and provider types; screenings performed by medical assistants in clinical settings

resulted in significantly more documented screens than in clinics where the clinician was the screener (74% vs. 9%).<sup>51</sup>

**Appendix A Table 3** summarizes the current recommendations of other groups for routine screening of IPV in healthcare settings. Several organizations based in the United States recommend routine screening. The Canadian Task Force on Preventive Health Care, the U.K. National Screening Committee, and the World Health Organization indicate that current evidence is insufficient to justify universal screening for IPV. None of these groups has a separate recommendation based on population age or pregnancy status.

Specific to screening for abuse of older and vulnerable adults, we identified no recent estimates describing current clinical practices in the United States. Recommendations of other groups related to screening for abuse in older adults in healthcare settings is mixed, as summarized in **Appendix A Table 4**. The American Medical Association and the American Academy of Neurology recommend routine screening, and the American College of Obstetricians and Gynecologists recommends screening for “signs and symptoms of elder mistreatment.” The American Academy of Family Physicians supports the 2018 USPSTF recommendation, and the American Geriatric Society has no formal recommendation on screening.

## Chapter 2. Methods

### Key Questions and Analytic Framework

The scope and key questions (KQs) were developed by the Evidence-based Practice Center (EPC) investigators, USPSTF members, and Agency for Healthcare Research and Quality (AHRQ) Medical Officers. The analytic framework and KQs that guided the review are shown in **Figures 1 and 2**. KQs for IPV are the following:

1. Does screening for current or past intimate partner violence (IPV) in adolescents and adults reduce exposure to IPV, physical or mental morbidity, or mortality?
2. What is the accuracy of screening questionnaires or tools for identifying adolescents and adults with current or past IPV?
3. What are the harms of screening for IPV in adolescents and adults?
4. How well do interventions reduce exposure to IPV, physical or mental morbidity, or mortality among screen-detected adolescents and adults with current or past IPV?
5. What are the harms of interventions for IPV in adolescents and adults?

KQs for caregiver abuse of older and vulnerable adults are the following:

1. Does screening in healthcare settings for current or past caregiver abuse and neglect in older and vulnerable adults reduce exposure to abuse and neglect, physical or mental morbidity, or mortality?
2. How effective are screening questionnaires or tools in identifying older and vulnerable adults with current or past abuse and neglect?
3. What are the harms of screening for caregiver abuse and neglect in older and vulnerable adults?
4. How well do interventions reduce exposure to abuse and neglect, physical or mental morbidity, or mortality among screen-detected older and vulnerable adults with current or past abuse and neglect?
5. What are the harms of interventions for abuse and neglect in older and vulnerable adults?

In addition to addressing our KQs, we also looked for evidence related to one Contextual Question.

1. Are there risk prediction tools that can help identify older and vulnerable adults who are at increased risk of abuse and neglect? If so, how well do they perform in distinguishing between those who are at high vs. low risk of abuse and neglect?

## Data Sources and Searches

We searched PubMed/MEDLINE, EMBASE, and the Cochrane Library for English-language articles published through December 14, 2023. Medical Subject Headings were used as search terms when available and keywords when appropriate, focusing on terms to describe relevant populations, tests, interventions, outcomes, and study designs. Complete search terms and limits are detailed in **Appendix B1**. Targeted searches for unpublished literature were conducted by searching the Cochrane Library. We reviewed all literature suggested by peer reviewers and public comment respondents and, if appropriate, incorporated findings into the final review. Since December 14, 2023, ongoing surveillance was conducted through article alerts and targeted searches of journals to identify major studies published in the interim that may affect the conclusions or understanding of the evidence and the related USPSTF recommendation. The last surveillance was conducted on May 24, 2024, and no additional studies meeting eligibility criteria were identified. All literature search results were managed using EndNote™ version X9.2 and version 21 (Thomson Reuters, New York, NY).

## Study Selection

Inclusion and exclusion criteria for populations, screening, interventions, comparisons, outcomes, study designs, and settings were developed with input from the USPSTF and can be found in **Appendix B2**. For all KQs, we included English-language studies enrolling populations recruited from primary care, settings generalizable to primary care (e.g., school-based health centers), as well as EDs conducted in countries categorized as “very high” on the 2022 United Nations Human Development Index.<sup>52</sup> The scope of this topic is specific to screening and treatment for abuse victims; evidence related to screening and treatment for perpetrators of abuse was not eligible. Only studies enrolling unselected participants were eligible; those limited to participants seeking care for abuse or selecting participants based on signs or symptoms of abuse were not eligible. KQs specific to IPV included adults as well as adolescents. For evidence specific to older adults, we included studies enrolling populations age 60 years or older. This age limit was not applied to eligible studies of vulnerable adults. For all KQs, evidence on specific populations defined by age category, sex, race/ethnicity, pregnancy status, sexual orientation, gender identity, type of abuse, history of IPV, or presence of comorbid conditions was eligible.

For KQ 1 (direct evidence that screening improves health outcomes), we included randomized, controlled trials (RCTs) comparing screening with no screening. Eligible outcomes included reduction in exposure to abuse or neglect, health outcomes (including acute physical trauma, chronic medical conditions, and mental health morbidity), adverse perinatal outcomes, healthcare utilization attributed to mental or physical effects of IPV or abuse and neglect (e.g., rates of emergency department visits), QoL, and mortality.

For KQ 2 (screening test accuracy), we included studies that assessed the accuracy of screening tests designed to detect current or past IPV or current or past abuse or neglect in older or vulnerable adults, compared with an acceptable reference standard (verified or self-reported abuse or validated screening instrument for abuse). Only tools feasible for use in U.S. primary care settings (i.e., brief, easy to interpret, acceptable to clinicians and patients) and appropriate for use when abuse is not suspected were eligible. For KQ 4 (benefits of interventions) and KQ 5



(harms of interventions), we included RCTs assessing interventions that could be offered in or referred to by primary care providers (e.g., counseling, psychological interventions, case management, home visitation, mentor or peer support, safety planning, and referral to community services). Eligible RCTs had to compare an intervention with an inactive control group (no treatment, usual care, attention control, or wait-list control).

For studies assessing the harms of screening (KQ 3) or interventions (KQ 5), cohort studies with a concurrent control group were also eligible. All harms associated with screening or the intervention (e.g., as increased abuse or other forms of retaliation, emotional distress) were eligible.

Two investigators independently reviewed titles and abstracts; those marked for potential inclusion by either reviewer were retrieved for evaluation of the full text. The full texts were then independently reviewed by two investigators to determine final inclusion or exclusion. Disagreements were resolved by discussion and consensus.

## Quality Assessment and Data Abstraction

For newly identified studies, two reviewers independently assessed each study's methodological quality using criteria developed by the USPSTF (**Appendix B4**). For RCTs, the most recent versions of the Cochrane Risk of Bias Tool (RoB 2.0) available for parallel and crossover trials were used.<sup>53</sup> It assessed the following risk-of-bias domains: bias arising from selection or randomization, bias due to missing outcome data, bias due to departures from intended interventions, bias from measurement of outcomes, and bias from selective reporting of results. For studies of diagnostic test accuracy, the Quality Assessment of Diagnostic Accuracy Studies-2 instrument was used.<sup>54</sup> We carried forward quality ratings of eligible studies included in the previous update for this topic. Disagreements in study quality ratings were resolved through discussion or with an independent assessment from a third senior investigator. Only studies rated as having good or fair quality were included.

For each included study, one investigator extracted pertinent information about the methods, populations, interventions, comparators, outcomes, timing, settings, and study designs. A second team member reviewed all data extractions for completeness and accuracy.

## Data Synthesis and Analysis

Findings for each KQ were summarized in tabular and narrative format. The overall strength of the evidence for each KQ was assessed as high, moderate, low, or insufficient based on the overall quality of the studies, consistency of results between studies, precision of findings, risk of reporting bias, and limitations of the body of evidence using methods developed for the USPSTF (and the EPC program).<sup>55,56</sup> Additionally, the applicability of the findings to U.S. primary care populations and settings was assessed. Discrepancies were resolved through consensus discussion.

To determine whether meta-analyses were appropriate, we assessed the clinical and methodological heterogeneity of studies following established guidance.<sup>57</sup> We qualitatively

assessed the populations, screening tests, interventions, comparators, outcomes, and study designs, looking for similarities and differences. For IPV, we did not estimate pooled effects of screening or treatment because there were too few trials that were similar in terms of populations, intervention types, and outcomes. For IPV screening test accuracy (KQ 2), we identified a larger body of literature but were unable to perform meta-analyses due to substantial heterogeneity in study populations, settings, screening tests, time frame of exposure (accuracy for detecting past-year IPV, accuracy for detecting current or ongoing IPV), and reference standards. When possible, for studies reporting on similar outcomes, we created forest plots to display effect estimates from individual studies using Stata version 16 (StataCorp).

## **Expert Review and Public Comment**

A draft research plan for this topic was posted on the USPSTF website for public comment from February 9, 2023, to March 8, 2023. In response to public comments, the USPSTF clarified there is no upper age limit for adults experiencing IPV by adding “(age 18 years and older)” after “adults” in the population eligibility criteria relating to IPV. For the older and vulnerable adult population, the USPSTF added the word “caregiver” before abuse and neglect (i.e., “Caregiver abuse of older and vulnerable adults”) where appropriate to make clear the focus is on screening for abuse or neglect perpetrated by a caregiver, rather than any abuse or neglect experience by older or vulnerable adults. The USPSTF also made minor additions to the wording of KQ 3 to clarify that the question is examining harms from screening. Finally, the USPSTF added “psychological interventions” as an example of an eligible intervention in the table of eligibility criteria. The final version of the research plan was posted on the USPSTF website on April 20, 2023. The draft evidence review was reviewed by content experts, representatives of Federal partners, USPSTF members, and AHRQ Medical Officers and revised based on comments received, as appropriate. Revisions included updates to various sections of the introduction section to provide more detail or cite more recent evidence related to prevalence, risk factors and burden associated with IPV and caregiver abuse in older and vulnerable adults. The draft evidence review will also be posted for public comment. Revisions will be made based on comments received, and any references suggested by experts or public reviewers will be evaluated for inclusion and exclusion.

## **USPSTF and AHRQ Involvement**

The authors worked with USPSTF liaisons at key points throughout the review process to develop and refine the analytic framework and KQs, as well as to resolve issues related to scope for the final evidence synthesis.

AHRQ staff provided project oversight, conducted reviews of the draft report, and helped facilitate an external review of the evidence synthesis.

# Chapter 3. Results

## Literature Search

All included studies in the previous review on this topic were carried forward for the current update. We identified 2,143 unique records in our updated search and assessed 315 full-text articles for eligibility (**Figure 3**). We excluded 2,103 articles for various reasons, as detailed in **Appendix C**, and included articles representing 35 studies (reported in 40 articles). Of these, 5 studies and 1 companion article to a previously included study are new and were not included in the previous USPSTF review on this topic. Details of quality assessments of the newly included studies are in **Appendix D Tables 1 and 2**.

### Intimate Partner Violence Results by Key Question

#### **KQ 1. Does screening for current, past, or increased risk for intimate partner violence (IPV) in adults and adolescents reduce exposure to IPV, physical or mental morbidity, or mortality?**

##### Summary

Three RCTs (n=3,759) directly compared universal IPV screening (followed by referral, provider alert, and/or brief intervention for those who screened positive) with no screening; all were included in the 2018 review on this topic, and no additional eligible studies were identified in searches for the current review. None found significant reductions in IPV, or improvement in QoL or other eligible outcomes over 3 to 18 months. All three RCTs described eligible participants as adult women (mean ages, 34 to 40 years), none enrolled men or adolescents, and none focused on pregnant women or reported outcomes separately by pregnancy status. One enrolled participants from 10 U.S. primary care clinics,<sup>58</sup> one enrolled participants from a single New Zealand ED,<sup>59</sup> and one enrolled participants from a variety of Canadian clinical settings (12 primary care sites, 11 EDs, and 3 obstetrics and gynecology [OBGYN] clinics).<sup>60</sup> Prevalence of past-year IPV ranged from 12 to 18 percent. Responses to positive screening results in the intervention group included brief education and referral options. The RCT set in U.S. primary care centers found similar rates of IPV among women randomized to screening (11%), receipt of a partner violence resource list (11%), and no resource list (9%) at 12 months. The two other RCTs found no statistically significant reduction in IPV associated with the interventions.

##### Characteristics of Included Studies

Three RCTs (n=3,759, described in 4 publications) compared universal screening for IPV in a healthcare setting with no screening (**Table 1**), including one each set in the United States,<sup>58</sup> New Zealand,<sup>59</sup> and Canada.<sup>60</sup> In terms of clinical settings, one enrolled participants from 10 primary care clinics,<sup>58</sup> one enrolled participants from a single ED,<sup>59</sup> and one cluster RCT enrolled participants from a variety of clinical settings (12 primary care sites, 11 EDs, and 3 OBGYN clinics).<sup>60</sup>

All described the eligible population as being limited to adult women. One RCT limited to women who had a male partner within the past 12 months;<sup>60</sup> the other two did not comment on whether participants had male or same-sex partners, and no studies commented on the proportion of study participants who identified as LGBTQ. The mean age of enrolled populations ranged from ages 34 to 40 years. One RCT enrolled a minority of pregnant women (5%),<sup>60</sup> and the other two did not comment on the proportion of participants who were pregnant. Two described the race/ethnicity of enrolled populations. The RCT conducted in the United States enrolled mostly those identifying as African American (55%) and Latina, (37%), with fewer who identified as White (6%) or other (1%). The RCT set in New Zealand enrolled a majority of New Zealand Europeans (61%), with most others identifying as Māori (38%). Prevalence of past-year IPV ranged from 12 to 18 percent across studies.

All included studies assessed the benefit of universal screening for IPV compared with no screening (or usual care); no studies described the number of participants who were potentially presenting with health complaints specific to violence. In the RCT set in an ED, 20 percent of enrolled women were presenting with an acute injury (not otherwise characterized).<sup>59</sup> All RCTs used screening tools designed to identify exposure to IPV within the past 12 months. Two studies used the three-item Partner Violence Screen (PVS)<sup>58, 59</sup> (one study administered the tool via a computer,<sup>58</sup> and the other administered the tool in person via a research assistant),<sup>59</sup> and one study used the eight-item WAST.<sup>60</sup> Two RCTs provided some information about IPV to an unscreened control group;<sup>58, 60</sup> one provided all participants with a business sized card with locally available IPV resources at enrollment,<sup>60</sup> and the other compared screening with two different control groups, one that received information on IPV resources and one that received no resource list).<sup>58</sup>

Responses to screening test results varied. In one RCT, screen-detected participants were immediately shown a short video providing support and information about a hospital-based partner violence advocacy program and were encouraged to seek help and received a printout with local partner violence resources.<sup>58</sup> In the RCT set in an ED, women who screened positive (via face-to-face screening delivered by research assistants) were given information about referral options and an additional clinical assessment was conducted to assess safety.<sup>59</sup> If women responded positively to questions about safety (concern about their own safety or that of children in their home), additional on-site support included notification of their ED care provider and hospital social worker.<sup>59</sup> Finally, in one RCT a research assistant conducted screening before a scheduled visit then placed the completed screening questionnaire in the chart for the clinician if the screen was positive; discussion of the positive findings, referrals, or treatment was left to the discretion of the treating clinician.<sup>60</sup> In the same RCT, all women completed the Composite Abuse Scale (CAS) after the clinic visit; women not randomized to screening completed both the WAST and CAS at the end of their visit. Women with positive scores on both the WAST and CAS (screened and nonscreened groups) were followed for 18 months (at baseline and again at 6, 12, and 18 months).<sup>60</sup>

Two RCTs were rated as fair, and one was rated as good quality (**Appendix D Table 1**). The RCT conducted in Canadian clinical settings had high overall attrition (42%), but low differential attrition and missing data was accounted for using multiple imputation.<sup>60</sup> However, 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 women retained in the trial.<sup>60</sup> This same trial also had low

fidelity; less than half of screen-positive women (44%) reported discussing IPV with their clinicians during their clinic visit.<sup>60</sup>

## Results of Included Studies

### *IPV*

All included RCTs reported on rates of IPV following the screening intervention; however, specific measures and outcome timings varied across studies. Despite heterogeneity across studies, no study found a statistically significant reduction in IPV among the screened group compared with a nonscreened control group.<sup>58-60</sup> Results are summarized in **Figure 4**, and detailed results are shown in **Appendix F Table 1**.

The RCT conducted exclusively in U.S. primary care settings (N=2,708) measured the occurrence of any partner violence events at 1 year using 18 questions adapted from the National Violence Against Women Survey<sup>61</sup> among groups randomized to screened or nonscreened control groups (1 that received a partner violence resource list and 1 that did not).<sup>58</sup> The incidence of partner violence was similar among women in the screened group and nonscreened groups, including the comparison with the control group that received a resource list (odds ratio [OR] 1.0; 95% CI, 0.8 to 1.4) and one that did not (OR 1.2; 95% CI, 0.7 to 2.2).<sup>58</sup> Results were similar for the subgroup of women reporting IPV before enrollment.<sup>58</sup>

The two other included RCTs measured rates of IPV using the CAS, and both reported on the number of participants in each group with a positive CAS score ( $\geq 7$ , range 0 to 150).<sup>59, 60</sup> The RCT set in various Canadian healthcare settings (N=707) limited the analysis to participants in the screening and control groups who screened positive on the WAST and CAS at baseline; recurrence of IPV was assessed at 6, 12, and 18 months (**Figure 4**). At each time point, there was an association between the intervention and lower IPV recurrence, but the difference was not statistically significant and confidence intervals were wide (OR, 0.88; 95% CI, 0.43 to 1.82 at 18 months).<sup>60</sup> The RCT set in a New Zealand ED (N=344) measured outcomes at 3 months among all participants (regardless of baseline screening results) and found an association between the intervention and lower risk of IPV, but the difference was not statistically significant (OR, 0.86; 95% CI, 0.39 to 1.92).<sup>59</sup>

### *Quality of Life*

Two RCTs reported on QoL using the 12-Item Short Form Survey (SF-12) and found no statistically significant differences between groups at followup over 6 to 18 months (**Figure 4**);<sup>58, 60</sup> one RCT also found no difference among a subgroup of women reporting IPV at enrollment (**Appendix F Table 1**). One RCT also measured QoL using the World Health Organization Quality of Life-BREF (WHOQOL-BREF) scale; scores were slightly lower in the screened group than in control groups (by 1 to 2 points) at 6, 12, or 18 months, but differences were not statistically significant.<sup>60</sup>

### *Mental Health Outcomes*

The RCT enrolling participants from various Canadian healthcare settings reported on PTSD and depression outcomes and found no statistically significant differences between groups.<sup>60</sup> For

depression (**Figure 4**), scores on the Center for Epidemiologic Studies Depression Scale favored the screening group, but results were imprecise and differences in scores were small across all time points (18-month mean difference between groups: -1.97; 95% CI, -4.33 to 0.39).<sup>60</sup> For PTSD, which was measured using the four-item Startle, Physiological Arousal, Anger, and Numbness screening tool, there was not a statistically significant difference between screened and nonscreened groups at any time point (**Appendix F Table 1**).

### *Healthcare Utilization Outcomes*

One RCT enrolling women from U.S. primary care settings reported on rates of healthcare utilization (not specific to use of IPV intervention services) (**Appendix F Table 1**).<sup>58, 62</sup> Rates of hospitalizations, ED visits, and outpatient care visits were similar for screened and nonscreened groups at 1 and 3 years.<sup>58, 62</sup>

## **KQ 2. What is the accuracy of screening questionnaires or tools for identifying adolescents and adults with current or past IPV?**

### **Summary**

We included 17 fair-quality studies (6,119 participants) assessing the accuracy of 14 different IPV screening tools. All studies enrolled adults; 15 of the studies were included in the 2018 review of this topic; the two studies that were new in this update were limited to populations who were pregnant.<sup>63, 64</sup> Recruitment settings varied and included EDs,<sup>65-68</sup> primary care practices,<sup>38, 69-71</sup> urgent care,<sup>72</sup> antenatal clinics,<sup>63, 64</sup> and telephone or mail survey.<sup>39, 73, 74</sup> Most studies assessed screeners designed to detect exposure to IPV within the past year; others focused on identifying current or ongoing IPV exposure (6 studies), lifetime abuse (1 study), and predicting future IPV (1 study). Reference standards varied across studies with the majority using self-report diagnostic questionnaires and only one study utilizing a semistructured interview.<sup>68</sup> For studies reporting on the accuracy of screening tools to identify past-year IPV, sensitivity varied widely (range: 26% to 87%), and specificity was generally more consistent (range: 80% to 97%). Across studies evaluating screening tools designed to detect current or ongoing IPV, accuracy varied widely with sensitivity ranging from 12 to 94 percent and specificity ranging from 38 to 100 percent. Notably, the lower range of accuracy estimates for both past-year and current IPV were reported in the newly included studies that focused on pregnant populations. Among the four studies set in primary care settings, two evaluated a tool to detect any type of IPV and two only reported on accuracy for specific types of violence only. For those that reported on the accuracy to detect any IPV, one evaluated the HITS tool to detect ongoing/current violence and found a sensitivity of 86 percent and a specificity of 99 percent<sup>69</sup> and the other evaluated the HARK to detect any past-year IPV and found a sensitivity of 81 percent and a specificity of 95 percent.<sup>38</sup>

### **Characteristics of Included Studies**

We included 17 fair-quality studies assessing the accuracy of a total of 14 different IPV screening tools (**Table 2**).<sup>38-40, 63-73, 75, 76</sup> Two were newly identified in searches for this update<sup>63, 64</sup> and the others were carried forward from the previous review on this topic.

Most studies recruited adults (age 18 years or older), but one newly included study reported participants as young as age 16 years.<sup>64</sup> Both of the newly included studies were limited to pregnant women,<sup>63, 64</sup> whereas the previous review included only two studies that reported on the percentage of women who were pregnant (8% to 9%) but did not report results separately for this group.<sup>40, 69</sup>

Most studies (12) were conducted in the United States, two were conducted in Canada,<sup>40, 75</sup> and one each was conducted in Australia,<sup>64</sup> Spain,<sup>63</sup> and the United Kingdom.<sup>38</sup> Recruitment settings varied and included antenatal clinics,<sup>63, 64</sup> EDs,<sup>65-68</sup> primary care practices,<sup>38, 69-71</sup> urgent care,<sup>72</sup> and telephone or mail survey.<sup>39, 73, 74</sup> Fifteen studies reported on race/ethnicity or nationality using heterogeneous terminology and categories (**Table 2**). No studies reported on the percentage of partners who were the same sex as the respondent. Sample sizes ranged from 53 to 5,604.

Fourteen different screening tools were evaluated across included studies (**Table 2**). The newly included studies assessed a two-item version of the WAST,<sup>63</sup> and the Afraid, Controlled, Threatened, Slapped or physically hurt (ACTS).<sup>63</sup> Copies of the screeners are found in **Appendix E Table 1**; most of the tools contained between two and eight items. The Abuse Assessment Screen (AAS),<sup>63, 76</sup> the HITS,<sup>39, 67, 69</sup> and the WAST<sup>40, 75</sup> were evaluated in multiple studies; however, for the studies evaluating the HITS and the WAST, the authors used different criteria for determining a positive screen. Details related to the threshold for positive screening results, and reference standards used are summarized in **Appendix F Table 2**. Using the reference standards as measurements, prevalence of current or recent IPV ranged from 10 percent to 29 percent.

Most screeners were assessed by only one study each. All 17 included studies were rated fair quality, common methodological limitations included exclusion of missing data or unclear handling of missing data.

## Results of Included Studies

### *Accuracy of Detecting Past-Year IPV*

Nine studies reported on the accuracy of nine different screeners (AAS, ACTS, HARK, HITS, Electronic HITS [E-HITS], PVS, Parent Screening Questionnaire, WAST, and WAST-Short) for detecting past-year IPV with most enrolling only women (or a majority of women) (**Appendix F Table 2**).<sup>38-40, 63, 64, 66, 67, 70, 73</sup> Across all screeners, sensitivity varied widely with estimates ranging from 26 to 87 percent, and specificity ranged between 80 and 97 percent (**Figure 5**). Three screeners were assessed with both the original version and a modified version, including the HITS (E-HITS), the WAST (WAST-Short), and the ACTS with a binary response scale and the ACTS with an ordinal response scale.

Both of the newly included studies recruited only pregnant women, and both recruited from antenatal clinics.<sup>63, 64</sup> Using the ACTS with a binary response format,<sup>64</sup> sensitivity was 51 percent and specificity was 97 percent using a threshold of responding yes on at least one of the four items. Using the five-point ordinal scale format, sensitivity was 66 percent and specificity was 94 percent using a threshold of responding “rarely” or above on any of the four items. The

other newly included study reported on the accuracy of both the WAST-Short and the AAS in assessing IPV before pregnancy; however, study authors did not specify a timeframe.<sup>63</sup> Using a threshold score of two on the WAST-Short, sensitivity was 26 percent and specificity was 96 percent. A threshold score of one on the AAS demonstrated a sensitivity of 51 percent and a specificity of 87 percent.

One study enrolling men only (N=53) from an ED reported on the accuracy of the PVS in detecting past-year IPV (**Appendix F Table 2**). This study examined the accuracy of both the HITS and PVS compared with the Conflict Tactics Scale-2 (CTS-2) scores for physical and psychological abuse; sensitivities were low for both PVS and HITS for detecting psychological abuse (30% and 35%, respectively) and for detecting physical abuse (46% for both tools).<sup>67</sup>

#### *Accuracy of Detecting Current or Ongoing IPV*

Six studies reported on the accuracy of a tool in identifying ongoing or current relationship violence.<sup>63, 65, 69, 71, 72, 76</sup> As shown in **Figure 5**, accuracy varied widely with sensitivity ranging from 12 to 94 percent, and specificity ranged from 38 to 100 percent. One of the newly included studies that focused on pregnant women evaluated both the WAST-Short and the AAS to assess IPV at the first trimester visit.<sup>63</sup> Using a threshold score of two on the WAST-Short, sensitivity was 37 percent and specificity was 96 percent. The AAS had a very low sensitivity (12%) but high specificity (100%) based on a threshold score for a positive screen of one.

#### *Accuracy for Predicting Future Abuse*

One study (N=409) evaluated the accuracy of a three-item tool for predicting future partner abuse.<sup>74</sup> The unnamed tool is derived from questions administered in the Colorado BRFSS; the full tool is shown in **Appendix E Table 1**. At baseline, 24 percent of the sample reported partner abuse (verbal, sexual, or physical) on the Conflict Tactic Scale (CTS). The sensitivity and specificity for predicting IPV over 3 to 5 months was 20 percent (95% CI, 13 to 30) and 96 percent (95% CI, 93 to 98), respectively.<sup>74</sup>

#### *Accuracy of Detecting Lifetime IPV*

One study evaluated the accuracy of the Slapped, Things, Threaten (STaT) tool for detecting lifetime occurrence of IPV among women presenting to an urgent care center.<sup>68</sup> Using the recommended cut point of at least one endorsed item on the STaT, sensitivity was high (95%) but specificity was low (37%) compared with the Index of Spouse Abuse.

### **KQ 3. What are the harms of screening for IPV in adults and adolescents?**

#### **Summary**

Two RCTs (n=935) that were limited to adult women, described in KQ 1, reported on harms of screening for IPV. Both were included in the prior report on this topic, and no new eligible studies were identified in searches for the current review. One trial enrolled participants from an ED of a New Zealand hospital, and the other enrolled participants from various Canadian



healthcare settings. In one RCT, authors developed a specific tool, the Consequences of Screening Tool (COST), to measure the consequences of IPV screening.<sup>60</sup> COST questions included an eight-item Effects on Quality of Life subscale that applies to women who received the screening intervention regardless of their abuse status, which was administered to a subset of participants sampled from those who screened either positive or negative or had mixed screen results within 14 days of being screened. The mean score on the eight-item Effects on Quality of Life subscale was 3.52 (standard deviation [SD] 3.24), indicating that being asked IPV screening questions was not harmful immediately after screening; scores were similar across groups with positive, mixed, and negative screening test results. The second trial reported that no adverse events were reported by participants, clinicians, or research staff; however, it is not clear whether adverse events were prespecified or how they were monitored.<sup>59</sup>

### **Characteristics of Included Studies**

We included two fair-quality RCTs reporting on harms of screening;<sup>59, 60</sup> both were included in KQ 1 (benefits of screening). Study characteristics are described in detail in KQ 1 and shown in **Table 1**. Both RCTs were limited to adult women; one (N=399) enrolled women presenting to a New Zealand ED,<sup>59</sup> and the other (N=591) enrolled women presenting to various Canadian healthcare settings (12 primary care sites, 11 EDs, and 3 OBGYN clinics).<sup>60</sup>

### **Results of Included Studies**

In one RCT, authors developed a specific tool, the COST,<sup>77</sup> to measure the consequences of IPV screening.<sup>60</sup> The COST questions included an eight-item Effects on Quality of Life subscale that applies to women who received the screening intervention regardless of their abuse status; items are scored on a five-point scale from two to minus two (range: 16 to -16), with negative scores reflecting harm. The full questionnaire is shown in **Appendix E Table 2**. Example questions from the COST include the following: “Because the questions on partner violence were asked, I feel my home life has become (less difficult ... more difficult)”; “Because the questions on partner violence were asked, I see the quality of my own life as being (better ... worse)”; “Because the questions on partner violence were asked, I feel that the problems in my relationship with my partner are my fault” (disagree ... agree); and “Because the questions on partner violence were asked, my financial situation has become (better ... worse).” Results of scores were not reported in the main RCT; however, the authors of another systematic review obtained and reported unpublished data from the authors.<sup>78</sup> The COST was administered to a subset of 591 women out of 3,271 screened (227 women who screened positive for abuse, 206 with mixed screen results, and 158 who screened negative). At baseline (within 14 days of being screened), the mean score on the eight-item Effects on Quality of Life subscale was 3.52 (SD 3.24), indicating that being asked IPV screening questions was not harmful to women immediately after screening. Scores were similar across abuse groups; the mean scores were 3.7 (SD 3.2) for women who scored negative on both the WAST and CAS, 3.3 (SD 3.3) for those who had mixed results, and 3.5 (SD 3.4) for those who scored positive on both measures.<sup>78</sup> Harms were not assessed beyond the baseline visit.<sup>60</sup>

The second trial reported that no adverse events were reported by participants, clinicians, or research staff; however, it is not clear whether adverse events were prespecified or how they were monitored.<sup>59</sup>

## **KQ 4. How well do interventions reduce exposure to IPV, physical or mental morbidity, or mortality among screen-detected adolescents and adults with current or past IPV?**

### **Summary**

Thirteen RCTs (n=7,425) evaluated an IPV intervention among populations with screen-detected IPV or who were considered at risk for IPV; 11 of these (n=6,740) were included in the prior review on this topic. Overall, results were imprecise and often inconsistent. Seven (n=2,644) enrolled populations from prenatal or perinatal care settings. Two (n=882) assessed the benefit of multiple perinatal home visits, one found a larger reduction in CTS-2 scores from baseline in the intervention vs. control group at 2 years (mean difference in change from baseline scores: -4.95; p<0.001),<sup>79</sup> and the other found a lower rate of IPV at 3 years associated with the intervention, but the difference was not statistically significant.<sup>80</sup> Four RCTs evaluated brief clinic-based counseling; three assessed a counseling intervention specific to IPV, two found no difference between groups for overall rates of IPV,<sup>81, 82</sup> and one found mixed results for subtypes of IPV.<sup>83</sup> One RCT assessing a clinic-based behavioral counseling intervention for women with one or more risk factors (IPV, depression, smoking, environmental tobacco exposure) reported on outcomes among the subgroup who had IPV at baseline (n=306); women in the intervention group had fewer recurrent episodes of IPV during pregnancy and postpartum (OR, 0.48; 95% CI, 0.29 to 0.80), and fewer very preterm neonates ( $\leq 33$  weeks) (2 vs. 9 women; p=0.03) but no statistically significant difference in rates of low birth weight neonates (<2,500 g), very low birth weight neonates (<1,500 g), or preterm birth (<37 weeks). Finally, one RCT enrolling new parents (n=368 couples) with a history of verbal abuse found no statistically significant difference between groups randomized to a skills-based relationship education intervention or wait-list control for measures of IPV victimization at 15 or 24 months.<sup>84</sup>

Six RCTs enrolling nonpregnant women all measured IPV incidence; four found no significant difference between groups in rates of overall IPV<sup>85, 86</sup> or combined physical and sexual violence<sup>87, 88</sup> and one reported on subtypes of violence only and found mixed results.<sup>89</sup> Few reported on other outcomes, such as QoL and depression, and results were mixed.

### **Characteristics of Included Studies**

Thirteen RCTs (17 articles; n=7,425) evaluated an intervention for populations with screen-detected IPV or who were considered at risk for IPV (**Table 3**).<sup>79-95</sup> Seven (n=2,644) enrolled populations who were pregnant or had recently given birth who screened positive during routine prenatal care visits or maternity wards.<sup>79-84, 90</sup> Of these, one RCT delivered the intervention to new parents in a committed relationship (couples, described as male and female partners)<sup>84</sup> and all others targeted the intervention to pregnant or postpartum individuals. Six RCTs focused on nonpregnant populations, most recruited from screen-detected populations from various outpatient primary care settings (e.g., family medicine and family planning clinics), and one recruited from EDs (**Table 3**).<sup>86</sup> In all included studies targeted toward individuals who screened positive for IPV, participants were categorized as women and/or females. No included study commented on gender or sexual identity in terms of trial eligibility or characteristics of enrolled participants. The one included study enrolling couples characterized partners as males and females.

All but four RCTs were conducted in the United States, including one each in Australia<sup>85</sup> and Norway<sup>82</sup> and two in Hong Kong.<sup>83, 89</sup> Diverse categories and terms were used to describe the race/ethnicity of enrolled participants. Among the nine studies set in the United States, one was limited to African American women only<sup>80</sup> and another enrolled mostly Black women (80%).<sup>86</sup> Two RCTs enrolled mostly White participants (80 and 87%).<sup>87, 94</sup> In one RCT set in Hawaii, most participants were either Native Hawaiian/Pacific Islander (33%) or Asian/Filipino (28%).<sup>80</sup> Other RCTs included populations that ranged from 23 to 59 percent White and also included other race/ethnicities primarily described as African American or Hispanic/Latino (**Table 3**). Most studies reported the mean age of enrolled participants, ranging from ages 24 to 38 years; in four RCTs studies that reported the proportion of participants by age range only, the majority were age 25 years or younger.<sup>80, 87, 88, 94</sup>

Included studies assessed heterogeneous interventions. **Appendix F Table 4** shows a detailed summary of intervention components, delivery personnel, and intensity (e.g., number and length of sessions). Studies enrolling pregnant participants or new parents tended to include other components relevant to pregnancy or parenting such as education about child development, counseling or assessment about other factors associated adverse perinatal outcomes (e.g., substance abuse, postpartum depression), and home visits that provided routine perinatal support. Because of differences in the populations and interventions, detailed characteristics of interventions are summarized separately for studies enrolling pregnant and/or postpartum populations, and nonpregnant populations below along with the results.

Four included studies were cluster RCTs,<sup>79, 85, 87, 88</sup> all others randomized individual participants. One<sup>95</sup> was rated good quality and others were rated fair quality. Common methodological limitations included high overall attrition (20% or higher in nine RCTs), but most had no differential attrition and accounted for missing data using multiple imputation.

### **Included Studies Enrolling Pregnant and Postpartum Participants**

Seven RCTs (n=2,644) enrolled populations who were pregnant or had recently given birth who screened positive during routine prenatal care visits or maternity wards.<sup>79-84, 90</sup> Five were included in the previous review, and two were identified in searches for the current update.<sup>82, 84</sup> One newly identified RCT delivered the intervention to new parents in a committed relationship (couples, described as male and female partners)<sup>84</sup> and all others targeted the intervention to the pregnant or postpartum individual, referred to as women in all included studies.

Five RCTs enrolled women who screened positive during routine outpatient prenatal care visits.<sup>79, 81-83, 90</sup> Two RCTs enrolled populations from maternity units following childbirth. One, the Hawaiian Health Start Program (HSP),<sup>80</sup> enrolled mothers based on the infant's risk of maltreatment determined by chart review and score on the Kempe Family Stress Inventory for screening;<sup>96</sup> however, known involvement by Child Protective Services was an exclusion criterion.<sup>80</sup> The second enrolled new parents (couples) in a committed relationship who reported at least one member who had been verbally aggressive toward the other in the previous 6 months but where there was no reported male-to-female physical IPV ever.<sup>84</sup> Trial recruiters first asked if the mother would like to determine if she and her partner were eligible; if interested, the mother was asked the screening questions first and fathers were screened later.

Interventions were heterogeneous but focused on two main types: those delivered via home visits (primarily during the postpartum period) and brief counseling or advocacy interventions delivered in outpatient settings (generally during routine prenatal or postnatal visits). Results are summarized below by intervention type.

### *Perinatal Home Visiting Interventions*

Two RCTs (n=882) assessed the benefit of perinatal home visiting interventions conducted either by paraprofessionals or trained nonprofessionals.<sup>79, 80</sup> Both included multiple home visits delivered over at least 1 to 2 years postpartum and provided services unrelated to IPV (e.g., parenting support, referral to community services). One, the Hawaiian HSP trial, enrolled those who gave birth between 1994 and 1995 via hospital maternity wards to children rated as being at high risk for maltreatment and compared weekly home visits for an intended duration of 3 years postpartum (mean of 13.6 home visits were delivered during the first year) with usual care.<sup>80</sup> The intervention featured services related to parenting, conflict resolution, and emotional support and linked families to community services, including IPV shelters/advocacy groups.<sup>80</sup> The other RCT assessing a home visiting intervention, the Domestic Violence Enhanced Home Visitation trial, enrolled participants from home visiting programs and targeted low-income, high-risk mothers such as single young mothers or families with low birth weight or preterm infants.<sup>79</sup> All participants received the usual care of the home visiting program, which included approximately four to six visits prenatally and six to 12 visits up to 2 years postpartum. The intervention arm included an abuse assessment and six IPV “empowered” sessions embedded into usual home visits.<sup>79</sup>

Both RCTs assessing home visiting interventions found reduced rates of IPV in favor of the intervention; however, the magnitude of difference was small, and results were imprecise. In the Hawaiian HSP trial, overall IPV victimization was lower in the intervention group than in the control group at 3 years, but the difference was not statistically significant (IRR of average IPV events per person-year: 0.86; 95% CI, 0.73 to 1.01).<sup>80</sup> The average numbers of IPV events per person-year over 3 years in the intervention and control groups was 7.50 and 9.55, respectively. Results were similar for subcategories of IPV at 3 years and for rates of overall IPV victimization at 1 year (**Appendix F Tables 5 and 6**). At 6 years post-enrollment (3 years after the intervention ended), there was no statistically significant difference between groups for overall IPV victimization (IRR, 0.95; 95% CI, 0.77 to 1.17).<sup>80</sup> The RCT comparing perinatal home visits with and without a structured IPV intervention found a larger reduction in mean CTS-2 scores from baseline in the IPV intervention arm compared with usual home visits at 2 years (-40.82 vs. -35.87; mean difference in change from baseline scores: -4.95; p<0.001).<sup>79</sup>

### *Interventions Delivered to Couples*

One RCT enrolled new parents (n=368 couples) via maternity wards with a history of verbal abuse and randomized couples to a skills-based relationship education intervention to prevent physical clinically significant IPV or wait-list control.<sup>84</sup> The intervention was delivered via two in-home visits and six phone visits during baby’s first 8 months and was combined with videos and workbook activities focused on relationship or parenting skills. There was no statistically significant difference between groups for any measure of IPV victimization at 15 or 24 months

post-enrollment (**Appendix F Table 6**). Of note, the study measures on rates of IPV victimization from both partners.

### *Clinic-Based Intervention*

Four RCTs enrolling pregnant women or young mothers evaluated a brief clinic-based counseling intervention.<sup>81-83, 90</sup> Studies varied in the number of sessions provided (range: 1 to 8), as well as in the counseling approach and delivery personnel (**Appendix F Table 4**). Three focused on counseling for IPV only, and one included screening and counseling for other perinatal risk factors.<sup>90</sup> Of those that focused on IPV only, two RCTs evaluated a single counseling session following screening, one was delivered face-to-face by trained midwives focused on safety advice and promoted independence and control,<sup>83</sup> and the other was delivered via a tablet-based video (7 minutes) featuring digital storytelling about IPV and safety behaviors that were culturally sensitive (provided in multiple languages, depicting women from different backgrounds).<sup>82</sup> One RCT assessed the benefit of five counseling sessions delivered by trained research personnel (60 minutes each) based on principles of interpersonal psychotherapy, four sessions during pregnancy and one session within 2 weeks of delivery (4 additional sessions were also offered after delivery).<sup>81</sup>

One RCT (N=913), the NIH-DC Initiative to Reduce Infant Mortality in Minority Populations, enrolled women who screened positive for one of several risk factors associated with adverse perinatal outcomes (cigarette smoking, environmental tobacco smoke exposure, depression, and IPV); women randomized to the intervention group received prenatal behavioral counseling specific to each identified risk factor over two to eight sessions (approximately 35 minutes each) delivered by professional counselors during routine prenatal care visits, with up to two additional postpartum sessions.<sup>90</sup> Thirty-two percent of enrolled participants in the main trial (n=336) screened positive for past-year IPV at baseline (rates were similar for intervention and usual care groups); in terms of other risk factors, 22 percent smoked, 78 percent had environmental smoke exposure, 62 percent were depressed, 32 percent used alcohol, and 17 percent used illicit drugs. The IPV-specific counseling emphasized danger assessment, safety behaviors, and information on community resources.<sup>90</sup>

### *IPV*

In the three RCTs assessing counseling specific to IPV, two found no difference between groups for overall rates of IPV (**Figure 6**),<sup>81, 82</sup> and one reported on subtypes of IPV only and found mixed results.<sup>83</sup> Additional results specific to subtypes of violence are shown in **Appendix F Table 5**. In the RCT evaluating an integrated behavioral counseling intervention compared with usual care (with counseling tailored to address one or more risk factors reported at enrollment), results were provided for the overall sample and the subset who reported IPV at enrollment (and thus received IPV counseling). In the overall sample (n=913), the difference between groups in terms of the percentage of women experiencing IPV (based on CTS-2) was not statistically different (change in percentage from baseline to postpartum: -28.8 vs. -24.9; p=0.074).<sup>90</sup> Among women who screened positive for IPV at baseline (n=306), those randomized to the intervention had significantly fewer recurrent episodes of IPV during pregnancy and postpartum (adjusted OR, 0.48; 95% CI, 0.29 to 0.80). Results based on outcome timing (during pregnancy vs. postpartum) and for specific subtypes of violence are shown in **Appendix F Table 5**.

### *Quality of Life*

Two RCTs assessing a single IPV counseling session delivered in routine prenatal care settings reported on QoL. One RCT assessing a tablet-based video found no significant difference between groups on WHOQOL-BREF domain scores at 12 months.<sup>82</sup> The second RCT assessing a single in-person counseling session reported on individual 36-Item Short Form Survey domains only and found mixed results (**Appendix F Table 5**).<sup>83</sup>

*Birth Outcomes.* One RCT, the NIH-DC Initiative to Reduce Infant Mortality in Minority Population trial reported on birth outcomes.<sup>90</sup> Among the subgroup of women who screened positive for IPV at baseline (n=306), fewer women in the intervention group had very preterm neonates ( $\leq 33$  weeks) (2 vs. 9 women; p=0.03) compared with women in the control group.<sup>91</sup> However, when using the full sample of the subgroup of women who had IPV at baseline and IPV measured at followup (n=306) (as opposed to the analytic approach used by the study—i.e., dropping participants with missing data), we found that the effect size for very preterm neonates was similar to the value reported in the study, but the result was not statistically significant (**Figure 6**). There was no statistically significant difference between intervention and control groups in rates of low birth weight neonates (<2,500 g) (17 vs. 24 women; p=0.204) or preterm birth (<37 weeks) (18 vs. 27 women; p=0.135). As noted above, women in the intervention group also had counseling to address other risk factors for adverse pregnancy outcomes; in the overall sample, women in the intervention group had significantly reduced smoking and environmental tobacco exposure compared with controls. In addition, among women experiencing IPV at baseline, 62 percent reported being depressed. It is unclear how modification of these risk factors influenced birth outcomes among women who had interventions targeting both IPV and other risk factors such as depression.

### *Mental Health Outcomes*

Two RCTs evaluating counseling interventions reported on depression outcomes, and one of these also reported on PTSD symptoms (**Figure 6**).<sup>81, 83</sup> The RCT assessing five counseling sessions delivered during routine prenatal/postnatal care visits found no statistically significant differences between intervention and control groups in terms of incident cases of major depressive episodes (measured by a standardized interview) or changes in symptoms measured by the Edinburgh Postnatal Depression Scale scores at 6 months.<sup>81</sup> In the second RCT reporting on depression symptoms fewer women in the intervention group had postnatal depression (defined as Edinburgh Postnatal Depression Scale score  $\geq 10$ ) at 6 weeks compared with the control group (RR, 0.36; 95% CI, 0.15 to 0.88).<sup>83</sup> The same RCT reported on PTSD symptoms using the Davidson Trauma Scale and found similar scores among the intervention and control groups at 6 months.<sup>83</sup> Of note, per authors, only one woman (in the intervention group) met criteria for PTSD for the duration of the study measured by a standardized interview.<sup>83</sup>

### **Included Studies Enrolling Nonpregnant Adults and Adolescents**

Six RCTs (n=5,712, described in 7 publications) enrolled populations for whom perinatal status was not an inclusion criterion; all assessed brief counseling interventions<sup>85, 93</sup> computer-assisted tool,<sup>94</sup> in-person screening using a validated instrument,<sup>86, 89</sup> or promotion of screening by discussion of IPV at all family planning clinic encounters.<sup>87, 88</sup> One study required that

participants screen positive for IPV and heavy drinking (based on the Alcohol Use Disorders Identification Test score).<sup>86</sup> Interventions evaluated varied in delivery format, content, and intensity. Three RCTs included one in-person intervention session followed by one or more telephone followup.<sup>86, 89, 94</sup> Two RCTs provided women with one session of counseling during a clinic visit delivered by clinical staff who had received an IPV training intervention<sup>87, 88</sup> Finally, one RCT evaluating physician training to respond to IPV delivered one to six counseling sessions, depending on the participant's needs; most participants received just one or a few visits (median=1; mean=2.4).<sup>85</sup> In general, compared with studies enrolling populations who were pregnant (described above), these studies provided fewer total number of visits/contact time; however, the main difference is that the interventions did not include additional content related to education or support specific to child development, parenting, or other (non-IPV) risk factors associated with adverse perinatal outcomes such as depression and smoking (**Appendix F Table 4**).

### *IPV*

Five RCTs reported on IPV outcomes.<sup>85-89</sup> Two reported on a measure of overall IPV and found similar rates of IPV among groups with no statistically significant difference at any time point (**Figure 7**).<sup>85, 86, 93</sup> Two trials that focused on IPV education and training for family planning staff reported on recent (past 3 months) physical or sexual violence; neither trial found a statistically significant difference between groups (women in the intervention group had a slightly higher rate of IPV).<sup>87, 88</sup> One of these<sup>88</sup> found a greater reduction in pregnancy coercion among the subgroup of women experiencing IPV at baseline in the intervention group (OR, 0.29; 95% CI, 0.09 to 0.91) but no difference between groups in terms of reduction in birth control sabotage, defined by a positive response to experiencing a range of tactics such as “putting holes in the condom so you would get pregnant” and “taking your birth control pills away from you so that you would get pregnant” (OR, 0.71; 95% CI, 0.17 to 2.94).<sup>88</sup> One RCT reported on subtypes of violence only and found mixed results (**Appendix F Table 5**).<sup>89</sup>

### *Quality of Life*

Two RCTs measured changes in QoL following an IPV intervention and found no statistically significant differences between groups.<sup>85, 89, 93</sup> One found no significant difference between groups on the mean SF-12 Mental Composite Score or mean WHOQOL-BREF component scores at 6, 12 or 24 months (mean difference between groups ranged from 1 to 5 points on all 4 component scores) (**Appendix F Table 7**).<sup>85, 93</sup> Another RCT found no statistically significant difference between groups at 3 to 9 months on mean SF-12 Physical Composite Scores (0.37; 95% CI, -0.91 to 1.65) or SF-12 Mental Composite Scores (0.80; 95% CI, -1.16 to 2.77).<sup>89</sup>

### *Mental Health Outcomes*

Three RCTs reported depression outcomes, and one of these also reported anxiety symptoms (**Figure 7**). One found a greater reduction in the percentage of participants with a Hospital Anxiety and Depression Scale (HADS) depression score at or above 8 in the intervention vs. control group at 6 months (OR, 0.4; 95% CI, 0.1 to 1.0) and 12 months (OR, 0.3; 95% CI, 0.1 to 0.7),<sup>85</sup> but not at 24 months (OR, 1.0; 94% CI, 0.4 to 2.9).<sup>93</sup> The second found a greater reduction among the intervention group on Chinese Beck Depression Inventory-II scores between 3 and 9

months (adjusted difference in score change: -2.66, 95% CI, -5.06 to -0.26), however, the difference was below the threshold considered clinically meaningful (a 5-point difference).<sup>89</sup> Finally, one study reported similar changes in scores on the Center for Epidemiologic Studies Short Depression Scale over 6 months, with no significant difference between groups.<sup>94</sup> One RCT reporting on anxiety found no difference between groups in terms of the percentage of women with HADS anxiety score at or above 8 at 6, 12, or 24 months.<sup>85, 93</sup>

## **KQ 5. What are the harms of interventions for IPV in adolescents and adults?**

### **Summary**

Five RCTs (n=1,413) assessing interventions for IPV reported on harms, all are included in KQ 4, and all were included in the previous report. In searches for the current review, we identified one companion study of a previously included RCT reporting on longer terms outcomes.<sup>93</sup> Characteristics of the studies are described above and shown in **Table 3**. Two RCTs specifically surveyed women about potential harms, and three did not describe how harms were ascertained. No study reported significant harms associated with the intervention.

### **Detailed Results**

Five RCTs assessing interventions for IPV reported on harms; all are included in KQ 4. Characteristics of the studies are described above and shown in **Table 3**. One RCT assessing a brief counseling intervention surveyed women at 6, 12, and 24 months about survey participation (including potential harms); there was no difference between groups in the percentage of women who reported potential harms, and authors concluded that no harms were associated with the intervention.<sup>85, 93</sup> Items measured (on a 5-point Likert scale from “strongly agree” to “strongly disagree”) included “I am glad to be a participant in the project” (at 6 months, 2% in the intervention group responded “strongly disagree” compared with 0% of controls) and “I felt judged negatively by practice staff for being a participant in this trial” (at 6 months, no intervention group members strongly agreed compared with 1% of controls). To the item “As a result of participating in this trial, I see the quality of my own life as ...” (respondents answered on a 5-point scale from “better” to “worse”), no intervention or control groups chose “worse” at 6 months. At 6 months, 28 percent in the intervention group and 10 percent in the control group reported that their abusive partners were aware that they had talked to a doctor about relationship issues; at 12 months, the percentage of women reporting abusive partner awareness of participation was 24 percent and 13 percent in the intervention and control arms, respectively. Among women who reported abusive partner awareness of trial participation, the number of negative partner behaviors (e.g., got angry, made her more afraid for herself or her children, or restricted her freedom) was not significantly different between groups. Women in the intervention group reported 0.5 negative behaviors (per 15 women) and 0.7 behaviors (per 23 women) at 6 and 12 months, respectively. In the control arm, the number of negative partner behaviors associated with abusive partner awareness of trial participation was 3.0 (per 5 women) and 0.2 (per 12 women) at 6 and 12 months, respectively. Across all items, the authors report no between-group differences in harms.



In one RCT,<sup>83</sup> conducted at the antenatal clinic of a public hospital in Hong Kong, participants were asked by telephone whether the frequency of violence had increased as a result of their taking part in the study. According to the authors, no adverse events related to participation were reported by women in either group.<sup>83</sup> Three other RCTs reported that no harms were associated with the intervention but did not comment on how harms were measured and assessed.<sup>79, 86, 89</sup>

## **Caregiver Abuse of Older and Vulnerable Adults Results by Key Question**

### **KQ 1. Does screening in healthcare settings for current, past, or increased risk for abuse and neglect in older and vulnerable adults reduce exposure to abuse and neglect, physical or mental morbidity, or mortality?**

We found no eligible study addressing this KQ.

### **KQ 2. How effective are screening questionnaires or tools in identifying older and vulnerable adults with current or past caregiver abuse and neglect?**

#### **Summary**

Two studies reported on the accuracy of different tools to assess abuse and neglect among adults age 65 years or older. One that enrolled participants presenting for routine dental care found poor accuracy for Hwalek-Sengstock Elder Abuse Screening Test (sensitivity 46% and specificity 73% for detecting physical or verbal abuse). The second (newly identified in this update) enrolled participants presenting to multiple U.S. EDs who were not critically ill and found that the Emergency Department Senior Abuse Identification (ED Senior AID) screening tool had a sensitivity of 94 percent (95% CI, 71 to 99) and a specificity of 84 percent (95% CI, 76 to 91).

#### **Detailed Results**

One newly identified study evaluated an ED-based screening tool to identify abuse in older adults<sup>97</sup> and one was carried forward from the previous review.<sup>41</sup> No prior or new studies were identified on the effectiveness of screening questionnaires or tools to identify abuse or neglect in vulnerable adults.

The newly included RCT (n=18) assessed the accuracy of the ED Senior AID screening tool. Eligible participants were age 65 years or older, English speaking, and not critically ill from one ED in each of three states: North Carolina, Florida, New Jersey. Participant enrollment occurred only during daytime hours on weekdays. The screening tool consisted of a brief mental status assessment, several questions about dependency and abuse, and a physical exam for participants deemed unable to report abuse based on the research nurse's assessment. Research nurses had at least 3 years of clinical experience and were trained in the use of the tool, and suspicion for abuse of older adults was based on the judgment of the research nurse after applying the

screening tool rather than a score derived from the tool. The reference standard was a structured social and behavioral evaluation (SSBE) conducted immediately after the ED Senior AID screening tool by ED or hospital social workers or members of the research staff if a social worker was unavailable (n=3). The SSBE included elements from validated instruments including the Geriatric Mistreatment Scale, Conflicts Tactic Scale (CTS), QUALCARE Scale, Food Insecurity Access Scale, and an assessment to identify poverty. The SSBE was conducted on all participants with a positive screen and a 10 percent random sample of participants with a negative screen. All personnel conducting the SSBE were blinded to the screening results. Results of the reference standard were determined by a panel of five experts who were blinded to the initial screening results.

Of 1,685 eligible patients, 916 consented to participate and completed the study. Most participants were between ages 65 and 74 years (57%), female (55%), White (69%), and living independently (92%). Thirty-three participants (3.6%) screened positive with the ED Senior AID tool. The SSBE was completed for 125 participants, including 17 of whom were considered positive cases of abuse. The ED Senior AID had a sensitivity of 94 percent (95% CI, 71 to 99) and a specificity of 84 percent (95% CI, 76 to 91). For a presumed prevalence of abuse of 5 percent, the estimated positive and negative predicted values were 24 percent (95% CI, 12 to 43) and 99 percent (95% CI, 95 to 100), respectively.

The prior review included one study that evaluated screening for abuse and neglect among older adults using the H-S/EAST. Participants were English or Spanish speaking and age 65 years or older (N=139) who presented for routine dental care at an academic dental clinic in New York State. Participants received caregiver assistance (paid or unpaid) for at least 2 hours per week, agreed to be screened for abuse again at 6 months following the initial screening, and scored 18 or higher on the Mini Mental Status Examination<sup>98</sup>. Study participants had a mean age of 75 years and most were female (60%). The H-S/EAST is a 15-item tool, and positive results were defined as three or more positive responses to seven tool questions (i.e., questions 5, 7, 9, 10, 11, 13, or 15). The reference standard was the violence/verbal aggression scales of the CTS; a positive CTS was defined as reporting of at least one item occurring at least once in the prior year for at least two of the following CTS scales: verbal aggression, minor violence, and severe violence.

Forty-one percent of participants tested positive using the CTS. The H-S/EAST had a sensitivity of 46 percent (95% CI, 32 to 59) and a specificity of 73 percent (95% CI, 62 to 82). The positive likelihood ratio was 2 (95% CI, 2 to 2), and the negative likelihood ratio was 1 (95% CI, 1 to 1). The positive predictive value was 54 percent (95% CI, 43 to 65), and the negative predictive value was 66 percent (95% CI, 60 to 72).

When comparing the individual components of the CTS with the H-S/EAST, the H-S/EAST has a sensitivity of 46 percent (95% CI, 32 to 59) to detect verbal aggression, 67 percent (95% CI, 22 to 96) to detect minor violence, and 75 percent (95% CI, 19 to 99) to detect severe violence. When comparing the individual components of the CTS with the H-S/EAST, the H-S/EAST has a specificity of 73 percent (95% CI, 62 to 82) to detect verbal aggression, 67 percent (95% CI, 58 to 75) to detect minor violence, and 67 percent (95% CI, 58 to 74) to detect severe violence. Positive likelihood ratios were 2.0 for all subtypes of violence, and negative likelihood ratios

ranged from 0.4 to 1.0. Positive predictive values for individual subtypes of violence ranged from 6 to 54 percent; similarly, negative predictive values ranged from 99 to 66 percent.

**KQ 3. What are the harms of screening for abuse and neglect in older and vulnerable adults?**

We found no eligible study addressing this KQ.

**KQ 4. How well do interventions reduce exposure to abuse and neglect, physical or mental morbidity, or mortality among screen-detected older and vulnerable adults with current, past, or increased risk for abuse and neglect?**

We found no eligible study addressing this KQ.

**KQ 5. What are the harms of interventions for abuse and neglect in older and vulnerable adults?**

We found no eligible study addressing this KQ.

## Chapter 4. Discussion

**Tables 4 and 5** provide a summary of findings in this evidence review. These tables are organized by KQ and provide a summary of the main findings along with a description of consistency, precision, quality, limitations, strength of evidence, and applicability.

### Evidence for the Benefits and Harms of Screening for IPV

Overall, consistent evidence from three RCTs (3,759 participants) found no benefit of screening adult women for IPV.<sup>58, 60</sup> Studies varied some in terms of setting, screening process, and comparisons; however, none found a statistically significant reduction in IPV among the screened vs. nonscreened control groups over 3 to 18 months of followup. Two RCTs also measured QoL and found no significant difference between groups.<sup>58, 60</sup> We found no RCTs of screening enrolling men or adolescents, and none focused on pregnant women or reported outcomes separately by pregnancy status.

In one RCT enrolling participants from various Canadian healthcare settings, limitations included high overall attrition (42%) with higher abuse scores among those with missing data.<sup>60</sup> In addition, the approach used in the control group may have biased results toward the null; participants randomized to the control group were provided with information cards listing local resources for women experiencing IPV and underwent extensive questioning about IPV over 18 months of followup.<sup>60</sup> These types of activities have the potential to influence control group participants' behavior.<sup>60</sup> In the other two included RCTs, neither questioned participants in the control group about IPV at baseline (and both measured IPV at only one time point). In addition, the RCT set in U.S. primary care centers included two nonscreened control groups (one was given a list of partner violence resources, while the other was not); there were no significant differences in IPV incidence, QoL, or healthcare utilization between women allocated to the control group that received the partner violence resource list group and the group that did not receive the resource list.<sup>58, 62</sup>

Screening practices and interventions provided to women who screened positive for IPV varied and may not be applicable to many current U.S. primary care settings. For example, in the RCT enrolling participants from various Canadian healthcare settings, participants were recruited between 2005 and 2006, and authors imply the positive IPV screen was flagged for clinicians by placing it in a paper chart, and the response to the positive screen was left to the discretion of the clinician.<sup>60</sup> The two others included more standardized interventions for those who screened positive—either a brief/standardized video focused on advocacy and support plus a list of resources or information about referral options and an additional clinical assessment to assess safety (plus an on-site support provided for those with a safety concern). Whether these interventions are widely applicable may depend on the availability of similar resources for IPV, support for creating and maintaining a current list of resources and similar advocacy video intervention, or staffing resources to assess and address safety concerns that were available in the trial set in an ED.

Potential harms of screening asymptomatic populations for abuse include labeling, stigma, and risk of increased violence. Of the two RCTs reporting on harms of screening, only one actively

monitored harms using prespecified outcomes and found no differences for women who were either exposed or not exposed to IPV;<sup>60</sup> however, outcomes were measured over a short duration following screening (within 2 weeks). Other potential harms include false-positive screening results that lead to more in-depth inquiry or referrals from health professionals that would not lead to benefit and may cause labeling. Separate from false-positive results, not all true-positive screening results require a referral or intervention due to the person's needs and circumstances. For this topic, the gold standard for determining abuse is a longer-form structured questionnaire (e.g., CTS-2) and/or interview. For screening programs in primary care settings, positive tests are not generally confirmed with a test such as the CTS-2 but are rather ideally followed by a conversation with a healthcare provider about safety counseling, preferences for referrals, or other resources.

## **Accuracy of Screening Questionnaires or Tools for Identifying Asymptomatic Populations Experiencing IPV**

Screening tools are available for clinical practice that may reasonably identify women experiencing past-year IPV. Included studies varied in terms of whether screening tools were evaluated to detect recent (12-month) IPV exposure vs. current or lifetime IPV exposure. Included populations and settings were also heterogeneous.

The estimates of screening test accuracy for detecting past-year IPV are derived from populations with a prevalence of IPV (based on a reference standard) of 10 to 29 percent. The two studies that enrolled participants from primary care or mixed settings (primary care, OBGYN, and EDs) reported an IPV prevalence of 23 and 14 percent, respectively. This is similar to the prevalence rate reported by the KQ 1 RCT enrolling women from U.S. primary care settings (15%). In a population of 100,000 women with a 15 percent prevalence of IPV, use of the HARK screener (80% sensitivity and 95% specificity) would result in 81,000 true-positive tests and 5,000 false-positive tests (positive predictive value, 83%). Use of the WAST, with slightly higher sensitivity (87%) but lower specificity (89%) than the HARK, in a population with the same IPV prevalence (15%) would result in 87,484 true-positive tests and 11,000 false-positive tests (positive predictive value, 56%).

The meaning of false-positive tests is not clear. As noted previously, the reference standard used to assess screening tool accuracy is a longer-form structured questionnaire. False-positive results may indicate a misunderstanding of the screening question. Alternatively, women with a false-positive test may have experienced IPV but chose to answer the reference standard negatively because disclosure of violence may be uncomfortable for them.

## **Benefits and Harms of IPV Interventions**

Overall, evidence from 13 RCTs (n=7,425) evaluated interventions for women with screen-detected IPV was imprecise and often inconsistent and focused on heterogeneous interventions that varied in content, delivery setting, and intensity. Interventions targeted to pregnant populations generally included components specific to supporting other pregnancy-related health problems and/or supporting parenting roles. For IPV incidence, included RCTs used different measures (e.g., CTS-2 scores, incidence of reproductive coercion) and often reported outcomes differently for the same measure (e.g., mean CTS-2 scores, incidence rate of violent episodes

measured by the CTS-2). Most RCTs found lower rates of IPV over time in both groups, but few found a statistically significant difference between groups. Few studies enrolling similar populations and evaluating similar types of interventions reported on other outcomes (e.g., QoL, reproductive outcomes).

The RCT assessing behavioral counseling during prenatal care that found a reduction in both IPV and some adverse neonatal outcomes has limitations. The intervention targeted multiple risk factors (smoking, environmental tobacco smoke exposure, depression, and IPV);<sup>90</sup> improvement in birth outcomes among the women who had experienced IPV at baseline may not be attributable to IPV counseling. For example, among the subgroup of women reporting IPV at baseline, most (62%) reported being depressed, and those randomized to the intervention also received counseling for depression in addition to IPV.<sup>92</sup> Improvement in birth outcomes may be attributable to counseling for depression rather than IPV counseling.

Across the six RCTs enrolling nonpregnant women, most (4 RCTs) found no significant difference between groups in overall IPV exposure or combined physical and sexual violence (rates of IPV were either similar across groups or slightly lower among women in the control group) and one found mixed results for subtypes of IPV.

Few RCTs reported on adverse effects of interventions. None found a statistically significant increase in IPV rates in the intervention group, and most reported that no adverse effects of the intervention were detected but did not specify whether harms outcomes were prespecified or how they were collected.

## **Evidence for the Benefits and Harms of Screening for Caregiver Abuse of Older and Vulnerable Adults**

We found no screening trials of abuse of older and vulnerable adults.

### **Accuracy of Screening Questionnaires or Tools for Identifying Asymptomatic Populations With Caregiver Abuse of Older and Vulnerable Adults**

Two included studies assessed the accuracy of different tools to detect abuse and neglect of older adults (age 65 years or older) in diverse settings and populations. One assessed the accuracy of the H-S/EAST screening among a population of older adults presenting for routine dental care with a relatively high prevalence of maltreatment (41%) based on the reference standard (CTS violence/verbal aggression scales). The second study enrolled participants presenting to multiple U.S. EDs who were deemed not critically ill. Populations enrolled in these studies may not be applicable to those presenting to routine primary care settings. No studies were found on the effectiveness of screening questionnaires or tools in identifying abuse and neglect of vulnerable adults.

## **Benefits and Harms of Interventions for Caregiver Abuse of Older and Vulnerable Adults**

We found no trials of interventions for older adults or vulnerable adults with screen-detected abuse.

### **Limitations**

This review did not evaluate interventions focused on the primary prevention of IPV or caregiver abuse of older and vulnerable adults, or evidence related to screening and interventions for perpetrators of abuse. The scope of this review focused on unselected or asymptomatic populations without signs or symptoms of abuse. We did not assess the literature on whether certain physical or psychological symptoms should trigger an assessment of abuse (i.e., “case finding”) for any type of abuse. This review did not evaluate provider or patient preferences for how screening is implemented in primary care (e.g., delivery platform and personnel, response to a positive screen).

For KQ 3 (harms of screening), we limited to study designs that had a concurrent control group. This limit excluded uncontrolled studies that report results from single cohorts or focus groups of women who were offered IPV screening. This may have excluded some studies that measured harms specific to screening. However, an older update of this topic (2012) suggested that results from uncontrolled studies were associated with significant methodological limitations, and results did not show significant harm related to screening; some studies found that a minority of respondents indicated discomfort with screening (particularly among those with prior IPV), infringement of privacy, worries about experiencing increased abuse after disclosing IPV, and feelings of sadness or depression.<sup>99</sup> For KQ 2 (accuracy of screening), we included studies from ED settings, which may limit applicability to primary care. Populations enrolled from ED settings may be more likely to include participants with acute injuries or other symptoms that may be related to abuse.

### **Future Research Needs**

None of the included RCTs of screening enrolled populations from prenatal settings only, or reported outcomes among women who were screened during prenatal care. Future studies could assess whether screening in this group results in improved health outcomes given that some RCTs of treatment, which are tailored to this population, show benefit. In addition, future RCTs of screening should report on potential harms over a sufficient period following screening to assess potential psychosocial harms.

Although one RCT of treatment (behavioral counseling) during prenatal care found a reduction in both IPV and some adverse neonatal outcomes, it is not clear whether the benefit was attributable to the IPV counseling component alone vs. counseling for IPV and other co-occurring risk factors (e.g., smoking or depression) at the same time. This study also enrolled participants from a minority-serving clinic in an urban setting between 2001 and 2003; it is unclear if results would be applicable to other populations or settings. Future studies could assess

whether similar behavioral counseling interventions for pregnant women with screen-detected IPV improve health outcomes, for example, among populations enrolled from different U.S. primary care settings (e.g., rural settings). Finally, future research is needed to assess the accuracy of screening tools in more diverse populations, including men and same-sex and transgender populations. Although there have been efforts to develop tools for use among transgender populations,<sup>100-102</sup> no eligible studies were identified that externally validated these tools. In addition, studies assessing interventions among more diverse populations are needed, including same-sex couples and transgender populations.

Several gaps and future research needs relate to evidence specific to screening for abuse in older and vulnerable adults. We found no eligible RCTs of screening or interventions for these populations. Studies of screening instruments are lacking; the two included studies focus on different tools and settings (ED and dental clinic). Screening and interventions for this population are likely to be different than IPV given that some older and vulnerable adults may not have sufficient physical, mental, or financial abilities to engage in screening or interventions. For these situations, instruments could be targeted toward caregivers. Additional challenges to this research may include the legal requirements related to disclosure, underlying medical conditions of patients (e.g., cognitive impairments for older persons), and dependence on the perpetrator for caregiving and access to medical care, among other issues.

## Conclusions

Although available screening tools may reasonably identify women experiencing past 12-month or current IPV, RCTs of IPV screening in adult women do not show a reduction in IPV or an improvement in QoL over 3 to 18 months of followup. Interventions for women with screen-detected IPV show inconsistent results; limited evidence from some RCTs suggested that home visiting interventions and behavioral counseling interventions that address multiple risk factors may lead to reduced IPV among perinatal populations. No eligible studies assessed screening of vulnerable adults or treatment for caregiver abuse among older and vulnerable adults.



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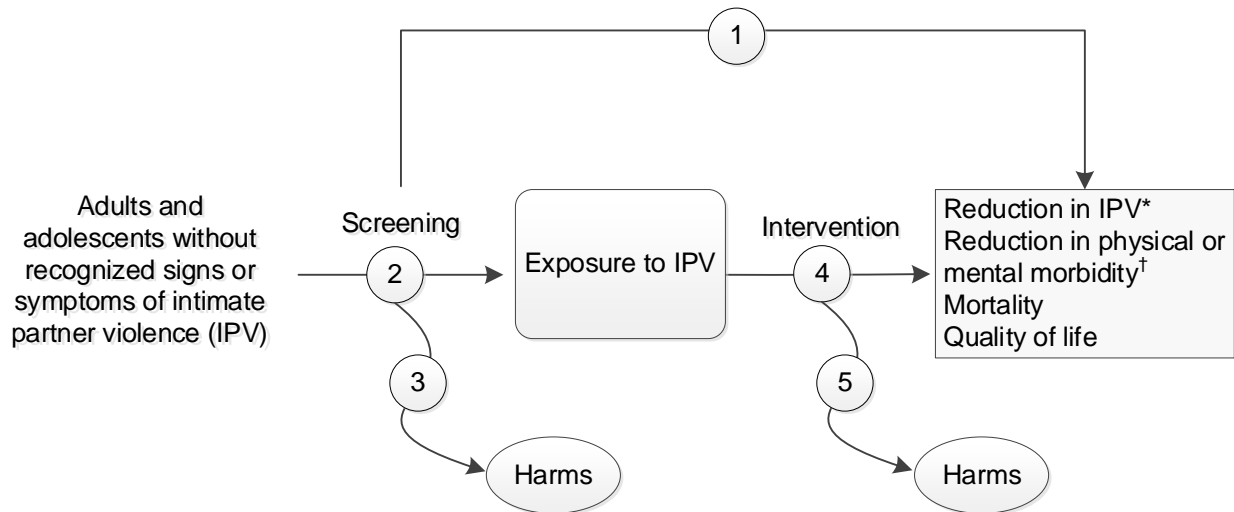
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**Figure 1. Intimate Partner Violence Analytic Framework**



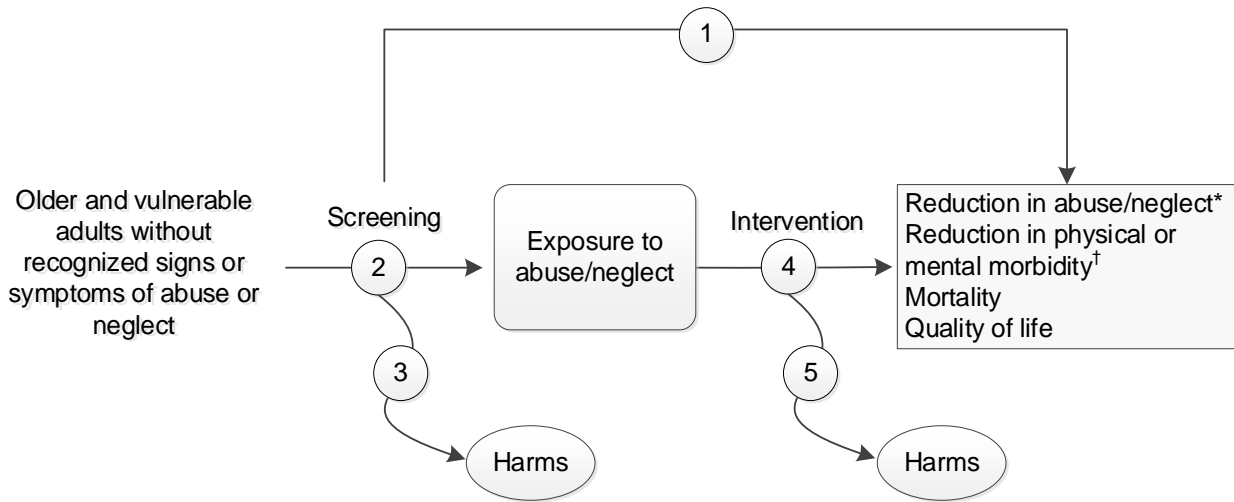
\* Includes reduction in the frequency or severity of IPV.

† Includes acute and chronic morbidity from physical abuse (e.g., fractures, dislocations, brain injury), sexual abuse (e.g., unwanted pregnancy, sexually transmitted infections), psychological abuse (e.g., depression, anxiety, post-traumatic stress disorder), and financial abuse (e.g., limiting access to money or other resources); healthcare utilization attributed to any form of abuse/neglect and associated physical and mental morbidity (e.g., rates of emergency room visits); adverse perinatal outcomes (e.g., miscarriage, low birth weight); social isolation; and quality of life.

**Abbreviations:** IPV=intimate partner violence.



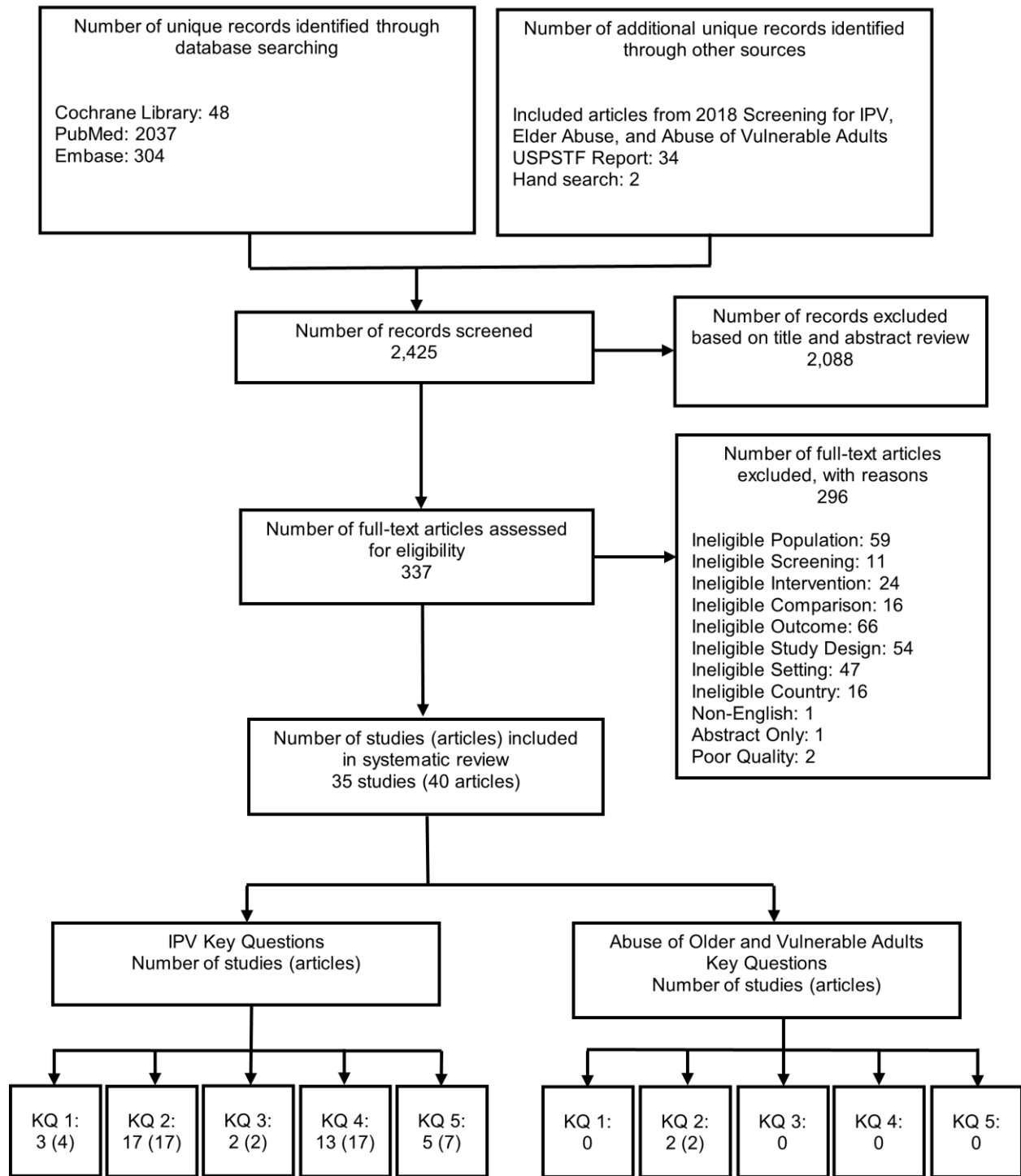
**Figure 2. Abuse of Older and Vulnerable Adults Analytic Framework**



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

† Includes acute and chronic morbidity from physical abuse (e.g., fractures, dislocations, brain injury), sexual abuse (e.g., unwanted pregnancy, sexually transmitted infections), psychological abuse (e.g., depression, anxiety, post-traumatic stress disorder), and financial abuse (e.g., misuse of assets by a caregiver); healthcare utilization attributed to any form of abuse/neglect and associated physical and mental morbidity (e.g., rates of emergency room visits); adverse perinatal outcomes (e.g., miscarriage, low birth weight); social isolation; and quality of life.

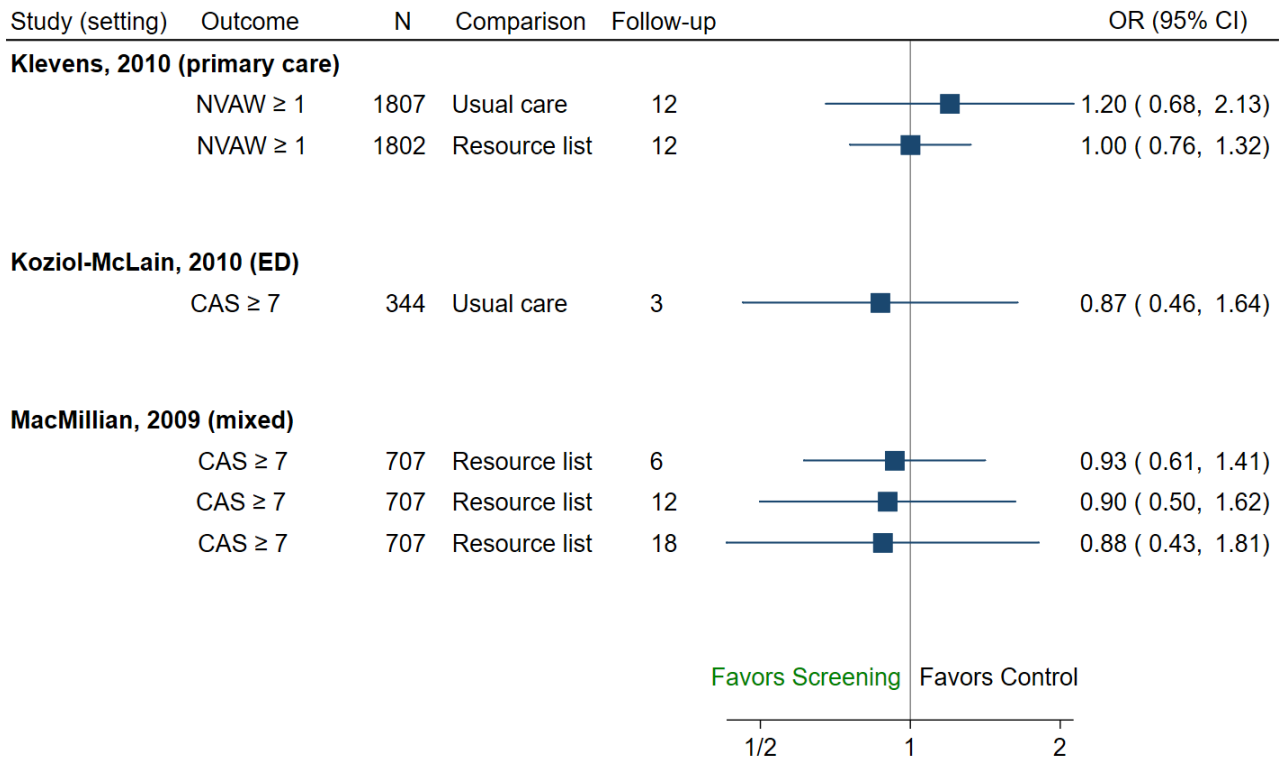
**Figure 3. Summary of Evidence Search and Selection Diagram**



Note: The sum of the number of studies per KQ exceeds the total number of studies because some studies were applicable to multiple KQs.

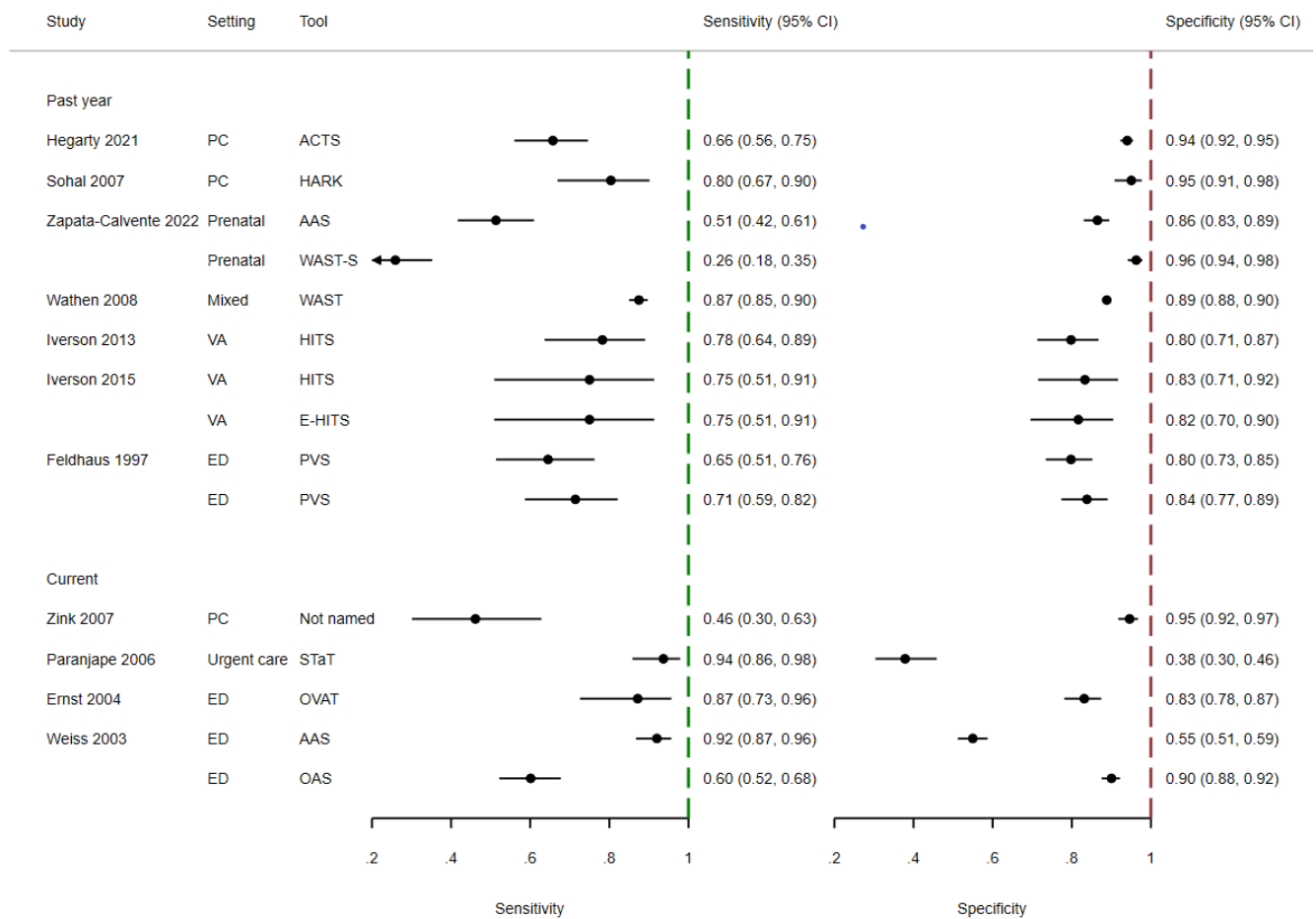
**Abbreviations:** IPV=Intimate Partner Violence; KQ=key question.

**Figure 4. Benefit of IPV Screening Interventions (KQ 1)**



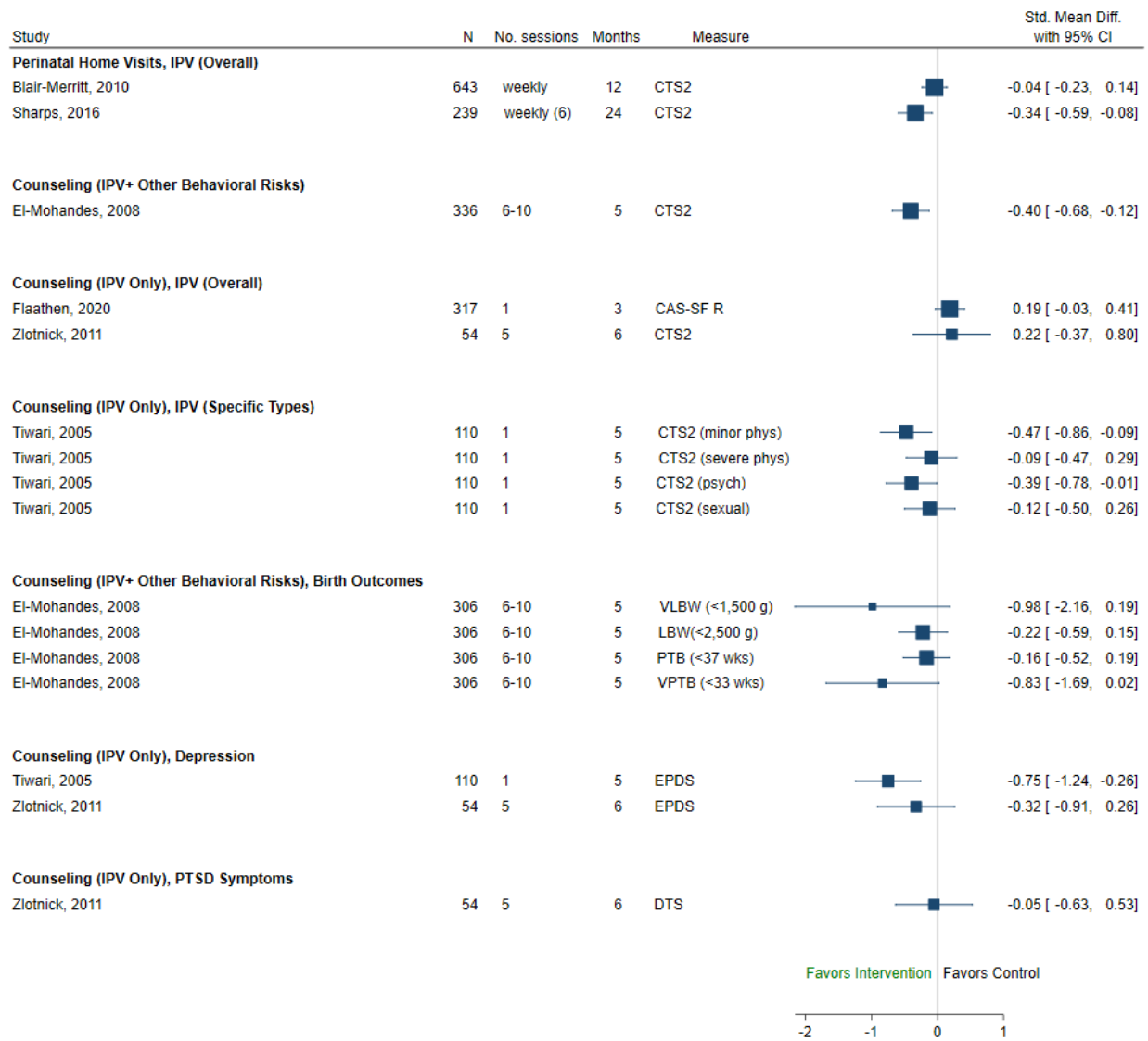
**Abbreviations:** CI=confidence interval; CAS=Composite Abuse Scale; ED=emergency department; IPV=intimate partner violence; KQ=key question; N=sample size, NVAW=National Violence Against Women Survey; OR=odds ratio.

**Figure 5. Accuracy of IPV Screening Tools for Detecting Past-Year or Current IPV Exposure (KQ 2)**



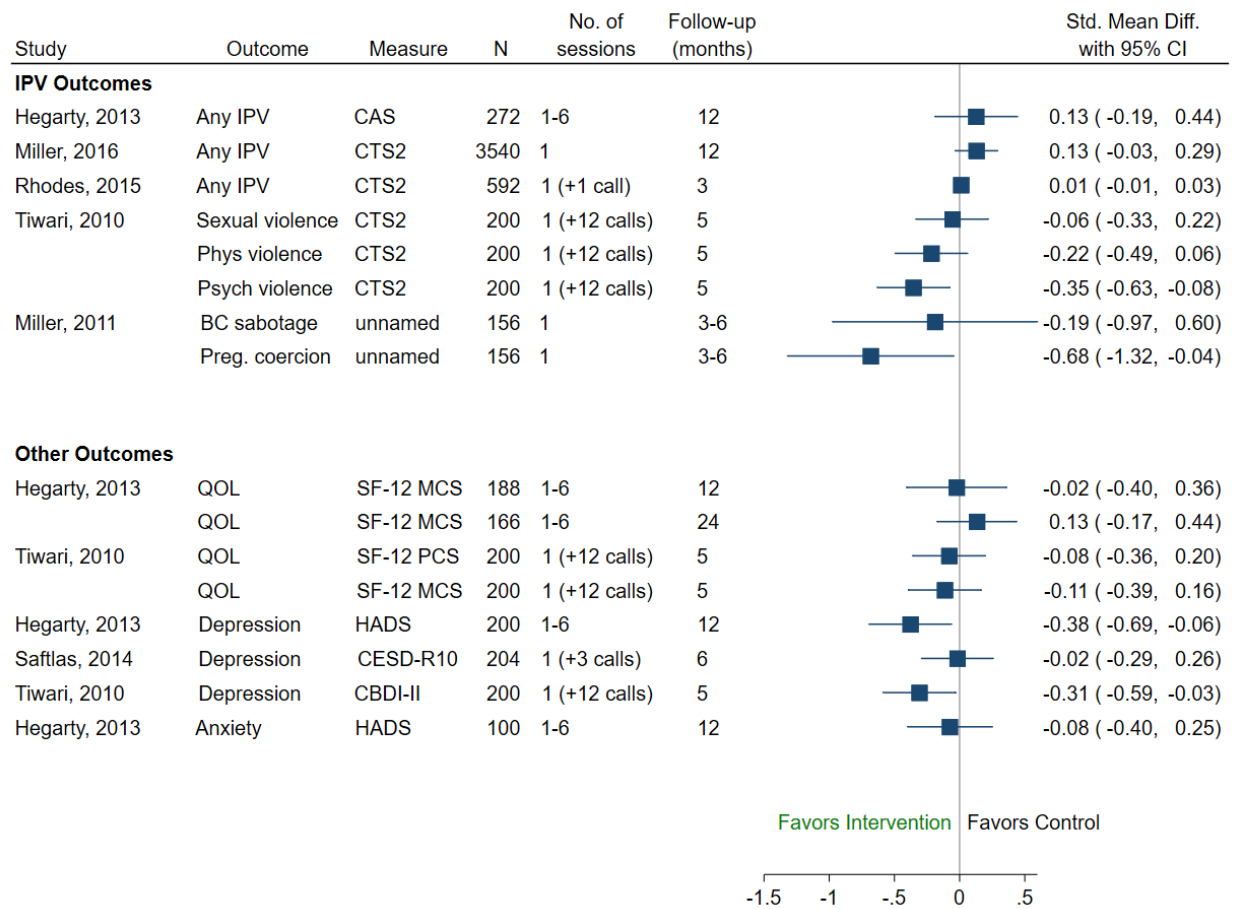
**Abbreviations:** AAS=Abuse Assessment Screen; ACTS= Afraid, Controlled, Threatened, Slapped or physically hurt; CI=confidence interval; ED=emergency department; E-HITS=Extended HITS; HARK=Humiliation, Afraid, Rape, Kick; HITS=Hurt, Insulted, Threaten, Scream; IPV=intimate partner violence; KQ=key question; OAS=Ongoing Abuse Screen; OVAT=Ongoing Violence Assessment Tool; PC=primary care; PVS=Partner Violence Screen; STaT=Slapped, Things, Threaten; VA=Veterans Administration; WAST=Woman Abuse Screening Tool; WAST-S=WAST-SHORT.

**Figure 6. Benefit of IPV Interventions Enrolling Pregnant or Postpartum Populations (KQ 4)**



**Abbreviations:** CAS=Composite Abuse Scale; CAS-SF R=CAS Short Form (Revised); CI=confidence interval; CTS2=Conflict Tactics Scale 2; Diff=difference; EPDS=Edinburgh Postnatal Depression Scale; IPV=intimate partner violence; KQ=key question; N=sample size; No.=number; Std.=standardized; phys.=physical; psych=psychological; PTSD=post-traumatic stress disorder.

**Figure 7. Benefit of IPV Interventions Enrolling Nonpregnant Populations (KQ 4)**



**Abbreviations:** BC=birth control; CAS=Composite Abuse Scale; CBDDI-II=Chinese Beck Depression Inventory-II; CESD-R10=Center for Epidemiologic Studies Short Depression Scale-10 Revised; CI=confidence interval; CTS2=Conflict Tactics Scale 2; Diff.=difference; HADS=Hospital Anxiety and Depression Scale; IPV=intimate partner violence; KQ=key question; N=sample size; No.=number; QoL=quality of life; SF-12=Short Form Health Survey-12 Item; Std.=standardized.

**Table 1. IPV KQ 1: Characteristics of Included Randomized, Controlled Trials**

Author, Year Quality Rating	Description of Screening Intervention	Description of Comparison(s)	Recruitment Setting, Country	Source Population N	% Race/Ethnicity	Mean Age (SD), Range	% With Past-Year IPV
Klevens, 2012 <sup>58</sup> Klevens, 2015 <sup>62</sup> Good	Computerized screening (3-item Partner Violence Screen); women with a positive response to 1 or more questions were shown a brief video providing support, information about a hospital-based IPV advocacy program, encouraged to seek help, and given a printout with resources (e.g., local partner violence advocacy programs, 24-hour hotlines, women’s shelters).	IPV resource list (no screening; all women received an IPV resource list)  Control group: No screening; no-partner violence list control group	10 primary healthcare clinics, U.S.	Women age 18 years or older seeking clinical services who could be separated from a partner, or child older than age 3 years  N=2,708	White non-Latina: 63 Non-Latina African American: 55 Latina: 37 Other: 3	39 (15)  NR	15*
Koziol-McLain, 2010 <sup>59</sup> Fair	In-person screening (3-item Intimate Partner Violence screen conducted by a research assistant); if 1 or more positive responses, women received a brief† statement about the unacceptability of violence, were asked additional questions about safety, and received information about referral options. Women with a positive response to safety questions‡ had additional services while in the ED.	Usual care (no formal ED IPV screening policy)	1 ED, New Zealand	Women age 16 years or older presenting to the ED for care; 19% of included sample were presenting for an acute injury  N=344	Māori: 38 New Zealand European: 61 Non-Māori, non-New Zealand European: 2	Median: 40 (IQR: 27–59)  16 to 94 years	18 (Lifetime prevalence: 51%)
MacMillan, 2009 <sup>60</sup> Fair	In-person screening (8-item Woman Abuse Screening Tool) before clinic visit, clinician notification of women who screened positive;§ all women were given a card that listed contact information of local agencies and hotlines for women exposed to violence.	No screening before healthcare visit (screening completed after the clinic visit); at enrollment, women received the same resource card as the screening group	12 primary care sites; 11 EDs; and 3 OBGYN clinics, Canada	Women ages 18 to 64 years who had a male partner within the last 12 months and could be separated from those accompanying them  N=707	NR	34 (NR)  18 to 64 years	12

\* Prevalence refers to the year before enrollment and based on recall at 12 months after enrollment. Measured using 18 questions from the National Violence Against Women Survey.

## Table 1. IPV KQ 1: Characteristics of Included Randomized, Controlled Trials

† Estimate based on a questionnaire described by authors as a compilation of the Partner Violence Screen and Abuse Assessment Screen that asks about current (past-year) abuse. Considered positive if one of three questions was answered positively.

‡ Women who screened positive were asked questions about personal danger or children/elderly in the home who are in danger. If questions indicated a safety concern, the ED provider was notified, and a referral was made to the hospital social worker or community specialist.

§ The completed screening questionnaire was placed in the chart. Any discussion of the positive finding was left to the discretion of the treating clinician.

**Abbreviations:** ED=emergency department; KQ=key question; IPV=intimate partner violence; IQR=interquartile ratio; N=sample size; NR=not reported; OBGYN=obstetrics and gynecology; SD=standard deviation; U.S.=United States.



**Table 2. IPV KQ 2: Characteristics of Included Studies**

First Author, Year Quality Rating	Screener(s)	Timing of IPV Exposure	Population N	Recruitment Setting Country	Age in Years, Mean (SD), Range	% Female	% Pregnant	Race/Ethnicity (%)
Chen, 2005 <sup>69</sup> Fair	HITS	Current	Women age 18 years or older, predominantly Hispanic, currently involved with a partner  N=113	Family practice clinics  U.S.	36 (NR)  Range: NR	100	9	Non-Hispanic White: 36 Non-Hispanic Black: 12 Non-Hispanic Other: 2 Hispanic: 50
Dubowitz, 2007 <sup>70</sup> Fair	PSQ	Past year	English-speaking adult caregivers with a child younger than age 6 years seen for a well-child visit  N=200	Pediatric primary care clinic  U.S.	Median: 24  Range NR	94 (mothers)	NR	Black: 92 White: 3 Mixed: 5
Ernst, 2004 <sup>65</sup> Fair	OVAT	Current	English-speaking patients at the ED  N=306	ED  U.S.	34 (10)  Range: NR	70	NR	Caucasian: 49 African American: 16 Hispanic: 20 Asian or other race: 15
Feldhaus, 1997 <sup>66</sup> Fair	PVS	Past year	English-speaking women age 18 years or older at ED who were noncritical  ISA, N=255 CTS, N=230	ED  U.S.	36 (16)  Range: NR	100	NR	Black: 19 White: 45 Hispanic: 30 Other: 6
Hegarty, 2021 <sup>64</sup> Fair	ACTS	Past year	Women age 16 years or older who were not accompanied by another person  N=1,067	Antenatal clinic  Australia	33.2 (4.5)  Range:18 to 48 years	100	100	Aboriginal or Torres Strait Islander: 1 Born outside Australia: 45
Iverson, 2013 <sup>39</sup> Fair	HITS	Past year	Female veterans age 18 years or older who were found through VHA database and who reported an intimate relationship in past year.  N=160	Mailed survey  U.S.	48 (NR)  Range: NR	100	NR	White: 80 Non-White: 20

**Table 2. IPV KQ 2: Characteristics of Included Studies**

First Author, Year Quality Rating	Screener(s)	Timing of IPV Exposure	Population N	Recruitment Setting Country	Age in Years, Mean (SD), Range	% Female	% Pregnant	Race/Ethnicity (%)
Iverson, 2015 <sup>73</sup> Fair	HITS E-HITS	Past year	Female veterans age 18 years or older who were found through VHA database and who reported an intimate relationship within the past year  N=80	Mailed survey U.S.	49 (NR) Range: NR	100	NR	White: 86 Non-White: 14
Koziol-McLain, 2001 <sup>74</sup> Fair	BRFSS (violence screen)	Prediction of future (3 to 5 months) partner abuse	English-speaking women age 18 years or older N=409	Telephone survey U.S.	46 (16) 18 to 93	100	NR	White: 91 Black: 4 Asian/Pacific Islander: 2 American Indian/Alaskan Native: 1 Other: 3 Hispanic/Spanish origin: 12
MacMillan, 2006 <sup>75</sup> Fair	PVS WAST	Past year	English-speaking (and reading) women ages 18 to 64 years presenting for their own healthcare visit who were not too ill to participate  N=Unclear; 2,339 completed the gold standard CAS	2 family practices, 2 EDs, and 2 women's health clinics  Canada	37 (12) Range: NR	100	NR	NR
Mills, 2006 <sup>67</sup> Fair	HITS PVS	Past year	Men age 18 years or older in the ED who were triaged to the medical or trauma sections  N=53	ED U.S.	40 (11) 20 to 62	0	NA	African American: 75 White: 22 Other: 4
Paranjape, 2003 <sup>68</sup> Fair	STaT	Lifetime	English-speaking women ages 18 to 64 years in the nonacute section of ED  N=75	ED U.S.	36 (10) Range: NR	100	NR	African American: 40 Caucasian: 34 Black Caribbean: 11 Other: 15

**Table 2. IPV KQ 2: Characteristics of Included Studies**

First Author, Year Quality Rating	Screener(s)	Timing of IPV Exposure	Population N	Recruitment Setting Country	Age in Years, Mean (SD), Range	% Female	% Pregnant	Race/Ethnicity (%)
Paranjape, 2006 <sup>72</sup> Fair	STaT	Current or most recent relationship	English-speaking women ages 18 to 65 years N=240	Urgent care U.S.		100	NR	African American: 91* Other 9
Sohal, 2007 <sup>38</sup> Fair	HARK	Past year	Women age 17 years or older who had been in an intimate relationship in the last year N=232	General practice waiting rooms U.K.	35 (NR) 18 to 70	100	NR	White British: 40 Black British, African, or Caribbean: 25 Indian, Pakistani, or Bangladeshi: 18
Wathen, 2008 <sup>40</sup> Fair	WAST	Past year	English-speaking (and reading) women ages 18 to 64 years with a male partner in the last year N=5,604	Primary, acute, and specialty care centers Canada	Overall NR Range: NR Screen group: 39 (NR) Range: NR	100	Overall: NR Screen group: 8	NR
Weiss, 2003 <sup>76</sup> Fair	OAS AAS	Current	ED patients with a current partner who were not too ill to participate (due to trauma, drug overdose, alcohol intoxication, or other condition) N=856	ED U.S.	36 (NR) Range: NR	62	NR	White: 51 African American: 22 Hispanic: 18
Zapata-Calvente, 2022 <sup>63</sup> Fair	WAST-Short AAS	Before pregnancy During pregnancy	Women attending first and third trimester visits N=592	Public primary care antenatal clinic Spain	31.82 (5.61) NR	100	100	Nationality Spanish: 88 Other: 9 Missing: 9 Race/Ethnicity NR

**Table 2. IPV KQ 2: Characteristics of Included Studies**

First Author, Year Quality Rating	Screener(s)	Timing of IPV Exposure	Population N	Recruitment Setting Country	Age in Years, Mean (SD), Range	% Female	% Pregnant	Race/Ethnicity (%)
Zink, 2007 <sup>71</sup> Fair	Unnamed <sup>†</sup>	Current	English-speaking mothers in a relationship with a steady partner for 1 year or longer and at least 1 child ages 3 to 12 years N=393	Pediatric and family medicine clinics U.S.	Median: 31 Range: 18 to 58	100	NR	White: 49 African American/Other: 51

\* Only African American reported.

<sup>†</sup> Five-item unnamed screener was designed to assess relationship quality and safety using nongraphic language.

**Abbreviations:** AAS=Abuse Assessment Screen; BRFSS=Behavioral Risk Factor Surveillance System; CAS=Composite Abuse Scale; CTS=Conflict Tactics Scale; ED=emergency department; HARK=Humiliation, Afraid, Rape, Kick; HITS=Hurt, Insult, Threaten, Scream; E-HITS=Extended HITS; IPV=intimate partner violence; ISA=Index of Spouse Abuse; KQ=key question; N =sample size; NR=not reported; OAS=Ongoing Abuse Screen; OVAT=Ongoing Violence Assessment Tool; PSQ=Parent Screening Questionnaire; PVS=Partner Violence Screen; SD=standard deviation; STaT=Slapped, Things, Threaten; U.K.=United Kingdom; U.S.=United States; VHA=Veterans Health Administration; WAST=Woman Abuse Screening Tool.

**Table 3. IPV KQ 4: Characteristics of Included Randomized, Controlled Trials**

First Author, Year	Study Name	Intervention	Control	Recruitment Setting, Country	Population	N	% F	% Race/Ethnicity	Mean Age (SD)
Bair-Merritt, 2010 <sup>80</sup>	Fair	Home visits from para-professionals over 3 years;* direct services related to parenting, conflict resolution, emotional support; linking families to community services, including IPV shelters/advocacy groups	Usual care	Hawaiian hospitals U.S.	Mothers age 18 years or older who gave birth between 1994 and 1995 on Oahu to children rated as high risk for maltreatment	643	100	Native Hawaiian or Pacific Islander: 33 Asian or Filipino: 28 Caucasian: 12 No primary ethnicity or other: 27	NR; % by age range: 18 years or younger: 22 19 to 25 years: 47 26 years or younger: 31
El-Mohandes, 2008 <sup>90</sup> Kiely, 2010 <sup>91</sup> El-Mohandes, 2011 <sup>92</sup>	Fair	Counseling delivered during prenatal visits (4 to 8 sessions) and postpartum visits (2 sessions) aimed at reducing behavioral risks (depression, IPV, smoking, and tobacco exposure) <sup>†</sup>	Usual care	6 prenatal care sites in the District of Columbia U.S.	African American women age 18 years or older, 28 weeks or under of gestation who screened positive for depression, IPV, smoking, or tobacco exposure	913	100	African American: 100	25 (SE 0.2)
Flaathen, 2022 <sup>82</sup>	Fair	Culturally sensitive tablet-based video intervention featuring digital storytelling about IPV and safety behaviors (7 minutes) provided in multiple languages	Control video <sup>‡</sup>	Routine antenatal care settings at 19 maternal and child health centers Norway	Pregnant women (any gestational age) age 18 years or older attending routine antenatal checkups without their partner or other family members who screened positive for previous and/or recent IPV	317	100	Native Norwegian speakers: 76 Non-native speakers: English: 0.8 Urdu: 1.6 Somali: 1.2 Other: 20	32 (5)
Heyman, 2019 <sup>84</sup>	Fair	Skills-based program delivered to new parents during baby's first 8 months (2 in-home visits, 6 phone visits) combined with videos and workbook activities focused on	Wait-list control <sup>§</sup>	Maternity units in 2 large hospitals in the exurbs of NYC U.S.	New parents (couples) in a committed relationship who spoke English, with at least 1 member age 30 years or younger and at least 1 member who had been verbally aggressive toward the other in the	368 couples	NA	Men/Women Non-Latino African American: 19/16 Hispanic/ Latino (any race): 22/18 non-Latino White: 53/59	Men: 29 (5) Women: 27 (4)

**Table 3. IPV KQ 4: Characteristics of Included Randomized, Controlled Trials**

	relationship or parenting skills			previous 6 months but no reported male-to-female physical IPV ever			non-Latino multiracial/other: 6/7	
Sharps, 2016 <sup>79</sup> DOVE Trial	IPV empowerment intervention embedded into a home visiting program; (3) 15- to 25-minute sessions during pregnancy and 3 postpartum sessions during home visits	Standard home visiting protocol <sup>l</sup>	Urban and rural perinatal home visiting programs  U.S.	Women age 14 years or younger, 32 weeks or under of gestation who were low income (i.e., Medicaid eligible), enrolled in a home visiting program, and screened positive for IPV	239	100	African American: 47 White non-Hispanic: 42 Other:10 Missing:1	24 (5)
Fair								
Tiwari, 2005 <sup>83</sup>	Culturally tailored IPV empowerment intervention/counseling ([1] 30-minute session delivered by midwife with counseling degree) focused on enhancing independence and providing advice on safety and problem-solving	Usual care (wallet-sized card with community resources for abused women)	Public antenatal clinic  Hong Kong	Chinese women less than 30 weeks' gestation who screened positive for abuse by a partner during their first antenatal appointment	110	100	Chinese women (living in Hong Kong): 100	28 (NR)
Fair								
Zlotnick, 2011 <sup>81</sup>	Counseling (based on Interpersonal psychotherapy); (4) 60-minute sessions during pregnancy and 1 session within 2 weeks of delivery)	Control (educational materials and list of IPV resources)	Primary care and OBGYN clinics  U.S.	Women ages 18 to 40 years who screened positive for past-year IPV	54	100	White: 39 Hispanic: 43 Black: 11 Other/Multiracial: 8	24 (5)
Fair								
<b>Nonpregnant</b>								
Hegarty, 2013 <sup>85</sup> Hegarty, 2020 <sup>93</sup>	Brief IPV counseling intervention (1 to 6 sessions, depending on needs) delivered by primary care doctors trained to deliver the intervention	Usual care	Family practice clinics in Victoria  Australia	Women ages 16 to 50 years who screened positive for fear of their partner in the past 12 months <sup>†</sup>	272 (52 physicians)	100	English not first language: 6  Born outside Australia: 18	38 (8)
Fair								
Miller, 2011 <sup>88</sup>	Counseling and education for IPV/reproductive coercion and assistance contacting resources (1 session during clinic visit)	Usual care <sup>#</sup>	4 family planning clinics in Northern California  U.S.	Women ages 16 to 29 years who agreed to a followup interview	904 (4 clinics)	100	White: 23 Non-Hispanic Black: 28 Hispanic: 30 Multiracial: 7 Asian/ Pacific Islander/ Other: 13	NR; % by age range: 16 to 20: 44 21 to 24: 33 25 to 29: 24
Fair								
Miller, 2016 <sup>87</sup>	Counseling and education for IPV and supported referrals to victims'	Usual care <sup>**</sup>	25 family planning clinics	Women ages 16 to 29 years who agreed to a followup interview	3,540 (17 clinics)	100	Black/African American:13 Hispanic/Latina: 2	NR; % by age range: 16 to 20: 38
Fair								

**Table 3. IPV KQ 4: Characteristics of Included Randomized, Controlled Trials**

	services (1 session during clinic visit)		in Western Pennsylvania				White 80 Multiracial or Other: 4	21 to 24: 36 25 to 29: 27
			U.S.					
Rhodes, 2015 <sup>86</sup>	Brief motivational intervention, manual-guided (1 session during ED visit, telephone booster 10 days later)	Assessed control	2 affiliated urban academic EDs in Philadelphia, PA	Women ages 18 to 64 years who screened positive for IPV and heavy drinking	592	100	Black: 80 White: 18 Native American: 3 Hispanic: 5 Pacific Islander: 1 Asian: 1 Other: 6 Missing: 1	32 (NR)
Fair		No contact control	U.S.					
Saftlas, 2014 <sup>94</sup>	Motivational interviewing ([1] 60-minute in-person session at baseline; [3] 10- to 15-minute telephone sessions 1, 2, and 4 months later)	Provision of written materials; referral to community-based resources on request	2 family planning clinics in rural Iowa	Women age 18 years or older who screened positive for past-year IPV	204	100	Race White: 87 Non-White: 12  Ethnicity Hispanic: 11 Non-Hispanic: 88	NR: % by age range: 18 to 19: 22 20 to 24: 40 25 to 29: 23 30 to 39: 0.9 40+: 0.06
Fair			U.S.					
Tiwari, 2012 <sup>95</sup> Tiwari, 2010 <sup>89</sup>	Counseling (1 in-person session focused on advocacy), 12 weekly telephone calls, 24-hour access to a hotline for additional support	Usual community care	Community center	Women age 18 years or older who screened positive for IPV	200	100	Chinese: 100; by place of birth: Hong Kong: 38 Mainland China: 61 Indonesia: 1	38 (7)
Good			Hong Kong					

\* Over the course of the intervention, 13.6 weekly visits occurred in year 1 (on average), tapering to 25% participation by year 3.

† Each session focused on the specific risk factors identified during prenatal screening (not IPV alone).

‡ Per authors, the control video included general information about lifestyle promoting a safe pregnancy.

§ The control group was offered a Couple CARE for Parents toddler program after the 24-month assessment period was completed; during the intervention period, control parents completed the same four questionnaires as intervention group when children were ages 8, 15, and 24 months.

|| Standard care includes assessment and referral for IPV during first home visit; during subsequent visits, discussion of perinatal IPV only if indication or if woman raises a concern.

¶ Eligible physicians (for training) included those who worked 3 or more sessions per week, used electronic records, and 70% or more of their patients spoke English. Patients of eligible providers were mailed a survey regarding participant and screening for fear of partner.

# Usual care described as two violence screening questions on clinic intake form and usual clinic protocol for positive disclosures during encounters.

\*\* Usual care described as standard IPV question on intake sheet and referral if IPV was discussed.

**Abbreviations:** DOVE=Domestic Violence Enhanced Home Visitation Program; ED=emergency department; F=female; IPV=intimate partner violence; KQ=key question; N=sample size; NR=not reported; NYC=New York City; OBGYN=obstetrics and gynecology; SD=standard deviation; SE=standard error; U.S.=United States.

**Table 4. Summary of Evidence for Screening for Intimate Partner Violence**

<b>Key Question</b>	<b>Population Intervention Screener Time Period</b>	<b>No. of Studies Study Designs No. of Participants</b>	<b>Summary of Findings</b>	<b>Consistency and Precision</b>	<b>Study Quality</b>	<b>Other Limitations</b>	<b>Strength of Evidence</b>	<b>Applicability</b>
KQ 1. Benefits of screening for IPV	Women presenting for routine primary care (2 RCTs) and emergency care (1 RCT)	3 RCTs N=3,759	No significant difference between screening and control groups over 3 to 18 months for IPV (3 RCTs), QoL (2 RCTs), or depression, PTSD, or healthcare utilization rates (reported by 1 RCT each)	IPV and QoL: consistent, imprecise  Other outcomes: unknown consistency; imprecise	1 good, 2 fair	Studies enrolled participants from different settings (U.S. primary care settings, one New Zealand ED, and mixed Canadian healthcare settings) and used diverse screening processes	IPV and QoL: Moderate for no benefit Healthcare utilization, depression, and PTSD: Low for no benefit	Unselected adult women presenting for primary care and ED visits; 1 large U.S. trial was set in primary care clinics only
KQ 2. Accuracy of screening tests for detecting IPV	Past-year IPV exposure (Women)	9 cross-sectional N=9,800	Sensitivity of 9 screeners (AAS, ACTS, HARK, HITS, E-HITS, PVS, PSQ, WAST, WAST-Short) ranged from 26% to 87% and specificity ranged from 80% to 97%	Unknown consistency; imprecise	9 fair	All screeners were assessed in only one study; reference standards varied across studies	Low	Women age 16 years or older presenting for primary care, antenatal care, or ED visits
	Past-year IPV exposure (Men)	1 cross-sectional N=55	Sensitivity of 2 screeners (PVS, HITS) ranged from 30% to 71% and specificity ranged from 83% to 88%	Unknown consistency; imprecise	1 fair	2 different screeners assessed in a single study	Insufficient	Men presenting in an ED setting



**Table 4. Summary of Evidence for Screening for Intimate Partner Violence**

Key Question	Population Intervention Screener Time Period	No. of Studies Study Designs No. of Participants	Summary of Findings	Consistency and Precision	Study Quality	Other Limitations	Strength of Evidence	Applicability
	Current/ ongoing IPV exposure	6 cross-sectional (7 screeners)  N=2,191	Sensitivity of 7 screeners (AAS, HITS, OAS, OVAT, STaT, WAST-Short, unnamed screener) ranged from 12% to 94% and sensitivity ranged from 38% to 100%	Unknown consistency; imprecise	6 fair	Most screeners were only assessed in a single study; 1 screener (AAS) was assessed in 2 studies, but 1 study administered only 4 of 5 items and studies used different reference standards	Low	Women age 16 years or older presenting for primary care, antenatal care, or ED visits
	Lifetime IPV exposure	1 cross-sectional  N=75	Sensitivity ranged from 64% to 96% and specificity ranged from 75% to 100% (using varying cutoff scores)	Unknown consistency; imprecise	1 fair	Lifetime screening was assessed in only a single study	Insufficient	Women age 18 years or older responding to a mailed survey
	Future	1 cohort  N=409	Sensitivity was 20% and specificity was 96%	Unknown consistency; imprecise	1 fair	Future IPV prediction was assessed in only a single study	Insufficient	Women age 18 years or older recruited from the nonacute section of the ED
KQ 3. Harms of screening for IPV	Women presenting for routine primary care (1 RCT) and emergency care (1 RCT)	2 RCTs  N=935	2 RCTs concluded no adverse effects of screening were identified	Consistent; unknown precision	2 fair	1 RCT did not report whether harms were prespecified; 1 assessed outcomes at initial screening visit, which may not be a sufficient time frame	Low for no harms	Adult women seeking care in various clinical settings

**Table 4. Summary of Evidence for Screening for Intimate Partner Violence**

KQ 4. Benefits of treatment*	Pregnant/post- partum (Individual women)	6 RCTs  N=2,276	<p>IPV: 2 RCTs assessing multiple home visits found a reduction in IPV at 2 to 3 years associated with the intervention; however, the difference between groups in 1 RCT was not statistically significant; 4 RCTs evaluated brief clinic-based counseling; 3 assessing counseling specific to IPV found mixed results and 1 assessing counseling targeting multiple risk factors (IPV, depression, smoking) found significantly fewer recurrent episodes among the subgroup who reported IPV at baseline</p>	<p>Inconsistent; imprecise for IPV and depression</p> <p>Mostly consistent; imprecise for QoL</p> <p>Unknown; imprecise for birth outcomes</p>	6 fair	<p>Studies assessed heterogeneous interventions; reduction in IPV and adverse perinatal outcomes in 1 RCT may be related to counseling for other risk factors (smoking, depression) and not IPV counseling alone</p>	<p>Low for IPV, depression and QoL; insufficient for birth outcomes</p>	<p>Participants enrolled from routine prenatal/perinatal care settings</p>
			<p>QoL: 2 RCTs of counseling interventions found no significant difference between groups</p>					
			<p>Depression: 2 RCTs of counseling interventions found mixed results</p>					
			<p>Birth outcomes: 1 RCT assessing counseling for IPV and other risk factors found benefit from some measures but not others</p>					

**Table 4. Summary of Evidence for Screening for Intimate Partner Violence**

Key Question	Population Intervention Screener Time Period	No. of Studies Study Designs No. of Participants	Summary of Findings	Consistency and Precision	Study Quality	Other Limitations	Strength of Evidence	Applicability
	Nonpregnant	6 RCTs N=5,712	<p>IPV: 4 RCTs found no significant difference between groups in rates of overall IPV<sup>85, 86</sup> or combined physical and sexual violence and 1 reported on subtypes of violence only and found mixed results</p> <p>QoL: 2 RCTs found no benefit for different QoL measures</p> <p>Mental health outcomes: anxiety, depression and PTSD were reported in one RCT with mixed results</p>	<p>Mostly consistent; imprecise for IPV</p> <p>Inconsistent; imprecise for other outcomes</p>	1 good, 5 fair	Studies assessed heterogeneous interventions using different outcome measures	Low for IPV (no benefit); insufficient for other outcomes	Women who screened positive for IPV during a routine primary care visit
	Couples	1 RCT N=368 couples	No statistically significant difference between groups for any measure of IPV victimization at 15 or 24 months post-enrollment	Unknown; imprecise	1 fair	Unclear fidelity to intervention	Insufficient	New parents in a committed relationship (couples, described as male and female partners) who screened positive for verbal abuse (but no prior physical IPV)

**Table 4. Summary of Evidence for Screening for Intimate Partner Violence**

Key Question	Population Intervention Screener Time Period	No. of Studies Study Designs No. of Participants	Summary of Findings	Consistency and Precision	Study Quality	Other Limitations	Strength of Evidence	Applicability
KQ 5. Harms of treatment	Individual women (pregnant and nonpregnant)	5 RCTs N=1,413	No study found significant harms associated with the interventions	Consistent; imprecise	1 good, 4 fair	Studies did not comment on whether harms were prespecified or how they were ascertained; reporting bias not detected	Low for no harms	Women who screened positive for IPV during a routine primary care visit

\* SOE ratings for KQ 4 were completed for outcomes reported on by more than one study each. For other outcomes, including anxiety, PTSD, and birth outcomes, SOE is insufficient due to unknown consistency, imprecision, and study limitations.

**Abbreviations:** AAS=Abuse Assessment Scale; ACTS=Afraid, Controlled, Threatened, Slapped or physically hurt; E-HITS=Extended HITS; ED=emergency department; HARK=Humiliation, Afraid, Rape, Kick; HITS=Hurt, Insult, Threaten, Scream; IPV=intimate partner violence; N=sample size; OAS=Ongoing Abuse Screen; OVAT=Ongoing Violence Assessment Tool; PSQ=Parent Screening Questionnaire; PTSD=post-traumatic stress disorder; PVS=Partner Violence Screen; QoL=quality of life; RCT=randomized, controlled trial; SOE= strength of evidence; SPAN=Startle, Physiological Arousal, Anger, and Numbness; STaT=Slapped, Things, Threaten; WAST=Woman Abuse Screening Tool.

**Table 5. Summary of Evidence for Screening for Caregiver Abuse of Older and Vulnerable Adults**

Key Question	Population Intervention Screener Time period	No. of Studies Study Designs No. of Participants	Summary of Findings	Consistency and Precision	Other Limitations	Strength of Evidence	Applicability
KQ 1. Benefits of screening for caregiver abuse of older and vulnerable adults	NA	NA	NA	NA	NA	Insufficient	NA
KQ 2. Accuracy of screening tests for detecting caregiver abuse of older and vulnerable adults	Age 65 years or older presenting for routine dental care  H-S/EAST	1 cross-sectional study  N=139	Compared with the CTS, the H-S/EAST had a sensitivity of 46% (95% CI, 32 to 59) for detecting physical or verbal aggression and a specificity of 73% (95% CI, 62 to 82).	Unknown consistency; imprecise	Scale is relatively long (15 items) and may not be feasible for screening older adults presenting for routine care; reporting bias not detected	Insufficient	Generally healthy older adults presenting for routine dental care; population had a high prevalence of abuse on CTS (41% reported violence or verbal aggression)
	Age 65 years or older presenting to an ED without critical illness  ED Senior AID	1 cross-sectional study  N=916	Compared with a structured social and behavioral evaluation, the ED Senior AID had a sensitivity of 94% (95% CI, 71 to 99) and specificity of 84% (95% CI, 76 to 91).	Unknown consistency; imprecise	Screening results based on judgment of trained research nurse after applying tool	Insufficient	Older adults presenting to an ED; screening result based on judgment of specially trained tool administrator

**Table 5. Summary of Evidence for Screening for Caregiver Abuse of Older and Vulnerable Adults**

<b>Key Question</b>	<b>Population Intervention Screener Time period</b>	<b>No. of Studies Study Designs No. of Participants</b>	<b>Summary of Findings</b>	<b>Consistency and Precision</b>	<b>Other Limitations</b>	<b>Strength of Evidence</b>	<b>Applicability</b>
KQ 3. Harms of screening for caregiver abuse of older and vulnerable adults	NA	NA	NA	NA	NA	Insufficient	NA
KQ 4. Benefits of treatment	NA	NA	NA	NA	NA	Insufficient	NA
KQ 5. Harms of Treatment	NA	NA	NA	NA	NA	Insufficient	NA

**Abbreviations:** AID=Abuse Identification; CI=confidence interval; CTS=Conflict Tactics Scale; ED=emergency department; ED Senior AID=Emergency Department Senior Abuse Identification; H-S/EAST=Hwalek-Sengstock Elder Abuse Screening Test; N=sample size; NA=not applicable.

## Detailed Summary of Prevalence

### Intimate Partner Violence in Adults

National estimates of IPV prevalence vary because of a variety of factors including nonstandardized definitions and differences in reporting requirements, and estimates are believed to underestimate rates of abuse because of underreporting.<sup>7</sup> Among respondents to the most recent (2016/2017) National Intimate Partner and Sexual Violence Survey (NISVS), approximately 47 percent of women and 44 percent of men age 18 years or older reported experiencing some form of IPV (contact sexual violence, physical violence, or stalking) in their lifetime.<sup>8</sup> The prevalence of IPV in the previous 12-months was similar among men and women respondents (7%). Of those who reported a history of any lifetime IPV, approximately 20 percent experienced contact sexual violence, 42 percent experienced physical violence, and 14 percent experienced stalking. Based on the same survey, among men the prevalence of lifetime IPV (contact sexual violence, physical violence, or stalking) was 44 percent, and lifetime rates of specific subtypes of violence was 8 percent for contact sexual violence, 5 percent for stalking, and 42 percent for physical violence in their lifetime.<sup>8</sup> Prevalence of lifetime psychological aggression is similar among men and women (45% and 49%, respectively) as is 12-month psychological aggression (7% for both men and women).<sup>8</sup>

In terms of specific populations, reported IPV rates vary by race/ethnicity, sexual orientation, gender identity, and socioeconomic status. Based on the 2016/2017 NISVS, the estimated lifetime prevalence of IPV among Hispanic women was 64 percent, and approximately 54 to 58 percent among women who identify as Multiracial, American Indian or Alaska Native, and Black. Rates were slightly lower among those identifying as White (48%), and among Asian and Pacific Islander women (27%).<sup>8</sup> Similar patterns by race/ethnicity were observed among men.<sup>8</sup>

Based on U.S. data from the 2009–2015 Pregnancy Risk Assessment Monitoring System, 3.8 percent of respondents who had a recent birth reported experiencing physical IPV before or during pregnancy, and 2.6 percent reported experiencing physical IPV during their most recent pregnancy only.<sup>103</sup>

Adults with a disability experience higher rates of victimization compared with those without disabilities based on findings from the 2005–2007 BRFSS (27.9% vs. 17.7%, respectively).<sup>9</sup> Women with disabilities reported a higher lifetime prevalence of IPV (25%) compared with men with disabilities (14.4%).<sup>9</sup> Women with disabilities were also more likely to experience all forms of lifetime IPV than men with and without disabilities and women without disabilities.<sup>9</sup>

IPV prevalence has also been found to vary based on sexual orientation and gender identity.<sup>10, 104</sup> The 2010 National Intimate Partner and Sexual Violence Survey reported the lifetime prevalence of rape, physical violence, or stalking by an intimate partner was highest among bisexual women (61%) compared with lesbian women (44%) and heterosexual women (35%). In comparison, 30 percent of bisexual men, 29 percent of heterosexual men, and 26 percent of gay men reported experiencing lifetime IPV victimization. Other factors are associated with higher prevalence of IPV, including economic insecurity (defined by household income),<sup>103, 105, 106</sup> housing and food insecurity,<sup>105</sup> and markers of socioeconomic status among pregnant women (prenatal care

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covered by Medicaid or other publicly funded sources, such as enrollment in the Women, Infants, and Children program).<sup>103</sup>

### Intimate Partner Violence in Adolescents

IPV during adolescence is often referred to as “dating violence.”<sup>8</sup> The 2019 YRBSS found that approximately 9 percent of girls and 7 percent of boys in high school reported experiencing physical dating violence (e.g., being hit, slammed into something, or purposefully injured with an object by someone whom they dated).<sup>10</sup> The 2019 YRBSS also estimated that 13 percent of girls and 4 percent of boys reported experiencing sexual dating violence, which included being forced to kiss or touch, or being physically forced to have sexual intercourse by someone they were dating.<sup>10</sup> In the same survey, female students had a higher prevalence of both physical and sexual dating violence than male students (3.8% vs. 2.1%, respectively).

Based on the 2019 YRBSS survey of high school students, 11 percent of those who were heterosexual reported experiencing dating violence compared with 22 percent who were lesbian, gay, bisexual (LGB) and 19 percent of those who were not sure of their sexual identity.<sup>10</sup> For high school students who experienced both physical and sexual dating violence, the prevalence was approximately 6 percent for LGB students and 9 percent for students who were not sure of their sexual identity compared with 2 percent for heterosexual students.

### Abuse and Neglect of Older and Vulnerable Adults

Estimates of abuse and neglect among older and vulnerable adults vary for a variety of factors, including inconsistent definitions and differences in reporting requirements. In addition, studies estimating prevalence are limited because of sampling (e.g., data collection limited to emergency departments [EDs]),<sup>11</sup> exclusion of those who are cognitively impaired,<sup>12</sup> and reliance on self-reported data,<sup>12</sup> which can be affected by fear or the inability to report abuse.<sup>11</sup>

An estimated 11 percent of U.S. adults age 60 years or older experienced at least one form of abuse in the past year.<sup>13</sup> The most common forms of violence experienced were emotional mistreatment, potential neglect, and financial mistreatment by family (estimated prevalence of each was 5%); less prevalent forms of violence include physical mistreatment (1.6%) and sexual mistreatment (0.6%).<sup>13</sup> Based on data from the National Elder Mistreatment Study, approximately 12 percent of older adults reported experiencing a single type of abuse and 2 percent reported experiencing multiple types of abuse in their lifetimes.<sup>14</sup> Among those experiencing a single form of abuse, financial exploitation was the most common (35%), followed by neglect (34%), emotional abuse (27%), physical abuse (7%), and sexual abuse.<sup>14</sup> Approximately 60 percent of cases of abuse and neglect in older adults is perpetrated by a family member and two thirds of those cases are adult children or spouses.<sup>15</sup> Older adults are more likely to be abused by nonintimate partners (56%) than by intimate partners (23%), and some report being victimized by both intimate and nonintimate partners (21%).<sup>16</sup>

Vulnerable adults experience a higher prevalence of violent victimization and maltreatment compared with adults without disabilities, regardless of age.<sup>17, 18</sup> Based on a sample from noninstitutionalized settings from the 2017–2019 National Crime Victimization Survey, the rate of violent victimization (violent crime, rape/sexual assault, robbery, aggravated assault, and



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simple assault) against persons with disabilities older than age 12 years was approximately 46 per 1,000 compared with 12 per 1,000 for those without a disability.<sup>17</sup> Persons with cognitive disabilities had the highest rate of victimization (83 per 1,000), followed by those with disabilities related to vision (48 per 1,000), independent living (38 per 1,000), self-care (37 per 1,000), ambulatory difficulty (35 per 1,000), and hearing (24 per 1,000).<sup>17</sup> In addition, 59 percent of violent victimizations against persons with disabilities were perpetrated by intimate partners, other relatives (e.g., parents, children, and other relatives), and well-known acquaintances.<sup>17</sup>

Based on the 2020 National Adult Maltreatment Study, which relies on data from state Adult Protective Services programs, almost 80 percent of victims were age 60 years or older.<sup>16</sup> The prevalence of experiencing abuse varies by type of vulnerability/disability, from approximately 35 percent for those with ambulatory difficulty, 21 percent for those with cognitive difficulty, 16 percent for those with independent living difficulty, 14 percent for those self-care difficulty, 10 percent for those with vision difficulty, and 5 percent for those with communication, hearing, or other disabilities (vs. 3 percent for those who had no disability identified).<sup>107</sup> Within the same sample, the most common form of maltreatment reported by victims with a disability was abandonment.<sup>107</sup>

**Appendix A Table 1. Categories of Intimate Partner Violence**

Category*	Definition
Physical violence	Intentional use of physical force with the potential for causing death, disability, injury, or harm. Includes but is not limited to scratching; pushing, shoving; throwing; grabbing; biting; choking; shaking; hair-pulling; slapping; punching; hitting; burning; using a weapon (gun, knife, or other object); and using restraints or one's body, size, or strength against another person. Physical violence also includes coercing other people to commit any of the above acts.
Sexual violence	Any sexual act committed or attempted by another person without the victim freely giving consent or a sexual act committed against someone who is unable to consent or refuse, including forced or alcohol-/drug-facilitated penetration (completed or attempted) of a victim, forced or alcohol-/drug-facilitated incidents in which the victim was made to penetrate a perpetrator or someone else, nonphysically pressured unwanted penetration, intentional sexual touching, or noncontact acts of a sexual nature. Sexual violence can also occur when a perpetrator forces or coerces a victim to engage in sexual acts with a third party.
Psychological aggression	Use of verbal and nonverbal communication with the intent to (1) harm another person mentally or emotionally and/or (2) exert control over another person. Includes but is not limited to making threats of physical or sexual violence that involves the use of words, gestures, or weapons to communicate the intent to cause death, disability, injury, or physical harm; humiliating, degrading, or intentionally embarrassing or diminishing the victim; using coercive control over what the victim can and cannot do; withholding information from the victim; isolating the victim from friends and family; controlling the victim's reproductive or sexual health; and denying the victim access to money or other basic resources.
Stalking	Repeated, unwanted attention and contact that causes the victim fear or concern for his or her own safety or the safety of someone else, such as a family member or close friend.

\* Categories and definitions of Intimate Partner Violence shown here are based on CDC guidance.<sup>2</sup>

## Appendix A Table 2. Categories of Abuse of Older Adults

Category*	Definition
Physical abuse	Intentional use of physical force that results in acute or chronic illness, bodily injury, physical pain, functional impairment, distress, or death. May include but is not limited to such acts of violence as striking (with or without an object or weapon), hitting, beating, scratching, biting, choking, suffocation, pushing, shoving, shaking, slapping, kicking, stomping, pinching, and burning. In addition, inappropriate use of medications and physical restraints, pinning in place, arm twisting, hair-pulling, force feeding, and physical punishment of any kind also are examples of physical abuse.
Sexual abuse or abusive sexual contact	Forced and/or unwanted sexual interaction (touching and nontouching acts) of any kind with an older adult. May include but is not limited to forced and/or unwanted completed or attempted contact between the penis and the vulva or the penis and the anus involving penetration, however slight; forced and/or unwanted contact between the mouth and the penis, vulva, or anus; forced and/or unwanted penetration of the anal or genital opening of another person by a hand, finger, or other object; forced and/or unwanted intentional touching, either directly or through the clothing, of the genitalia, anus, groin, breast, inner thigh, or buttocks; unwarranted, intrusive and/or painful procedures in caring for genitals or rectal area; or forced and/or unwanted noncontact acts of a sexual nature. Also any of the above committed against an incapacitated person who is not competent to give informed approval, indicating a freely given agreement to have sexual intercourse or sexual contact.
Emotional or psychological abuse	Verbal or nonverbal behavior resulting in the infliction of anguish, mental pain, fear, or distress perpetrated by a caregiver or other person who stands in a trust relationship to the elder. May have immediate effects or delayed effects that are short or long term in nature that may or may not be readily apparent to or acknowledged by the victim. May include any of the following and vary according to cultural norms: humiliation/disrespect, threats, harassment, or isolation/coercive control.
Neglect	Failure by a caregiver or other person in a trust relationship to protect an elder from harm or the failure to meet needs for essential medical care, nutrition, hydration, hygiene, clothing, or basic activities of daily living or shelter, which results in a serious risk of compromised health and/or safety, relative to age, health status, and cultural norms.
Financial abuse or exploitation	The illegal, unauthorized, or improper use of an older individual's resources by a caregiver or other person in a trusting relationship for the benefit of someone other than the older individual. Includes but is not limited to depriving an older individual of rightful access to information about or use of personal benefits, resources, belongings, or assets.

\* Categories of abuse of older adults shown here are based on CDC guidance.<sup>3</sup>

### Appendix A Table 3. Current Recommendations From Other Organizations: Intimate Partner Violence

Organization, Year	IPV Screening Recommendation
AAFP, 2022 <sup>108</sup>	The AAFP supports the 2018 USPSTF recommendation.
AMA, 2019 <sup>109</sup>	Physicians should routinely inquire about physical, sexual, and psychological abuse. Upon discovering that patients are currently facing abuse, physicians should work with patients to develop exit plans for use in emergencies and refer patients to appropriate healthcare professionals or community resources.
AAN, 2012 <sup>110</sup>	Physicians should routinely screen all patients for past and ongoing violence and fully integrate the questions into their medical history.
AAP, 2010 <sup>111</sup>	Pediatricians should remain alert to the signs and symptoms of exposure to IPV in caregivers and children and should consider attempts to identify evidence of IPV either by targeted screening of high-risk families or universal screening.
ACOG, 2012; reaffirmed 2022 <sup>112</sup>	Physicians should screen all women for IPV as part of routine visits. For pregnant women, screenings should occur over the course of pregnancy beginning with the first prenatal visit, at least once per trimester and at the postpartum checkup. All patients should receive educational materials on IPV even if none is acknowledged. Screening may take place through either direct interviewing or written questionnaire. Special consideration should be given to certain populations, including adolescents, immigrant women, and older women (age 65 years or older). Practitioners should be aware of state law reporting requirements and clearly disclose those laws to the patient prior to asking questions.
WPSI, 2016 <sup>113</sup>	All adolescents and women should be screened for interpersonal and domestic violence at least annually, starting at age 13 years.
CTFPHC, 2013 <sup>114</sup>	Available evidence does not justify routinely screening Canadian residents for IPV.
U.K. NSC, 2019 <sup>115</sup>	Screening is not currently recommended due to a lack of evidence on its effectiveness, lack of research on test accuracy, and the unknown extent of partner violence in different groups in the U.K.
CDC	No official guidelines or recommendations have been released for screening for IPV in the healthcare setting.
WHO, 2013 <sup>116</sup>	Universal or routine screening should not be implemented. WHO guidelines cover only violence against women and girls.

**Abbreviations:** AAN=American Academy of Neurology; AAFP=American Academy of Family Physicians; AAP=American Academy of Pediatrics; ACOG=American Congress of Obstetricians and Gynecologists; AMA=American Medical Association; CDC=Centers for Disease Control and Prevention; CTFPHC=Canadian Task Force on Preventive Health Care; IPV=intimate partner violence; U.K.=United Kingdom; U.K. NSC=United Kingdom National Screening Committee; USPSTF=U.S. Preventive Services Task Force; WHO=World Health Organization; WPSI=Women’s Preventive Services Institute.

**Appendix A Table 4. Current Recommendations From Other Organizations: Caregiver Abuse of Older and Vulnerable Adults**

Organization, Year	Screening Recommendation
AAFP, 2022 <sup>108</sup>	Supports the 2018 USPSTF recommendation.
AMA, 2019 <sup>109</sup>	Recommends routinely screening all patients for abuse and neglect.
AAN, 2012 <sup>110</sup>	Recommends routinely screening all patients for abuse and neglect.
ACOG, 2021 <sup>117</sup>	Recommends screening all patients age 60 years or older for signs and symptoms of elder mistreatment and referring to appropriate medical or psychosocial care. Recommends following individual state guidelines for reporting elder abuse to APS.
AGS	Does not have a recommendation for or against routinely screening.
CTFPHC, 2013 <sup>114</sup>	Available evidence does not justify routine screening of Canadian residents for abuse of elderly and vulnerable persons.
HIGN, 2021 <sup>118</sup>	Recommends screening for elder abuse and neglect, citing AMA guidelines.

**Abbreviations:** AAFP=American Academy of Family Physicians; AAN=American Academy of Neurology; ACOG=American Congress of Obstetricians and Gynecologists; AGS=American Geriatrics Society; AMA=American Medical Association; APS=adult protective services; CTFPHC=Canadian Task Force on Preventive Health Care; HIGN=Hartford Institute for Geriatric Nursing; USPSTF=U.S. Preventive Services Task Force.

## **Appendix A. Contextual Question**

**CQ 1. Are there risk prediction tools that can help identify older and vulnerable adults who are at increased risk of caregiver abuse and neglect? If so, how well do they perform in distinguishing between those who are at high vs. low risk of abuse and neglect?**

No studies were identified for this Contextual Question (CQ).

## Appendix B1. Original Search Strategies

Note: to check for recent additions to the literature, all PubMed searches were repeated with the same criteria on December 14, 2023, with the end date of publication adjusted to that date.

### PubMed, KQ 1, March 29, 2023

Search Number	Query	Results
#1	ipv[tiab] OR "interpersonal violence"[tiab] OR "intimate partner"[tiab] OR spouse abuse[mesh] OR battered women[mesh] OR "intimate partner violence"[tiab] OR Intimate Partner Violence[mesh] OR elder abuse[mesh] OR "elder abuse"[tiab] OR battered[tiab] OR "spouse abuse"[tiab] OR "spousal abuse"[tiab] OR "spousal violence"[tiab] OR "spouse violence"[tiab] OR "domestic violence"[tiab] OR domestic violence[mesh] OR "dating violence"[tiab] OR "partner violence"[tiab] OR "battered women"[tiab] OR ((abus*[ti] OR violen*[ti] AND (spous*[ti] OR partner*[ti] OR "sexual partner"[ti] OR marriage*[ti] OR husband*[ti] OR wife*[ti] OR wives*[ti] OR gender*[ti] OR woman[ti] OR women[ti])) NOT ("Child abuse"[tiab] OR "child abuse"[mesh] OR dtap[tiab])	33,508
#2	("Mass Screening"[Mesh] OR "Risk"[Mesh] OR "Risk Assessment"[Mesh] OR screen*[tiab] OR "risk assess*[tiab])	2,316,584
#3	#1 AND #2	9,268
#4	("Surveys and Questionnaires"[Mesh] OR "Diagnosis"[Mesh] OR "diagnosis"[Subheading] OR questionnaire*[tiab] OR survey*[tiab] OR diagnosis[tiab] OR scale*[tiab] OR assess*[tiab] OR evaluat*[tiab] OR identif*[tiab] OR index*[tiab] OR indices[tiab] OR interview*[tiab] OR instrument*[tiab] OR inventor*[tiab] OR measur*[tiab] OR monitor*[tiab] OR prognos*[tiab] OR score*[tiab] OR test[tiab] OR testing[tiab] OR tests[tiab] OR "self report"[tiab] OR "self reports"[tiab] OR "self reported"[tiab])	20,058,367
#5	#3 AND #4	8,152
#6	#5 AND Filter: English	7,938
#7	#6 AND Filters applied: English, from 2018 - 3000/12/12	2,680
#8	"prevention and control" [Subheading] OR "Primary Prevention"[Mesh] OR "Preventive Health Services"[Mesh] OR "Counseling"[Mesh] OR "Outcome and Process Assessment, Health Care"[Mesh] OR "Mental Health Services"[Mesh] OR "Case Management"[Mesh] OR prevent*[tiab] OR counsel*[tiab] OR "mental health service*[tiab]	4,483,782
#9	#1 AND #8	13,583
#10	("Patient Outcome Assessment"[Mesh] OR "Outcome Assessment, health care"[Mesh] OR "Pragmatic Clinical Trial" [Publication Type] OR "Outcome and Process Assessment, Health Care"[Mesh] OR "Epidemiologic Studies"[Mesh] OR outcome*[tiab] OR epidemiologic[tiab])	5,211,152
#11	#1 AND #10	10,553
#12	(#9 OR #11) AND Filters applied: English, from 2018 – 3000/12/12	6,932
#13	"Random Allocation"[Mesh] OR "Randomized Controlled Trial" [Publication Type] OR "Randomized Controlled Trials as Topic"[Mesh] OR "Single-Blind Method"[Mesh] OR "Double-Blind Method"[Mesh] OR rct[tiab] OR rcts[tiab] OR randomized[tiab] OR randomised[tiab] OR "single blind*[tiab] OR "double blind*[tiab]	1,183,946
#18	(#7 OR #12) AND #13 AND Filters applied: English, from 2018 – 3000/12/12	<b>614</b>

**Abbreviations:** KQ=key question.

## Appendix B1. Original Search Strategies

### PubMed, KQ 2, March 29, 2023

Search Number	Query	Results
#1	ipv[tiab] OR "interpersonal violence"[tiab] OR "intimate partner"[tiab] OR spouse abuse[mesh] OR battered women[mesh] OR "intimate partner violence"[tiab] OR Intimate Partner Violence[mesh] OR elder abuse[mesh] OR "elder abuse"[tiab] OR battered[tiab] OR "spouse abuse"[tiab] OR "spousal abuse"[tiab] OR "spousal violence"[tiab] OR "spouse violence"[tiab] OR "domestic violence"[tiab] OR domestic violence[mesh] OR "dating violence"[tiab] OR "partner violence"[tiab] OR "battered women"[tiab] OR ((abus*[ti] OR violen*[ti]) AND (spouse*[ti] OR partner*[ti] OR "sexual partner"[ti] OR marriage*[ti] OR husband*[ti] OR wife*[ti] OR wives*[ti] OR gender*[ti] OR woman[ti] OR women[ti])) NOT ("Child abuse"[tiab] OR "child abuse"[mesh] OR dtap[tiab])	33,603
#2	"Surveys and Questionnaires"[Mesh] OR psychiatric status rating scales[mesh] OR questionnaire*[tiab] OR survey*[tiab] OR diagnosis[tiab] OR scale*[tiab] OR assess*[tiab] OR evaluat*[tiab] OR identif*[tiab] OR index*[tiab] OR indices[tiab] OR interview*[tiab] OR instrument*[tiab] OR inventor*[tiab] OR measur*[tiab] OR monitor*[tiab] OR prognos*[tiab] OR score*[tiab] OR test[tiab] OR testing[tiab] OR tests[tiab] OR "mass screening"[mesh] OR screen*[tiab] OR diagnosis[mesh] OR diagnosis[subheading] OR "Risk Assessment"[Mesh] OR "risk assess*[tiab]	20,216,062
#3	#1 AND #2	25,121
#4	"Sensitivity and Specificity"[Mesh] OR "Predictive Value of Tests"[Mesh] OR "ROC Curve"[Mesh] OR "Reproducibility of Results"[Mesh] OR "False Negative Reactions"[Mesh] OR "False Positive Reactions"[Mesh] OR <u>"predictive value"[tw] OR sensitivity[tw] OR specificity[tw] OR accuracy[tw] OR ROC[tw] OR reproducib*[tw] OR "false positive"[tw] OR "false negative"[tw] OR "likelihood ratio"[tw]</u>	2,978,663
#5	#3 AND #4	1,169
#6	#5 AND Filters applied: English, from 2018 - 3000/12/12	<b>386</b>

Abbreviations: KQ=key question.



## Appendix B1. Original Search Strategies

### PubMed, KQ 3, March 29, 2023

Search Number	Query	Results
#1	ipv[tiab] OR "interpersonal violence"[tiab] OR "intimate partner"[tiab] OR spouse abuse[mesh] OR battered women[mesh] OR "intimate partner violence"[tiab] OR Intimate Partner Violence[mesh] OR elder abuse[mesh] OR "elder abuse"[tiab] OR battered[tiab] OR "spouse abuse"[tiab] OR "spousal abuse"[tiab] OR "spousal violence"[tiab] OR "spouse violence"[tiab] OR "domestic violence"[tiab] OR domestic violence[mesh] OR "dating violence"[tiab] OR "partner violence"[tiab] OR "battered women"[tiab] OR ((abus*[ti] OR violen*[ti]) AND (spous*[ti] OR partner*[ti] OR "sexual partner"[ti] OR marriage*[ti] OR husband*[ti] OR wife*[ti] OR wives*[ti] OR gender*[ti] OR woman[ti] OR women[ti])) NOT ("Child abuse"[tiab] OR "child abuse"[mesh] OR dtap[tiab])	33,604
#2	("Mass Screening"[Mesh] OR "Risk"[Mesh] OR "Risk Assessment"[Mesh] OR screen*[tiab] OR "risk assess*"[tiab])	2,316,584
#3	#1 AND #2	9,268
#4	("Surveys and Questionnaires"[Mesh] OR "Diagnosis"[Mesh] OR "diagnosis"[Subheading] OR questionnaire*[tiab] OR survey*[tiab] OR diagnosis[tiab] OR scale*[tiab] OR assess*[tiab] OR evaluat*[tiab] OR identif*[tiab] OR index*[tiab] OR indices[tiab] OR interview*[tiab] OR instrument*[tiab] OR inventor*[tiab] OR measur*[tiab] OR monitor*[tiab] OR prognos*[tiab] OR score*[tiab] OR test[tiab] OR testing[tiab] OR tests[tiab] OR "self report"[tiab] OR "self reports"[tiab] OR "self reported"[tiab])	20,058,367
#5	#3 AND #4	8,152
#6	#5 AND Filter: English	7,938
#7	#6 AND Filters applied: English, from 2018 - 3000/12/12	2,680
#8	("Observational Study" [Publication Type] OR "Prospective Studies"[Mesh] OR "Cohort Studies" [Mesh] OR "adverse effects" [Subheading] OR harms[tw] OR cohort[tiab] OR observational[tiab] OR "prospective stud*"[tiab])	5,028,600
#9	#7 AND #8 AND Filters applied: English, from 2018 - 3000/12/12	<b>514</b>

**Abbreviations:** KQ=key question.

Appendix B1. Original Search Strategies

PubMed, KQs 4 and 5, March 29, 2023

Search Number	Query	Results
#1	ipv[tiab] OR "interpersonal violence"[tiab] OR "intimate partner**"[tiab] OR spouse abuse[mesh] OR battered women[mesh] OR "intimate partner violence"[tiab] OR Intimate Partner Violence[mesh] OR elder abuse[mesh] OR "elder abuse"[tiab] OR battered[tiab] OR "spouse abuse"[tiab] OR "spousal abuse"[tiab] OR "spousal violence"[tiab] OR "spouse violence"[tiab] OR "domestic violence"[tiab] OR domestic violence[mesh] OR "dating violence"[tiab] OR "partner violence"[tiab] OR "battered women"[tiab] OR ((abus*[ti] OR violen*[ti]) AND (spouse*[ti] OR partner*[ti] OR "sexual partner**"[ti] OR marriage*[ti] OR husband*[ti] OR wife*[ti] OR wives*[ti] OR gender*[ti] OR woman[ti] OR women[ti])) NOT ("Child abuse"[tiab] OR "child abuse"[mesh] OR dtap[tiab])	33,603
#2	"prevention and control" [Subheading] OR "Primary Prevention"[Mesh] OR "Preventive Health Services"[Mesh] OR "Counseling"[Mesh] OR "Outcome and Process Assessment, Health Care"[Mesh] OR "Mental Health Services"[Mesh] OR "Case Management"[Mesh] OR prevent*[tiab] OR counsel*[tiab] OR "mental health service**"[tiab]	4,483,782
#3	#1 AND #2	13,583
#4	#3 AND Filters applied: English, from 2018 - 3000/12/12	4,401
#5	("Observational Study" [Publication Type] OR "Prospective Studies"[Mesh] OR "Cohort Studies" [Mesh] OR "adverse effects" [Subheading] OR harms[tw]) OR cohort[tiab] OR observational[tiab] OR "prospective stud**"[tiab]	5,028,600
#6	"Random Allocation"[Mesh] OR "Randomized Controlled Trial" [Publication Type] OR "Randomized Controlled Trials as Topic"[Mesh] OR "Single-Blind Method"[Mesh] OR "Double-Blind Method"[Mesh] OR rct[tiab] OR rcts[tiab] OR randomized[tiab] OR randomised[tiab] OR "single blind**"[tiab] OR "double blind**"[tiab]	1,183,946
#6	#4 AND (#5 OR #6)	1,064
#7	#6 AND Filters applied: English, from 2018-3000/12/12	<b>1,064</b>

Abbreviations: KQ=key question.

## Cochrane Library, All KQs and Grey Literature, March 29, 2023

Search Number	Query	Results
#1	ipv OR "interpersonal violence" OR "intimate partner" OR "intimate partners" OR "battered women" OR "batter woman" OR "intimate partner violence" OR "elder abuse" OR battered OR "spouse abuse" OR "spousal abuse" OR "spouse violence" OR "spousal violence" OR "domestic violence" OR "dating violence" OR "partner violence"	3186
#2	MeSH descriptor: [Spouse Abuse] explode all trees	224
#3	MeSH descriptor: [Elder Abuse] explode all trees	27
#4	MeSH descriptor: [Intimate Partner Violence] explode all trees	553
#5	MeSH descriptor: [Battered Women] explode all trees	74
#6	#1 OR #2 OR #3 OR #4 OR #5	3186
#7	Prevention OR preventive OR "mental health service"	226460
#8	MeSH descriptor: [Primary Prevention] explode all trees	6484
#9	MeSH descriptor: [Preventive Health Services] this term only	610
#10	MeSH descriptor: [Counseling] this term only	5794
#11	MeSH descriptor: [Mental Health Services] this term only	901
#12	MeSH descriptor: [Case Management] explode all trees	895
#13	#7 OR #8 OR #9 OR #10 OR #11 OR #12	233383
#14	#6 AND #13	1295
#15	MeSH descriptor: [Mass Screening] explode all trees	5337
#16	MeSH descriptor: [Risk Assessment] explode all trees	13599
#17	Screen* OR "risk assess"	99199
#18	#15 OR #16 OR #17	112072
#19	Questionnaire* OR survey* OR diagnosis OR scale* OR assess* OR evaluat* OR identif* OR index* OR indices OR interview* OR instrument* OR inventor* OR measur* OR monitor* OR prognos* OR score OR test OR testing OR tests OR "self report" OR "self reports" OR "self reported"	1466288
#20	MeSH descriptor: [Surveys and Questionnaires] explode all trees	69959
#21	#19 OR #20	1466732
#22	#14 AND #18 AND #21	191, 69 clinical trials

**Abbreviations:** KQ=key question.

## Appendix B1. Original Search Strategies

### EMBASE, All KQs, March 23, 2023

Search Number	Query	Results	Key Question
#1	((abus*:ti OR violen*:ti) AND (spous*:ti OR partner*:ti OR marriage*:ti OR husband*:ti OR wife*:ti OR wives*:ti OR gender*:ti OR woman:ti OR women:ti) OR ipv:ti,ab OR 'interpersonal violence':ti,ab OR 'intimate partner*:ti,ab OR 'spouse abuse'/exp OR 'battered women'/exp OR 'intimate partner violence':ti,ab OR 'intimate partner violence'/exp OR 'elder abuse'/exp OR 'elder abuse':ti,ab OR 'battered:ti,ab OR 'spouse abuse':ti,ab OR 'spousal abuse':ti,ab OR 'spousal violence':ti,ab OR 'spouse violence':ti,ab OR 'domestic violence':ti,ab OR 'domestic violence'/exp OR 'dating violence':ti,ab OR 'partner violence':ti,ab OR 'battered women':ti,ab) NOT ('child abuse':ti,ab OR 'child abuse'/exp OR dtap:ti,ab)	39,853	
#2	'domestic violence'/exp	72,966	
#3	#1 OR #2	84,955	
#4	screen*:ti,ab OR 'risk assess*':ti,ab	1,421,768	
#5	'mass screening'/exp OR 'risk assessment'/exp	1,003,277	
#6	#4 OR #5	2,123,306	
#7	#3 AND #6	9,959	
#8	prevent*:ti,ab OR counsel*:ti,ab OR 'mental health service*':ti,ab	2,432,617	
#9	'mass screening'/exp OR 'risk assessment'/exp OR 'counseling'/exp OR 'outcome assessment'/exp OR 'mental health service'/exp OR 'preventive health service'/exp	2,004,798	
#10	#7 AND #9	5,511	
#11	#10 AND (2018:py OR 2019:py OR 2020:py OR 2021:py OR 2022:py OR 2023:py)	1,583	
#12	#11 AND ('cohort analysis'/de OR 'comparative study'/de OR 'observational study'/de OR 'prospective study'/de OR 'randomized controlled trial'/de OR 'randomized controlled trial topic'/de) NOT [medline]/lim	97	KQs 4/5
#13	survey*:ti,ab OR diagnosis:ti,ab OR scale*:ti,ab OR assess*:ti,ab OR evaluat*:ti,ab OR identif*:ti,ab OR index*:ti,ab OR indices:ti,ab OR interview*:ti,ab OR instrument*:ti,ab OR inventor*:ti,ab OR measur*:ti,ab OR monitor*:ti,ab OR prognos*:ti,ab OR score*:ti,ab OR test:ti,ab OR testing:ti,ab OR tests:ti,ab OR 'self report*':ti,ab	20,082,649	
#14	'questionnaire'/exp OR 'health survey'/exp	1,119,152	
#15	#13 OR #14	20,231,030	
#16	outcome*:ti,ab OR epidemiolog*:ti,ab	3,828,767	
#17	'outcome'/exp OR 'clinical outcome'/exp OR 'epidemiology'/exp	4,564,970	
#18	#16 OR #17	7,047,888	
#19	#18 OR #10	7,050,737	
#20	#19 AND #1 AND #6 AND #13	3,794	
#21	#20 AND ('randomized controlled trial'/de OR 'randomized controlled trial topic'/de)	218	KQ 1
#22	#21 AND (2018:py OR 2019:py OR 2020:py OR 2021:py OR 2022:py OR 2023:py) NOT [medline]/lim	101	
#23	#22 AND (2018:py OR 2019:py OR 2020:py OR 2021:py OR 2022:py OR 2023:py)	26	KQ 2
#24	#1 AND #16 NOT [medline]/lim	6,590	
#25	'predictive value':ti,ab OR sensitivity:ti,ab OR specificity:ti,ab OR accuracy:ti,ab OR roc:ti,ab OR reproducib*:ti,ab OR 'false positive':ti,ab OR 'false negative':ti,ab OR 'likelihood ratio':ti,ab	2,459,209	
#26	'sensitivity and specificity'/exp OR 'predictive value'/exp OR 'reproducibility'/exp OR 'false negative result'/exp OR 'false positive result'/exp	852,195	
#27	#25 OR #26	2,779,049	
#28	#27 AND #26	246	
#29	#28 AND (2018:py OR 2019:py OR 2020:py OR 2021:py OR 2022:py OR 2023:py)	105	
#30	#1 AND (#4 OR #9) AND #16	6,729	

## Appendix B1. Original Search Strategies

Search Number	Query	Results	Key Question
#31	#30 AND (2018:py OR 2019:py OR 2020:py OR 2021:py OR 2022:py OR 2023:py)	2,643	
#32	#31 AND ('cohort analysis'/de OR 'observational study'/de OR 'prospective study'/de)	319	
#33	#32 NOT [medline]/lim	<b>112</b>	KQ 3

**Abbreviations:** KQ=key question.

## Appendix B2. Eligibility Criteria: Intimate Partner Violence

Category	Include	Exclude
Populations	<p>Studies enrolling adolescents* and adults (age 18 years or older) presenting for primary care services without recognized signs or symptoms of IPV or abuse†</p> <p>Specific populations of interest include those defined by age, sex, race/ethnicity, pregnancy status, sexual orientation, gender identity, type of abuse (e.g., physical abuse or sexual abuse), history of IPV, or presence of comorbid conditions</p>	Studies restricted to populations seeking care for IPV or for obvious signs or symptoms of abuse
Screening	<b>KQs 1–3:</b> Screening questionnaires designed to detect current or past IPV victimization, including self-administered, computer-enabled, or patient self-report instruments, as well as clinician-administered screening methods; instruments must be feasible for use in screening in U.S. primary care settings (i.e., brief, easy to interpret, and acceptable to patients and clinicians)	KQs 1–3: Screening tests designed to identify perpetrators of IPV
Interventions	<b>KQs 4, 5:</b> Services that could be offered in primary care settings or referred to by primary care services, including counseling, psychological interventions, case management, home visitation, mentor or peer support, safety planning, and referral to community services	KQs 4, 5: 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 a clinician)
Comparisons	<p><b>KQs 1, 3:</b> Screened vs. nonscreened groups</p> <p><b>KQ 2:</b> Eligible instruments must be compared with an acceptable reference standard (verified or self-reported abuse or validated screening instrument for abuse)</p> <p><b>KQs 4, 5:</b> No treatment, usual care, attention control, or wait-list control</p>	KQs 4, 5: Head-to-head comparisons of two active interventions
Outcomes	<p><b>KQs 1, 4:</b> Reduced exposure to IPV as measured by a validated instrument (e.g., Conflict Tactics Scale), self-report frequency of abuse (e.g., number of physical assaults), or discontinuation of an unsafe relationship; physical morbidity caused by IPV, including acute physical trauma (e.g., fractures or dislocations), chronic medical conditions (e.g., chronic pain or brain injury), and sexual trauma; mental health morbidity caused by IPV, including acute mental morbidity (e.g., stress or nightmares) and chronic mental health conditions (e.g., post-traumatic stress disorder, anxiety, or depression); sexual trauma, unintended pregnancy, and sexually transmitted infections; adverse perinatal outcomes (e.g., preterm birth, low birth weight, or decreased mean gestational age); healthcare utilization attributed to physical or mental effects of IPV (e.g., rates of emergency department visits); quality of life and social isolation; and mortality</p> <p><b>KQ 2:</b> Sensitivity, specificity, positive and negative predictive values, positive and negative likelihood ratios, diagnostic odds ratios, and relative risks for future abuse</p> <p><b>KQ 3:</b> Psychosocial harms that result from screening, including labeling and stigma; false-positive and false-negative results; increased abuse or other forms of retaliation; and other reported harms of screening or identification</p> <p><b>KQ 5:</b> Any harms that result from interventions, such as increased abuse or other forms of retaliation, and emotional distress</p>	<p>All KQs: Screening or referral rates, attitudes about screening, plans or intentions related to screening, and other intermediate outcomes</p> <p>KQ 2: Theory or survey development and validation without correlation to abuse outcomes or studies that focus only on particular risk factors or assessment of provider or participant attitudes toward the instrument</p>
Study designs	<p><b>All KQs:</b> RCTs</p> <p><b>KQ 2:</b> Cross-sectional and cohort studies of diagnostic accuracy are also eligible</p> <p><b>KQs 3, 5:</b> Cohort studies with a concurrent control group are also eligible</p>	All other study designs, including case series, case-control studies, and systematic reviews‡
Quality	Studies rated good or fair quality	Studies rated poor quality

## Appendix B2. Eligibility Criteria: Intimate Partner Violence

Category	Include	Exclude
Settings	<b>All KQs:</b> Primary care clinics or other settings where primary care services are offered, such as student health centers; studies recruiting participants from emergency departments are also eligible <sup>§</sup> <b>KQs 4, 5:</b> Settings referable from primary care are also eligible	Nonclinical-based settings or nonapplicable settings (e.g., prisons)
Country	Research conducted in the United States or in populations similar to U.S. populations with services and interventions applicable to U.S. practice (i.e., countries categorized as “Very High” on the United Nations Human Development Index, as defined by the United Nations Development Programme)	Research not relevant to the United States (i.e., countries not categorized as “Very High” on the United Nations Human Development Index)
Language	Full text published in English	Languages other than English

\* Studies enrolling adolescents at any age will be included as long as the focus is on abuse from an intimate partner and not a parent or other caregiver.

† Adolescents and adults with problems directly related to abuse (e.g., physical injuries) will have evaluations outside the scope of screening.

‡ Relevant systematic reviews will be identified in database searches and used for handsearches to ensure the databases have captured all relevant studies.

§ Results will be stratified by study setting to assess whether results for IPV screening accuracy and intervention studies differ based on whether populations were enrolled from primary care or emergency department settings.

**Abbreviations:** IPV=intimate partner violence; KQ=key question; RCT=randomized, controlled trial; U.S.=United States.

### Appendix B3. Eligibility Criteria: Caregiver Abuse of Older and Vulnerable Adults

Category	Include	Exclude
Populations	<p>Studies enrolling older adults (age 60 years or older) and vulnerable* adult (age 18 years or older) populations presenting for primary care services without recognized signs or symptoms of caregiver abuse or neglect</p> <p>Specific populations of interest include those defined by age, sex, race or ethnicity, pregnancy status, sexual orientation, gender identity, type of abuse (e.g., physical abuse or sexual abuse), history of abuse, or presence of comorbid conditions</p>	Studies restricted to populations seeking care for abuse or presenting with obvious signs or symptoms of abuse
Screening	<b>KQs 1–3:</b> Screening questionnaires designed to detect current or past caregiver abuse or neglect, including self-administered, computer-enabled, or patient self-report instruments, as well as clinician-administered screening methods; screening may involve input from caregivers and instruments must be feasible for use in U.S. primary care settings (i.e., brief, easy to interpret, and acceptable to patients and clinicians)	<b>KQs 1–3:</b> Screening to detect behavioral problems in older and vulnerable adults with specific conditions (e.g., dementia)
Interventions	<b>KQs 4, 5:</b> Services that could be offered in primary care settings or referred to by primary care services, including counseling, psychological interventions, case management, home visitation, and referral to community services (e.g., adult protective services)	<b>KQs 4, 5:</b> 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 nursing facility policies and procedures to reduce violence)
Comparisons	<p><b>KQs 1, 3:</b> Screened vs. nonscreened groups</p> <p><b>KQ 2:</b> Eligible instruments must be compared with an acceptable reference standard (verified or self-reported abuse or validated screening instrument for abuse)</p> <p><b>KQs 4, 5:</b> No treatment, usual care, attention control, or wait-list control</p>	<b>KQs 4, 5:</b> Head-to-head comparisons of active interventions
Outcomes	<p><b>KQs 1, 4:</b> Reduced exposure to caregiver abuse or neglect (e.g., reduced episodes of physical violence); physical morbidity associated with abuse or neglect, including physical trauma (e.g., fractures or dislocations) and chronic conditions (e.g., brain injury or physical disability); mental morbidity associated with abuse or neglect (e.g., anxiety or nightmares) and chronic mental health conditions (e.g., post-traumatic stress disorder, anxiety, or depression); sexual trauma, unintended pregnancy,<sup>†</sup> and sexually transmitted infections; adverse perinatal outcomes<sup>†</sup> (e.g., preterm birth, low birth weight, or decreased mean gestational age); healthcare utilization attributed to physical or mental effects of abuse (e.g., rates of emergency department visits); social isolation and quality of life; and mortality</p> <p><b>KQ 2:</b> Sensitivity, specificity, positive and negative predictive values, positive and negative likelihood ratios, diagnostic odds ratios, and relative risks for future abuse</p> <p><b>KQ 3:</b> Psychosocial harms that result from screening, including labeling and stigma; false-positive and false-negative results; increased abuse or other forms of retaliation; and other reported harms of screening or identification</p> <p><b>KQ 5:</b> Any harms that result from interventions, such as increased abuse or emotional distress</p>	<p><b>KQs 1, 4:</b> Screening or referral rates, attitudes about screening, plans or intentions related to screening, and other intermediate outcomes</p> <p><b>KQ 2:</b> Theory or survey development and validation without correlation to abuse outcomes or studies that focus only on particular risk factors or assessment of provider or participant attitudes toward the instrument</p>
Study designs	<p><b>All KQs:</b> RCTs</p> <p><b>KQ 2:</b> Cross-sectional and cohort studies of diagnostic accuracy are also eligible</p> <p><b>KQs 3, 5:</b> Cohort studies with a concurrent control group are also eligible</p>	All other study designs, including case series, case-control studies, and systematic reviews <sup>‡</sup>



### Appendix B3. Eligibility Criteria: Caregiver Abuse of Older and Vulnerable Adults

Category	Include	Exclude
Quality	Studies rated good or fair quality	Studies rated poor quality
Settings	Primary care clinics <sup>§</sup> or other settings where primary care services are offered; <sup>§</sup> studies recruiting participants from emergency departments are also eligible <sup>¶</sup>	Nonclinical-based or nonapplicable settings (e.g., prison populations or services/interventions not applicable to U.S. practice)
Country	Research conducted in the United States or in populations similar to U.S. populations with services and interventions applicable to U.S. practice (i.e., countries categorized as “Very High” on the United Nations Human Development Index, as defined by the United Nations Development Programme)	Research not relevant to the United States (i.e., countries not categorized as “Very High” on the United Nations Human Development Index)
Language	Full text published in English	Languages other than English

\* “Vulnerable adult” is a person age 18 years or older whose ability to provide their own care or protection is impaired.

† Outcomes that are specific to pregnancy apply to vulnerable adults who are pregnant or may become pregnant.

‡ Relevant systematic reviews will be identified in database searches and used in handsearches to ensure the databases have captured all relevant studies.

<sup>§</sup>This includes community-dwelling, assisted living settings where primary care services are delivered and where patients or residents are able to live independently and receive care similar to a traditional primary care setting.

<sup>¶</sup> Results will be stratified by study setting to assess whether results for older or vulnerable adult abuse screening accuracy or intervention studies differ based on whether populations were enrolled from primary care or emergency department settings.

**Abbreviations:** KQ=key question; RCT=randomized, controlled trial; U.S.=United States.

### 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, crossovers, adherence, and contamination)
- Important differential loss to followup or overall high loss to followup
- Measurements that are equal, reliable, and valid (includes masking of outcome assessment)
- Clear definition of interventions
- Important outcomes considered
- 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  $\geq 80\%$ ); reliable and valid measurement instruments are used and applied equally to the groups; interventions are spelled out clearly; important outcomes are considered; and appropriate attention is given to confounders in analysis. In addition, intention-to-treat analysis is used for RCTs.

**Fair:** Studies will be graded “fair” if any or all of the following problems occur without the important limitations noted in the “poor” category below: Generally comparable groups are assembled initially, but some question remains on 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. Intention-to-treat analysis is lacking for RCTs.

**Poor:** Studies will be graded “poor” if any of the following major limitations exist: Groups assembled initially are not close to being comparable or maintained throughout the study; unreliable or invalid measurement instruments are used or not applied equally among groups (including not masking outcome assessment); and key confounders are given little or no attention. Intention-to-treat analysis is lacking for RCTs.

**Diagnostic Accuracy Studies Criteria:**

- Screening test relevant, available for primary care, and adequately described
- Credible reference standard, performed regardless of test results
- Reference standard interpreted independently of screening test
- Indeterminate results handled in a reasonable manner
- Spectrum of patients included in study
- Sample size
- Reliable screening test

**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; assesses reliability of test; has few or handles indeterminate results in a reasonable manner; includes large number (greater than 100) of broad spectrum patients with and without disease

**Fair:** Evaluates relevant available screening test; uses reasonable although not best standard; interprets reference standard independent of screening test; has moderate sample size (50 to 100 subjects) and a “medium” spectrum of patients

**Poor:** Has a fatal flaw, such as uses inappropriate reference standard; improperly administers screening test; has biased ascertainment of reference standard; has very small sample size or very narrow selected spectrum of patients

Source: U.S. Preventive Services Task Force. U.S. Preventive Services Task Force, Procedure Manual, Appendix VI. Rockville, MD: U.S. Preventive Services Task Force; 2015.<sup>119</sup>

## Appendix C. Excluded Articles

1

X1: Not original research  
X2: Ineligible population  
X3: Ineligible screening  
X4: Ineligible intervention  
X5: Ineligible or no comparator  
X6: Ineligible or no outcome  
X7: Ineligible study design  
X8: Ineligible setting  
X9: Meets criteria but ineligible country  
X10: Non-English  
X11: Meets criteria but abstract only  
X12: Irretrievable  
X13: Poor quality

1. "High sensitivity and specificity screening for clinically significant intimate partner violence": correction. *J Fam Psychol.* 2022 Jun;36(4):544. doi: 10.1037/fam0000974. PMID: 35311319. Exclusion Code: X7.
2. Abramsky T, Guadarrama DS, Kapiga S, et al. Pathways to reduced physical intimate partner violence among women in north-western Tanzania: evidence from two cluster randomised trials of the maisha Intervention. *PLoS Glob Public Health.* 2023;3(11):e0002497. doi: 10.1371/journal.pgph.0002497. PMID: 37956111. Exclusion Code: X4.
3. Addo-Lartey AA, Ogum Alangea D, Sikweyiya Y, et al. Rural response system to prevent violence against women: methodology for a community randomised controlled trial in the central region of Ghana. *Glob Health Action.* 2019;12(1):1612604. doi: 10.1080/16549716.2019.1612604. PMID: 31134866. Exclusion Code: X9.
4. Akbari AR, Alam B, Ageed A, et al. The identification and referral to improve safety programme and the prevention of intimate partner violence. *Int J Environ Res Public Health.* 2021 May 25;18(11)doi: 10.3390/ijerph18115653. PMID: 34070518. Exclusion Code: X7.
5. Al Ubaidi B, Tawfeeq F, Ayed H, et al. Intimate partner violence in the Kingdom of Bahrain: prevalence, associated factors and WAST screening in primary health centres. *J Family Med Prim Care.* 2021 Aug;10(8):2893-9. doi: 10.4103/jfmpc.jfmpc\_2401\_20. PMID: 34660422. Exclusion Code: X5.
6. Alexander EF, Backes BL, Johnson MD. Evaluating measures of intimate partner violence using consensus-based standards of validity. *Trauma Violence Abuse.* 2022 Dec;23(5):1549-67. doi: 10.1177/15248380211013413. PMID: 33969760. Exclusion Code: X7.
7. Alhalal E, Ford-Gilboe M, Wong C, Albuhairan F. The reliability and validity of the Arabic version of the Composite Abuse Scale. *Violence Vict.* 2019 Feb 1;34(1):3-27. doi: 10.1891/0886-6708.34.1.3. PMID: 30808791. Exclusion Code: X3.

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8. Allan-Blitz LT, Olson R, Tran Q. Assessment of microfinance interventions and intimate partner violence: a systematic review and meta-analysis. *JAMA Netw Open*. 2023 Jan 3;6(1):e2253552. doi: 10.1001/jamanetworkopen.2022.53552. PMID: 36705918. Exclusion Code: X7.
9. Allen K, Melendez-Torres GJ, Ford T, et al. Family focused interventions that address parental domestic violence and abuse, mental ill-health, and substance misuse in combination: a systematic review. *PLoS One*. 2022;17(7):e0270894. doi: 10.1371/journal.pone.0270894. PMID: 35905105. Exclusion Code: X7.
10. Aminalroaya R, Alizadeh-Khoei M, Hormozi S, et al. Screening for elder abuse in geriatric outpatients: reliability and validity of the Iranian version Hwalek-Sengstock Elder Abuse Screening Test (H-S/EAST). *J Elder Abuse Negl*. 2020 Jan-Feb;32(1):84-96. doi: 10.1080/08946566.2020.1719564. PMID: 32008473. Exclusion Code: X9.
11. Andersen E, Geiger P, Xia K, Girdler S. Mindfulness-based stress reduction decreases stress reactivity and increases pain tolerance in women with early life abuse: a randomized controlled trial. *Psychosomatic Medicine*. 2019;81(4):A5. doi: 10.1097/psy.0000000000000699. Exclusion Code: X2.
12. Anderson RE, Holmes SC, Johnson NL, Johnson DM. Analysis of a modification to the sexual experiences survey to assess intimate partner sexual violence. *J Sex Res*. 2021 Nov-Dec;58(9):1140-50. doi: 10.1080/00224499.2020.1766404. PMID: 32484752. Exclusion Code: X8.
13. Andersson G, Olsson E, Ringsgård E, et al. Individually tailored internet-delivered cognitive-behavioral therapy for survivors of intimate partner violence: a randomized controlled pilot trial. *Internet Interv*. 2021 Dec;26:100453. doi: 10.1016/j.invent.2021.100453. PMID: 34584851. Exclusion Code: x2.
14. Andreasen K, Zapata-Calvente AL, Martín-de-Las-Heras S, et al. Video consultations and safety app targeting pregnant women exposed to intimate partner violence in Denmark and Spain: nested cohort intervention study (STOP study). *JMIR Form Res*. 2023 Mar 20;7:e38563. doi: 10.2196/38563. PMID: 36939835. Exclusion Code: X5.
15. Baek D, Elman A, Gottesman E, et al. Initial steps in addressing the challenges of elder mistreatment evaluation: protocol for evaluating the vulnerable elder protection team. *BMJ Open*. 2023 Oct 13;13(10):e071694. doi: 10.1136/bmjopen-2023-071694. PMID: 37832983. Exclusion Code: X6.
16. Bahadir-Yilmaz E, Öz F. The effectiveness of empowerment program on increasing self-esteem, learned resourcefulness, and coping ways in women exposed to domestic violence.

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- Issues Ment Health Nurs.* 2018 Feb;39(2):135-41. doi: 10.1080/01612840.2017.1368750. PMID: 29028364. Exclusion Code: X8.
17. Balderrama-Durbin C, Erbes CR, Polusny MA, Vogt D. Psychometric evaluation of a measure of intimate partner communication during deployment. *J Fam Psychol.* 2018 Feb;32(1):31-41. doi: 10.1037/fam0000382. PMID: 29543485. Exclusion Code: X5.
18. Basheer MB, Bell R, Boyle A. Systematic review of the effectiveness of advocacy interventions for adult victims of domestic violence within an emergency department setting. *Emergency Medicine Journal.* 2022;39(12):972. doi: 10.1136/emered-2022-RCEM2.18. Exclusion Code: X7.
19. Beck T, Berger A, Stix L, Riedl D. The Innsbruck Domestic Violence screening questions (IDV-3) effectively help to identify victims of domestic violence during clinical routine - results of an observational single-center study. *Gen Hosp Psychiatry.* 2022 May-Jun;76:55-6. doi: 10.1016/j.genhosppsych.2022.02.001. PMID: 35153059. Exclusion Code: X5.
20. Bernecker SL, Rosellini AJ, Nock MK, et al. Improving risk prediction accuracy for new soldiers in the U.S. Army by adding self-report survey data to administrative data. *BMC Psychiatry.* 2018 Apr 3;18(1):87. doi: 10.1186/s12888-018-1656-4. PMID: 29615005. Exclusion Code: X2.
21. Bitew T, Keynejad R, Myers B, et al. Brief problem-solving therapy for antenatal depressive symptoms in primary care in rural Ethiopia: protocol for a randomised, controlled feasibility trial. *Pilot Feasibility Stud.* 2021 Jan 30;7(1):35. doi: 10.1186/s40814-021-00773-8. PMID: 33514447. Exclusion Code: X2.
22. Bragesjö M, Arnberg FK, Särholm J, et al. Condensed internet-delivered prolonged exposure provided soon after trauma: a randomised pilot trial. *Internet Interv.* 2021 Mar;23:100358. doi: 10.1016/j.invent.2020.100358. PMID: 33384946. Exclusion Code: X2.
23. Brown AN. Some interventions to shift meta-norms are effective for changing behaviors in low- and middle-income countries: a rapid systematic review. *Int J Environ Res Public Health.* 2022 Jun 14;19(12)doi: 10.3390/ijerph19127312. PMID: 35742556. Exclusion Code: X7.
24. Campbell RJ, Lichtenberg PA. A short form of the financial exploitation vulnerability scale. *Clin Gerontol.* 2021 Oct-Dec;44(5):594-603. doi: 10.1080/07317115.2020.1836108. PMID: 33124959. Exclusion Code: X8.
25. Cannell B, Livingston M, Burnett J, et al. Evaluation of the detection of elder mistreatment through emergency care technicians project screening tool. *JAMA Netw Open.* 2020

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- May 1;3(5):e204099. doi: 10.1001/jamanetworkopen.2020.4099. PMID: 32379330. Exclusion Code: X6.
26. Cantor AG, Nelson HD, Pappas M, et al. Telehealth for women's preventive services for reproductive health and intimate partner violence: a comparative effectiveness review. *J Gen Intern Med.* 2023 May;38(7):1735-43. doi: 10.1007/s11606-023-08033-6. PMID: 36650334. Exclusion Code: X7.
27. Cao J, Gallis JA, Ali M, et al. The impact of a maternal mental health intervention on intimate partner violence in northern Ghana and the mediating roles of social support and couple communication: secondary analysis of a cluster randomized controlled trial. *BMC Public Health.* 2021 Nov 4;21(1):2010. doi: 10.1186/s12889-021-12121-9. PMID: 34736452. Exclusion Code: X4.
28. Cárdenas Castro M, Salinero Rates S. Validating a measurement of psychological, physical and sexual abuse against women in gynecological care within the Chilean health system. *Health Care Women Int.* 2022 Jul;43(7-8):873-84. doi: 10.1080/07399332.2021.1931224. PMID: 34751637. Exclusion Code: X7.
29. Cascardi M, Blank S, Dodani V. Comparison of the CADRI and CTS2 for measuring psychological and physical dating violence perpetration and victimization. *J Interpers Violence.* 2019 Aug;34(16):3466-91. doi: 10.1177/0886260516670182. PMID: 27760876. Exclusion Code: X3.
30. Chalise P, Manandhar P, Infanti JJ, et al. Addressing Domestic Violence in Antenatal Care Environments in Nepal (ADVANCE) - study protocol for a randomized controlled trial evaluating a video intervention on domestic violence among pregnant women. *BMC public health.* 2023;23(1):1794. doi: 10.1186/s12889-023-16685-6. PMID: CN-02615943. Exclusion Code: X7.
31. Chen M, Chan KL. Effectiveness of digital health interventions on unintentional injury, violence, and suicide: meta-analysis. *Trauma Violence Abuse.* 2022 Apr;23(2):605-19. doi: 10.1177/1524838020967346. PMID: 33094703. Exclusion Code: X7.
32. Cheung DST, Deng W, Tsao SW, et al. Effect of a qigong intervention on telomerase activity and mental health in Chinese women survivors of intimate partner violence: a randomized clinical trial. *JAMA Netw Open.* 2019 Jan 4;2(1):e186967. doi: 10.1001/jamanetworkopen.2018.6967. PMID: 30646209. Exclusion Code: X2.
33. Cheung DST, Tiwari A, Chan KL, et al. Validation of the psychological maltreatment of women inventory for Chinese women. *J Interpers Violence.* 2020 Nov;35(21-22):4614-39. doi: 10.1177/0886260517715602.

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- PMID: 29294813. Exclusion Code: X6.
34. Christia F, Larreguy H, Parker-Magyar E, Quintero M. Empowering women facing gender-based violence amid COVID-19 through media campaigns. *Nat Hum Behav.* 2023 Oct;7(10):1740-52. doi: 10.1038/s41562-023-01665-y. PMID: 37550411. Exclusion Code: X5 COV.
35. Clark CJ, Shrestha B, Ferguson G, et al. Impact of the change starts at home trial on women's experience of intimate partner violence in Nepal. *SSM Popul Health.* 2020 Apr;10:100530. doi: 10.1016/j.ssmph.2019.100530. PMID: 31890850. Exclusion Code: X8.
36. Cockcroft A, Omer K, Gidado Y, et al. The impact of universal home visits with pregnant women and their spouses on maternal outcomes: a cluster randomised controlled trial in Bauchi state, Nigeria. *BMJ Glob Health.* 2019;4(1):e001172. doi: 10.1136/bmjgh-2018-001172. PMID: 30899560. Exclusion Code: X4.
37. Collibee C, Rizzo CJ, Kemp K, et al. Depressive symptoms moderate dating violence prevention outcomes among adolescent girls. *J Interpers Violence.* 2021 Mar;36(5-6):Np3061-np79. doi: 10.1177/0886260518770189. PMID: 29673306. Exclusion Code: X4.
38. Começanha R, Maia Â. Screening tool for psychological intimate partner violence: Portuguese validation of the psychological maltreatment of women inventory. *Violence Vict.* 2018 Feb 1;33(1):75-90. doi: 10.1891/0886-6708.Vv-d-16-00060. PMID: 29436362. Exclusion Code: X7.
39. Coulter RWS, Egan JE, Kinsky S, et al. Mental health, drug, and violence interventions for sexual/gender minorities: a systematic review. *Pediatrics.* 2019 Sep;144(3)doi: 10.1542/peds.2018-3367. PMID: 31427462. Exclusion Code: X7.
40. Creech SK, Benzer JK, Ebalu T, et al. National implementation of a trauma-informed intervention for intimate partner violence in the department of veterans affairs: first year outcomes. *BMC Health Serv Res.* 2018 Jul 24;18(1):582. doi: 10.1186/s12913-018-3401-6. PMID: 30041642. Exclusion Code: X2.
41. Creech SK, Pulverman CS, Kahler CW, et al. Computerized intervention in primary care for women veterans with sexual assault histories and psychosocial health risks: a randomized clinical trial. *J Gen Intern Med.* 2022 Apr;37(5):1097-107. doi: 10.1007/s11606-021-06851-0. PMID: 34013470
- CN-02275972. Exclusion Code: X2.
42. Crespo M, Miguel-Alvaro A, Hornillos C, et al. Effect of adding a positive memories' module in a trauma-focused cognitive-behavioural treatment for female survivors of intimate partner violence: trial protocol. *Trials.* 2022 Jul 23;23(1):593. doi: 10.1186/s13063-022-06540-



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1. PMID: 35870999. Exclusion Code: X6.
43. Daneshvar S, Shafiei M, Basharpour S. Compassion-focused therapy: proof of concept trial on suicidal ideation and cognitive distortions in female survivors of intimate partner violence with PTSD. *J Interpers Violence*. 2022 Jun;37(11-12):Np9613-np34. doi: 10.1177/0886260520984265. PMID: 33375899. Exclusion Code: X2.
44. Dardis CM, Dichter ME, Iverson KM. Empowerment, PTSD and revictimization among women who have experienced intimate partner violence. *Psychiatry Res*. 2018 Aug;266:103-10. doi: 10.1016/j.psychres.2018.05.034. PMID: 29859496. Exclusion Code: X7.
45. Daruwalla N, Machchhar U, Pantvaidya S, et al. Community interventions to prevent violence against women and girls in informal settlements in Mumbai: The SNEHA-TARA pragmatic cluster randomised controlled trial. *Trials*. 2019 Dec 17;20(1):743. doi: 10.1186/s13063-019-3817-2. PMID: 31847913. Exclusion Code: X2.
46. De Marchis EH, McCaw B, Fleegler EW, et al. Screening for interpersonal violence: missed opportunities and potential harms. *Am J Prev Med*. 2021 Sep;61(3):439-44. doi: 10.1016/j.amepre.2021.02.010. PMID: 34023161. Exclusion Code: X5.
47. Debost-Legrand A, Guiguet-Auclair C, Lémery D, Vendittelli. Screening for intimate partner violence: French validation of the woman abuse screening tool. *International Journal of Gynecology and Obstetrics*. 2018;143:535-6. doi: 10.1002/ijgo.12582. Exclusion Code: X2.
48. Decker MR, Grace KT, Holliday CN, et al. Safe and stable housing for intimate partner violence survivors, Maryland, 2019–2020. *Am J Public Health*. 2022 Jun;112(6):865-70. doi: 10.2105/ajph.2022.306728. PMID: 35420894. Exclusion Code: X8.
49. Decker MR, Wood SN, Hameeduddin Z, et al. Safety decision-making and planning mobile app for intimate partner violence prevention and response: randomised controlled trial in Kenya. *BMJ Glob Health*. 2020 Jul;5(7)doi: 10.1136/bmjgh-2019-002091. PMID: 32675229. Exclusion Code: X8.
50. Decker MR, Wood SN, Kennedy SR, et al. Adapting the myPlan safety app to respond to intimate partner violence for women in low and middle income country settings: app tailoring and randomized controlled trial protocol. *BMC Public Health*. 2020 May 29;20(1):808. doi: 10.1186/s12889-020-08901-4. PMID: 32471469. Exclusion Code: X2.
51. Decker MR, Wood SN, Ndinda E, et al. Sexual violence among adolescent girls and young women in Malawi: a cluster-randomized controlled implementation trial of

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- empowerment self-defense training. *BMC Public Health*. 2018 Dec 4;18(1):1341. doi: 10.1186/s12889-018-6220-0. PMID: 30514264. Exclusion Code: X2.
52. DeGue S, Le VD, Roby SJ. The Dating Matters(®) toolkit: Approaches to increase adoption, implementation, and maintenance of a comprehensive violence prevention model. *Implement Res Pract*. 2020 Dec 9;1doi: 10.1177/2633489520974981. PMID: 35979015. Exclusion Code: X4.
53. DeGue S, Niolon PH, Estefan LF, et al. Effects of Dating Matters® on sexual violence and sexual harassment outcomes among middle school youth: a cluster-randomized controlled trial. *Prev Sci*. 2021 Feb;22(2):175-85. doi: 10.1007/s11121-020-01152-0. PMID: 32844328. Exclusion Code: X8.
54. Demirtaş ET, Sümer ZH, Murphy CM. Turkish version of the multidimensional measure of emotional abuse: preliminary psychometrics in college students. *Violence Vict*. 2018 Apr 1;33(2):275-95. doi: 10.1891/0886-6708.Vv-d-16-00087. PMID: 29609676. Exclusion Code: X6.
55. DePrince AP, Hasche LK, Olomi JM, et al. A randomized-control trial testing the impact of a multidisciplinary team response to older adult maltreatment. *J Elder Abuse Negl*. 2019 Aug-Dec;31(4-5):307-24. doi: 10.1080/08946566.2019.1682097. PMID: 31647382. Exclusion Code: X8.
56. Dinmohammadi S, Dadashi M, Ahmadnia E, et al. The effect of solution-focused counseling on violence rate and quality of life of pregnant women at risk of domestic violence: a randomized controlled trial. *BMC Pregnancy Childbirth*. 2021 Mar 20;21(1):221. doi: 10.1186/s12884-021-03674-z. PMID: 33743632. Exclusion Code: X9.
57. Dobarrio-Sanz I, Fernández-Vargas A, Fernández-Férez A, et al. Development and psychometric assessment of a questionnaire for the detection of invisible violence against women. *Int J Environ Res Public Health*. 2022 Sep 5;19(17)doi: 10.3390/ijerph19171127. PMID: 36078848. Exclusion Code: X6.
58. Dos Santos KB, Murta SG, do Amaral Vinha LG, de Deus JS. Efficacy of a bystander intervention for preventing dating violence in Brazilian adolescents: short-term evaluation. *Psicol Reflex Crit*. 2019 Oct 16;32(1):20. doi: 10.1186/s41155-019-0133-4. PMID: 32026072. Exclusion Code: X2.
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- 10.1016/j.eclinm.2023.102233.  
PMID: 37781160. Exclusion  
Code: X2.
60. Dunkle K, Gibbs A, Chirwa E, et al. How do programmes to prevent intimate partner violence among the general population impact women with disabilities? Post-hoc analysis of three randomised controlled trials. *BMJ Glob Health*. 2020 Dec;5(12)doi: 10.1136/bmjgh-2019-002216. PMID: 33277296. Exclusion Code: X7.
61. Dunkle K, Stern E, Chatterji S, Heise L. Effective prevention of intimate partner violence through couples training: a randomised controlled trial of Indashyikirwa in Rwanda. *BMJ Glob Health*. 2020 Dec;5(12)doi: 10.1136/bmjgh-2020-002439. PMID: 33355268. Exclusion Code: X9.
62. Dutton MA, Dahlgren S, Martinez M, Mete M. The holistic healing arts retreat: an intensive, experiential intervention for survivors of interpersonal trauma. *Psychol Trauma*. 2021 Dec 20doi: 10.1037/tra0001178. PMID: 34928687. Exclusion Code: X8.
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**Appendix D Table 1. Quality Assessment of Diagnostic Accuracy Studies (KQ 2)**

1

First Author, Year	Index Test	Reference Standard	Bias Due to Patient Selection	Comments on Bias Due to Patient Selection	Bias Due to Index Test	Comments on Bias Due to Index Test	Bias Due to Reference Standard	Comments on Bias Due to Reference Standard
Platts-Mills, 2020 <sup>97</sup>	ED Senior Abuse Identification Tool	Structured social and behavioral evaluation (SSBE) consisting of Geriatric Mistreatment Scale, Conflicts Tactic Scale, QUALCARE Scale, Food Insecurity Access Scale, and a poverty measure	Unclear	Unclear if all patients or a random sample of patients were approached; limited to weekday, daytime hours.	Low	Screeners was a combination of several measures; unclear if there was a threshold for positive screen that was prespecified	Low	NA
Zapata-Calvente, 2022 <sup>63</sup>	WAST-Short; AAS	WHO Multi-Country Study on Women's Health and Domestic Violence Against Women questionnaire	Low	NA	Unclear	Unclear blinding; brief methods only indicate that midwives administered the measures via 1:1 interviews.	Unclear	Unclear blinding; brief methods only indicate that midwives administered the measures via 1:1 interviews.
Hegarty, 2021 <sup>64</sup>	ACTS	Composite Abuse Scale	Low	Test administered twice; binary results likely unbiased but Likert version may have elevated sensitivity due to repeat testing; unclear blinding.	Unclear	NA	Unclear	NA

2

**Appendix D Table 1. Quality Assessment of Diagnostic Accuracy Studies (KQ 2)**

<b>First Author, Year</b>	<b>Bias Due to Flow and Timing</b>	<b>Comments on Bias Due to Flow and Timing</b>	<b>Overall Quality Rating</b>	<b>Comments on Overall Quality Rating</b>	<b>Comments on Applicability</b>
Platts-Mills, 2020 <sup>97</sup>	Unclear	Small random sample of negative screened participants received the reference standard.	Fair	Convenience sample and exclusion of most participants who screened negative could introduce selection bias. Use of a 10% random sample of negative screens is helpful. Exclusion of 90% of screen negative participants; it's unclear if sample was random/consecutive.	Patients presenting to an ED. Although ESI 1 patients were excluded, ESI 2 and some ESI 3 patients uncommonly present to primary care initially.
Zapata-Calvente, 2022 <sup>63</sup>	Unclear	Those without reference standard results were not included, including 14/503 for the WAST and 96/590 for the AAS. The reason for missing data is unclear.	Fair	Unclear blinding; missing participants in analysis; 16% in WAST during pregnancy analysis makes that high RoB, but others should be fair. It's unclear if the index test and the reference standard were interpreted separately WAST Before pregnancy: n=6/~1% not included During pregnancy: n=95/~16% not included AAS Before pregnancy: n=21/~3.5% not included During pregnancy: n=14/~2.7% not included	Study took place in Spain and measures were in Spanish.
Hegarty, 2021 <sup>64</sup>	Low	5% with missing data were excluded from analysis. Full data not reported, so unable to independently calculate sensitivity and specificity.	Fair	Unclear blinding; repeated testing of the index test could bias second round of testing. All of the items in the screener and in the reference standard were in the same survey, so it's hard to tell if the screener could be interpreted separately from the reference test.	This study was of women who were proficient in English, Arabic, Mandarin, or Cantonese.

**Abbreviations:** AAS=Abuse Assessment Scale; ACTS=Afraid, Controlled, Threatened, Slapped or physically hurt; ED=emergency department; ESI=Emergency Severity Index; KQ=key question; NA=not applicable; RoB=risk of bias; WAST = Woman Abuse Screening Tool; WHO=World Health Organization.



**Appendix D Table 2. Quality Assessment of Randomized, Controlled Trials (KQs 4 and 5)**

First Author, Year	Bias Due to Randomization Process	Comment on randomization process	Bias Due to Deviations from Intended Interventions	Comment on Deviations from Intended Interventions	Bias Due to Missing Outcome Data	Comment on Missing Outcome Data
Feder, 2018 <sup>120</sup>	High	Randomization occurred at program referral so that correctly trained nurse could be assigned if patient consented to study. Few baseline characteristics were reported but race and education had potentially important differences.	Some concerns	Participants were consented by nurses who knew which program patients would be consenting into. NFP+ nurses had a higher consent rate.	High	Low attrition rates were possibly related to severity of IPV skewing followup results. 1,056 were randomized prior to consent; 330 agreed to NFP services; 238 agreed to study participation (NFP: 105; NFP+: 133). There was a 20% dropout at 2 years (nondifferential).
Flaathen, 2022 <sup>82</sup>	Low	NA	Some concerns	Overall attrition was 21% (24% and 18% in intervention and control group, respectively); analysis focused on completers only.	Some concerns	Reasons for lost to followup in intervention group included a higher number of participants who “did not want to answer question” than control group (16 vs. 7 participants, respectively) and a higher rate of those who could not be reached (17 vs. 8 participants, respectively). Overall attrition was 21% (24% and 18% in intervention and control group, respectively). Baseline sociodemographic characteristics were similar among completers vs. noncompleters. However, women lost to followup had slightly higher rates of baseline recent emotional IPV (7.6% vs. 2.4%) and physical IPV (3% vs. 0.8%) than those who responded and lower rates of previous sexual IPV (4.5% vs. 21%).
Heyman, 2019 <sup>84</sup>	Low	NA	Low	Participants were aware of their assignment, but it was not possible for them to be unaware.	Low	There were high levels of attrition but attempted to adjust for potential missing data.

**Appendix D Table 2. Quality Assessment of Randomized, Controlled Trials (KQs 4 and 5)**

First Author, Year	Bias Due to Randomization Process	Comment on randomization process	Bias Due to Deviations from Intended Interventions	Comment on Deviations from Intended Interventions	Bias Due to Missing Outcome Data	Comment on Missing Outcome Data
Palm, 2020 <sup>121</sup>	Some concerns	Significant differences in foreign-born participants and education level, but no other factors including IPV prevalence; possibly due to chance.	Some concerns	NA	High	Dropout rate was 46%.
Feder, 2018 <sup>120</sup>	Some concerns	Participants could choose to turn off the audio of the audio computer-assisted self-interview, which could lead to a nondifferential bias of both baseline and outcomes data.  No information was given on who managed questionnaire data.  Conducted via interview.	Some concerns		High	Potential bias related to measurement bias
Flaathen, 2022 <sup>82</sup>	Low	NA	Low	Supplementary statistical analysis provided.	Some concerns	
Heyman, 2019 <sup>84</sup>	Some concerns	All measures were self-reported.	Some concerns	Multiple analyses were reported with the same conclusion. Unclear if there was a pre-specified analysis plan.	Some concerns	

**Appendix D Table 2. Quality Assessment of Randomized, Controlled Trials (KQs 4 and 5)**

First Author, Year	Bias Due to Randomization Process	Comment on randomization process	Bias Due to Deviations from Intended Interventions	Comment on Deviations from Intended Interventions	Bias Due to Missing Outcome Data	Comment on Missing Outcome Data
Palm, 2020 <sup>121</sup>	High	Interview for intervention group and questionnaire for control group; concerns of variation in interview techniques or differences in replies to a person vs. a questionnaire.	Some concerns		High	Potential bias related to participant selection and attrition

**Abbreviations:** IPV=Intimate Partner Violence; KQ=key question; NA=not applicable; NPF=Nurse Family Partnership home visiting program; NFP+=Enhanced NFP.

**Appendix E Table 1. Screening Instruments Evaluated in KQ 1, KQ 2, and KQ 3 Studies**

Screening Instrument	Description	Items	Scoring, Range, and Cutoff for Positive Screen
Hurt, Insulted, Threaten, Scream <sup>69, 73, 122</sup>	4 items assess the frequency of IPV	<ol style="list-style-type: none"> <li>1. How often does your partner physically hurt you?</li> <li>2. How often does your partner insult or talk down to you?</li> <li>3. How often does your partner threaten you with physical harm?</li> <li>4. How often does your partner scream or curse at you?</li> </ol>	<p>Each item is answered on a 5-point Likert scale:                      1=Never                      2=Rarely                      3=Sometimes                      4=Fairly often                      5=Frequently</p> <p>Score range: 4 to 20                      Cutoff for IPV: * 10 or higher</p>
Extended–Hurt, Insulted, Threaten, Scream <sup>73</sup>	5 items (including all 4 HITS items and an additional sexual violence item)	<p>Over the last 12 months, how often did your partner:</p> <ol style="list-style-type: none"> <li>1. Physically hurt you?</li> <li>2. Insult your or talk down to you?</li> <li>3. Threaten you with harm?</li> <li>4. Scream or curse at you?</li> <li>5. Force you to have sexual activities?</li> </ol>	<p>Each item is answered on a 5-point Likert scale:                      1=Never                      2=Rarely                      3=Sometimes                      4=Fairly often                      5=Frequently</p> <p>Score range: 5 to 25                      Cutoff for IPV: 7 or higher</p>
Parent Screening Questionnaire <sup>70</sup>	3 items assess occurrence of physical IPV and fear over the past year	<ol style="list-style-type: none"> <li>1. Have you ever been in a relationship in which you were physically hurt or threatened by a partner?</li> <li>2. In the past year, have you been afraid of a partner?</li> <li>3. In the past year, have you thought of getting a court order for protection?</li> </ol>	<p>Each item is answered yes/no</p> <p>Cutoff for IPV: Affirmative response to 1 or more items</p>
Ongoing Violence Assessment Tool <sup>65, 122</sup>	4 items assess ongoing physical and emotional IPV	<ol style="list-style-type: none"> <li>1. At the present time, does your partner threaten you with a weapon?</li> <li>2. At the present time, does your partner beat you up so badly that you must seek medical help?</li> <li>3. At the present time, does your partner act like he/she would like to kill you?</li> <li>4. My partner has no respect for my feelings.</li> </ol>	<p>Items 1, 2, and 4 are answered true/false</p> <p>Item 3 is answered on a 5-point Likert scale:                      1=Never                      2=Rarely                      3=Occasionally                      4=Frequently                      5=Very frequently</p> <p>Cutoff for IPV: Affirmative response to items 1+H5, 2, or 4; Response of 3 or higher for item 3</p>
Partner Violence Screen <sup>66, 122</sup>	3 items that assess physical IPV in the last year and current safety	<ol style="list-style-type: none"> <li>1. Have you been hit, kicked, punched, or otherwise hurt by someone within the past year? If so, by whom?</li> <li>2. Do you feel safe in your current relationship?</li> <li>3. Is there a partner from a previous relationship who is making you feel unsafe now?</li> </ol>	<p>Each item is answered yes/no</p> <p>Cutoff for IPV: Affirmative response to 1 or more items (assuming person harming or making the respondent feel unsafe is a current or past partner)</p>

**Appendix E Table 1. Screening Instruments Evaluated in KQ 1, KQ 2, and KQ 3 Studies**

Screening Instrument	Description	Items	Scoring, Range, and Cutoff for Positive Screen
Hwalek-Sengstock Elder Abuse Screening Test <sup>41</sup>	15 items that screen for elder abuse	<ol style="list-style-type: none"> <li>1. Do you have anyone who spends time with you, taking you shopping or to the doctor?</li> <li>2. Are you helping to support someone?</li> <li>3. Are you sad or lonely often?</li> <li>4. Who makes decisions about your life—like how you should live or where you should live?</li> <li>5. Do you feel uncomfortable with anyone in your family?</li> <li>6. Can you take your own medication and get around by yourself?</li> <li>7. Do you feel that nobody wants you around?</li> <li>8. Does anyone in your family drink a lot?</li> <li>9. Does someone in your family make you stay in bed or tell you you're sick when you know you're not?</li> <li>10. Has anyone forced you to do things you didn't want to do?</li> <li>11. Has anyone taken things that belong to you without your O.K.?</li> <li>12. Do you trust most of the people in your family?</li> <li>13. Does anyone tell you that you give them too much trouble?</li> <li>14. Do you have enough privacy at home?</li> <li>15. Has anyone close to you tried to hurt you or harm you recently?</li> </ol>	<p>All items (except item 4) are answered yes/no; item 4 answered by free response</p> <p>Responses associated with abuse are: "No" to items 1, 6, 12, and 14; "Someone else" to item 4; "Yes" to all other items</p> <p>Unclear cutoff for positive test<sup>†</sup></p>
Afraid/Controlled/Threatened/Slapped or physically hurt <sup>64</sup>	4 questions presented in either a binary or ordinal frequency format	<p>Has partner or ex-partner...</p> <p>Done something that made you feel afraid?</p> <p>Controlled your day-to-day activities or put you down?</p> <p>Threatened to hurt you in any way?</p> <p>Hit, slapped, kicked, or otherwise physically hurt you?</p>	<p>Binary: All items are answered yes/no. A "yes" response to 1 or more items is considered a positive screen</p> <p>Ordinal frequency: A response of "rarely" or higher for 1 or more items is considered a positive screen</p>
Behavioral Risk Factor Surveillance Survey (modified by authors) <sup>74</sup>	3 items from Colorado BRFFS	<ol style="list-style-type: none"> <li>1. Thinking back over the past year, on any occasion were you hit, slapped, kicked, raped, or otherwise physically hurt by someone you know or knew intimately, such as a spouse, partner, ex-spouse or partner, boyfriend, girlfriend, or date?</li> <li>2. Considering your current partners or friends, or any past partners or friends, is there anyone who is making you feel unsafe now?</li> <li>3. In the past year, have the police ever been called to your home because of a fight or argument, no matter who was fighting or who was at fault?</li> </ol>	<p>Each item is answered yes/no</p> <p>Cutoff for IPV: Affirmative response to 1 or more item(s)</p>

**Appendix E Table 1. Screening Instruments Evaluated in KQ 1, KQ 2, and KQ 3 Studies**

Screening Instrument	Description	Items	Scoring, Range, and Cutoff for Positive Screen
Woman Abuse Screening Tool <sup>75, 122</sup>	8 items assess physical and emotional IPV	<ol style="list-style-type: none"> <li>1. In general, how would you describe your relationship?</li> <li>2. Do you and your partner work out arguments with...</li> <li>3. Do arguments ever result in you feeling down or bad about yourself?</li> <li>4. Do arguments ever result in hitting, kicking or pushing?</li> <li>5. Do you ever feel frightened by what your partner says or does?</li> <li>6. Has your partner ever abused you physically?</li> <li>7. Has your partner ever abused you emotionally?</li> <li>8. Has your partner ever abused you sexually?</li> </ol>	<p>Item 1 is answered with: a lot of tension, some tension, or no tension</p> <p>Item 2 is answered with great difficulty, some difficulty, or no difficulty</p> <p>Items 4 to 8 are answered with often, sometimes, or never</p> <p>Responses are recoded such that a higher score indicates higher frequency of experiences; scores should be summed for individuals who answer all items</p> <p>Cutoff for IPV: None provided</p>
Slapped, Things, Threatened <sup>68, 72</sup>	3 items (2 assess physical IPV, 1 assesses threats)	<p>Have you ever been in a relationship where:</p> <ol style="list-style-type: none"> <li>1. Your partner has pushed or slapped you?</li> <li>2. Your partner threatened you with violence?</li> <li>3. Your partner has thrown, broken or punched things?</li> </ol>	<p>Each item is answered yes/no</p> <p>Scoring: Each affirmative response is given a score of 1</p> <p>Cutoff for IPV: Score of 1 or higher</p>
Humiliation, Afraid, Rape, Kick <sup>38</sup>	4 items assess emotional and physical IPV over the past year	<ol style="list-style-type: none"> <li>1. Within the last year, have you been humiliated or emotionally abused in other ways by your partner or your ex-partner?</li> <li>2. Within the last year, have you been afraid of your partner or ex-partner?</li> <li>3. Within the last year, have you been raped or forced to have any kind of sexual activity by your partner or ex-partner?</li> <li>4. Within the last year, have you been kicked, hit, slapped or otherwise physically hurt by your partner or ex-partner?</li> </ol>	<p>Each item is answered yes/no</p> <p>Scoring: Each affirmative response is given a score of 1</p> <p>Cutoff for IPV: Score of 1 or higher</p>
Ongoing Abuse Screen <sup>76, 122</sup>	5 items adapted from the AAS that assess ongoing physical, sexual, emotional IPV, and fear	<ol style="list-style-type: none"> <li>1. Are you presently emotionally or physically abused by your partner or someone important to you?</li> <li>2. Are you presently being hit, slapped, kicked, or otherwise physically hurt by your partner or someone important to you?</li> <li>3. Are you presently forced to have sexual activities?</li> <li>4. Are you afraid of your partner or anyone of the following (circle if appropriate): husband/wife, ex-husband/ex-wife, boyfriend/girlfriend, stranger</li> <li>5. (If pregnant) Have you ever been hit, slapped, kicked, or otherwise physically hurt by your partner or someone important to you during pregnancy?</li> </ol>	<p>Each item is answered yes/no</p> <p>Cutoff for IPV: Affirmative response to 1 or more items</p>

**Appendix E Table 1. Screening Instruments Evaluated in KQ 1, KQ 2, and KQ 3 Studies**

Screening Instrument	Description	Items	Scoring, Range, and Cutoff for Positive Screen
Abuse Assessment Screen <sup>76, 122</sup>	5 items assess physical, emotional, and sexual violence	<ol style="list-style-type: none"> <li>1. Have you ever been emotionally or physically abused by your partner or someone important to you?</li> <li>2. Within the last year, have you ever been hit, slapped, kicked, or otherwise physically hurt by someone?</li> <li>3. Since you've been pregnant, have you been slapped, kicked, or otherwise physically hurt by someone?</li> <li>4. Within the last year, has anyone forced you to have sexual activities?</li> <li>5. Are you afraid of your partner or anyone listed above?</li> </ol>	<p>Items 1 and 5 are answered yes/no; if items 2, 3, or 4 are answered yes, participant is asked to indicate category of abuser (Circle all that apply: husband, ex-husband, boyfriend, stranger, other, multiple); for items 2 and 3, participants are asked to mark the area of injury on a body map</p> <p>For each violence incident, items are scored based on severity of (1 to 6)<sup>‡</sup></p> <p>Cutoff for IPV: Affirmative response to 1 or more items</p>
Women Abuse Screening Tool-Short <sup>63</sup>	2 questions adapted from the WAST	<ol style="list-style-type: none"> <li>1. In general, how would you describe your relationship?</li> <li>2. Do you and your partner work out arguments with...?</li> </ol>	<p>Responses ranged from 1 (a lot of tension or great difficulty) to 3 (no tension or no difficulty)</p> <p>Positive responses (e.g., 2 or 3) were assigned a score of 1</p> <p>Cutoff <math>\geq 2</math></p>

\* Cutoff for positive score here reflects widely accepted value; one included IPV test accuracy study<sup>73</sup> used a cutoff value of 6 or higher.

† We found no widely agreed-upon standard for what constitutes a positive test. In general, higher scores indicate higher risk of being abused, neglected, or exploited. The one included study in this review considered positive responses to questions 5, 7, 9, 10, 11, 13, and 15 to indicate high risk of elder mistreatment.<sup>41</sup>

‡ Scores are based on the following: 1=Threats of abuse including use of weapon; 2=Slapping, pushing; no injuries and/or lasting pain; 3=Punching, kicking, bruises, cuts, and/or continuing pain; 4=Beating up, severe contusions, burns, broken bones; 5=Head injury, internal injury, permanent injury; 6=Use of weapon; wound from weapon.

**Abbreviation:** AAS= Abuse Assessment Screen; BRFFS=Behavioral Risk Factor Surveillance System; IPV=intimate partner violence; KQ=key question; HITS= Hurt, Insult, Threaten, Scream; WAST= Women Abuse Screening Tool

**Appendix E Table 2. IPV Consequences of Screening Tool (COST) Effects on Quality-of-Life Subscale**

Consequences of Item (Response Options) <sup>60</sup>	Scoring, Range, and Interpretation
<ol style="list-style-type: none"> <li>1. For me, I feel that being asked the questions on partner violence was (Good, Somewhat good, Neither good nor bad, Somewhat bad, or Bad)</li> <li>2. Because the questions on partner violence were asked, I feel my home life has become (Less difficult, Somewhat less difficult, Neither less nor more difficult, Somewhat more difficult, or More difficult)</li> <li>3. Because the questions on partner violence were asked, my feelings about my relationship with my partner are (More positive, Somewhat more positive, Neither more nor less positive, Somewhat more negative, or More negative)</li> <li>4. Because the questions on partner violence were asked, I see the quality of my own life as being (Better, Somewhat better, Neither better nor worse, Somewhat worse, or Worse)</li> <li>5. Because the questions on partner violence were asked, the people in my community who are usually 'there' for me for emotional support are (More available, Somewhat more available, Neither more nor less available, Somewhat less available, or Less available)</li> <li>6. Because the questions on partner violence were asked, my feelings about myself as a person are (Better, Somewhat better, Neither better nor worse, Somewhat worse, or Worse)</li> <li>7. Because the questions on partner violence were asked, I feel that the problems in my relationship with my partner are my fault. (Disagree, Somewhat disagree, Neither disagree not agree, Somewhat agree, or Agree)</li> <li>8. Because the questions on partner violence were asked, my financial situation has become (Better, Somewhat better, Neither better nor worse, Somewhat worse, or Worse)</li> </ol>	<p>Each item is answered on a 5-point Likert scale; items are coded 2 through -2 (range 16 to -16). Positive scores indicate benefit while negative scores reflect harm.</p>

**Abbreviations:** COST=Consequences of Screening Tool; IPV=intimate partner violence.



Appendix F Table 1. IPV KQ 1: Results of Included Randomized, Controlled Trials

First Author, Year Quality Rating	Setting Group (N)	IPV Outcome Measure (tool) Results	QoL Measure Results	Other Eligible Outcomes Measure (Tool) Results
Klevens, 2012 <sup>58, 62</sup> Good	<p><b>Primary Care</b></p> <p>G1: Computerized screening followed by brief intervention for screen-positive women and IPV resource list (909)</p> <p>G2: IPV resource list only (893)</p> <p>G3: Control (898)</p>	<p><b>IPV exposure at 1 year (18 questions adapted from the National Violence Against Women Survey), G1 vs. G2</b></p> <p>N events/N analyzed</p> <p>G1: 96/909 G2: 101/893 G3: 83/898</p> <p>OR, (95% CI): G1 vs. G2: 1.2 (0.9 to 1.6) G1 vs. G3 1.0 (0.8 to 1.4) G2 vs. G3: 1.1 (0.8 to 1.5)</p> <p><b>Recurrence of IPV at 1 year among women reporting IPV in the year prior to enrollment</b></p> <p>N events/N analyzed</p> <p>G1: 38/120 G2: 33/116 G3: 40/110</p> <p>OR, (95% CI): G1 vs. G2: 0.8 (0.5 to 1.4) G1 vs. G3: 1.2 (0.7 to 2.2) G2 vs. G3: 1.4 (0.8 to 2.5)</p>	<p><b>SF-12 PCS at 1 year* (mean, 95% CI)</b></p> <p>G1: 46.8 (46.1 to 47.4) G2: 46.4 (45.8 to 47.1) G3: 47.2 (46.5 to 47.8) P=0.21 (across all groups)</p> <p><b>SF-12 MCS at 1 year (mean, 95% CI):</b></p> <p>G1: 48.3 (47.5 to 49.1) G2: 47.9 (47.2 to 48.7) G3: 47.8 (47 to 48.5) p=0.51 (across all groups)</p> <p><b>SF-12 at 1 year among women reporting IPV in the year prior to enrollment</b></p> <p><b>SF-12 PCS (mean, 95% CI):</b></p> <p>G1: 47.4 (46.1 to 48.8) G2: 47.1 (45.7 to 48.4) G3: 47.5 (46.7 to 8.3) p=0.32 (across all groups)</p> <p><b>SF-12 Mental Composite (mean, 95% CI):</b></p> <p>G1: 44.2 (42.4 to 45.9) G2: 40.7 (41.9 to 45.5) G3: 42.5 (47.0 to 44.3) p=0.21 (across all groups)</p>	<p><b>Hospitalization at 1 year (mean, 95% CI)</b></p> <p>G1: 0.2 (0.0 to 0.3) G2: 0.1 (0 to 0.3) G3: 0.2 (0 to 0.3) p=0.40 (across all groups)</p> <p><b>ED visits at 1 year (mean, 95% CI)</b></p> <p>G1: 0.3 (0.2 to 0.4) G2: 0.3 (0.2 to 0.4) G3: 0.3 (0.2 to 0.4) p=0.40 (across all groups)</p> <p><b>Ambulatory visits at 1 year (mean, 95% CI)</b></p> <p>G1: 5.4 (3.8 to 7.0) G2: 5.7 (4.1 to 7.3) G3: 5.9 (4.3 to 7.4) p=0.12 (across all groups)</p> <p><b>Hospitalization at 3 years (mean, 95% CI)</b></p> <p>G1: 0.2 (0.1 to 0.4) G2: 0.3 (0.1 to 0.4) G3: 0.2 (0.1 to 0.4)</p> <p><b>ED visits at 3 years (mean, 95% CI)</b></p> <p>G1: 0.6 (0.4 to 0.8) G2: 0.7 (0.5 to 0.9) G3: 0.6 (0.4 to 0.9)</p> <p><b>Ambulatory visits at 3 years (mean, 95% CI)</b></p> <p>G1: 12.7 (8.9 to 16.2) G2: 12.2 (8.4 to 16.1) G3: 11.6 (7.7 to 15.4) p=0.12 (across all groups)</p>

**Appendix F Table 1. IPV KQ 1: Results of Included Randomized, Controlled Trials**

First Author, Year, Quality Rating	Setting Group (N)	IPV Outcome Measure (tool) Results	QoL Measure Results	Other Eligible Outcomes Measure (Tool) Results
Koziol-McLain, 2010 <sup>59</sup>  Fair	<b>ED</b>  G1: In-person screening followed by brief intervention, safety assessment, and information about referrals/resources (166)  G2: Usual care (no formal IPV screening) (177)	<b>IPV exposure at 3 months (30-item Composite Abuse Scale)</b> N positive (CAS ≥7)/N analyzed G1: 20/167 G2: 24/177 Absolute risk difference (95% CI): -1.6 (-8.7 to 5.5) OR, (95% CI): 0.87 (0.46 to 1.64)	NR	NR
MacMillan, 2009 <sup>60</sup>  Fair	<b>Mixed (primary care, OBGYN clinics and EDs)</b>  G1: In-person screening prior to visit with notification of clinician (inclusion of positive screen in chart); provision of IPV resource list (347)  G2: No screening before visit (IPV screening conducted after clinic visit); provision of IPV resource list (360)	<b>Recurrence of IPV (30-item Composite Abuse Scale) among women disclosing past-year IPV at baseline, G1 vs. G2</b> <b>OR, (95% CI)†</b> 6 months: 0.93 (0.61 to 1.41) 12 months: 0.90 (0.50 to 1.63) 18 months: 0.88 (0.43 to 1.82)	<b>WHOQOL-BREF, difference between groups in mean scores (95% CI),† G2 vs. G2</b> 6 months: 1.32 (-0.99 to 3.63) 12 months: 1.86 (-1.39 to 5.12) 18 months: 2.29 (-1.71 to 6.28)  <b>SF-12 PCS, difference between groups in mean scores (95% CI),† G2 vs. G2</b> 6 months: 0.91 (-0.34 to 2.15) 12 months: 1.28 (-0.48 to 3.04) 18 months: 1.57 (-0.59 to 3.73)  <b>SF-12 MCS, difference between groups in mean scores (95% CI),† G2 vs. G2</b> 6 months: 0.60 (-0.98 to 2.19) 12 months: 0.85(-1.39 to 3.09) 18 months: 1.05 (-1.70 to 3.79)	<b>PTSD screen (SPAN) OR, (95% CI) †</b> 6 months: 0.77 (0.55 to 1.06) 12 months: 0.69 (0.43 to 1.08) 18 months: 0.63 (0.36 to 1.10)  <b>Depression (CES-D) difference in mean scores (95% CI) †</b> 6 months: -1.14 (-2.50 to 0.22) 12 months: -1.61 (-3.53 to 0.32) 18 months: -1.97 (-4.33 to 0.39)

\* SF-12 scores adjusted for age, education, race/ethnicity, insurance status, and clustering by clinic) and baseline scores.

† All results shown are those adjusted for baseline differences and missing data using multiple imputation.

**Abbreviations:** CAS=Composite Abuse Scale; CES-D=Center for Epidemiologic Studies Depression; CI=confidence interval; ED=emergency department; G=group; IPV=intimate partner violence; KQ=key question; MCS=Mental Composite Score; N =sample size; NR=not reported; OBGYN=obstetrics and gynecology; OR=odds ratio; PCS=Physical Composite Score; PTSD=post-traumatic stress disorder; QoL=quality of life; RCT=randomized, controlled trial; SF-12= 12-Item Short Form Survey; SPAN=Startle, Physiological Arousal, Anger, and Numbness; WHOQOL-BREF=World Health Organization Quality of Life-BREF; vs.=versus.

**Appendix F Table 2. IPV KQ 2: Results of Included Randomized, Controlled Trials**

First Author, Year Quality Rating	Timing of IPV Exposure	Screening Tools; Number of Items; Item Coverage  Scores Used; Criteria for Positive Screen	Reference Standard(s) Number of Items, Item Coverage  Criteria for Positive Score	Prevalence of IPV in Analyzed Population Based on Reference Standard	Total N Analyzed	Overall IPV Sensitivity, % (95% CI)	Overall IPV Specificity, % (95% CI)	Overall IPV Positive Likelihood Ratios, % (95% CI)	Overall IPV Negative Likelihood Ratios, % (95% CI)
Chen, 2005 <sup>69</sup> Fair	Current	HITS; 4 items; physical, psychological abuse  Scores: Overall abuse; positive screen: Score >10.5	ISA-P; 11 items; dimensions: Only physical abuse included  Physical abuse cut score >10	5%	113	86 (NR)	99 (NR)	91	0.1
Dubowitz, 2007 <sup>70</sup> Fair	Past year	PSQ; 3 items; physical, fear, considered court order  Scores: Any item; positive screen: If endorsed ≥1 positive response	CTS-2; 78 items; dimensions: Psychological aggression, physical assault, injury, sexual coercion  Cut score: Top 20% on psychological aggression; any past-year physical assault and injury	Psychological aggression: 76%* Physical assault: 32% Injury: 9% Sexual coercion: 28%	200 (n=185 for psychological aggression)	Physical assault: 19 (NR) Injury: 29 (NR) Psychological aggression: 27 (NR)	Physical assault: 92 (NR) Injury: 91 (NR) Psychological aggression: 92 (NR)	Physical assault: 2.5 (NR) Injury: 3.3 (NR) Psychological aggression: 3.3 (NR)	Physical assault: 0.9 (NR) Injury: 0.8 (NR) Psychological aggression: 0.8 (NR)
Ernst, 2004 <sup>65</sup> Fair	Current	OVAT; 4 items; physical and nonphysical violence  Scores: Total abuse; positive screen: A "true" response to Q1, 2, or 4 and a ≥3 Q3	ISA; 30 items; dimensions: Physical, emotional, and sexual abuse  Overall IPV: Positive score on physical or nonphysical; physical abuse cut score ≥25; nonphysical abuse cut score ≥10	Overall: 20% Physical: 16% Nonphysical: 17%	306	86 (75 to 93)	83 (78 to 88)	5.1 (3.8 to 6.8)	0.2 (0.1 to 0.3)

**Appendix F Table 2. IPV KQ 2: Results of Included Randomized, Controlled Trials**

First Author, Year Quality Rating	Timing of IPV Exposure	Screening Tools; Number of Items; Item Coverage  Scores Used; Criteria for Positive Screen	Reference Standard(s) Number of Items, Item Coverage  Criteria for Positive Score	Prevalence of IPV in Analyzed Population Based on Reference Standard	Total N Analyzed	Overall IPV Sensitivity, % (95% CI)	Overall IPV Specificity, % (95% CI)	Overall IPV Positive Likelihood Ratios, % (95% CI)	Overall IPV Negative Likelihood Ratios, % (95% CI)
Feldhaus, 1997 <sup>66</sup>  Fair	Past year	PVS; 3 items; physical violence and safety  Scores: Combined abuse positive screen: Yes to any question  Positive screen partner physical violence: Yes  Positive screen safety: Yes or unsure to either question	ISA; 30 items; dimensions: Physical, emotional, sexual abuse; physical and nonphysical scales  Combined abuse: Positive score on either physical or nonphysical: Physical abuse cut score >25; nonphysical abuse cut score >10  CTS (Form N); 19 items; dimensions: Verbal aggression, violence  Combined abuse: Positive on either verbal or physical abuse; verbal abuse cut score >45.2; physical abuse cut score >7.4	ISA combined abuse: 24%  CTS combined abuse: 27%	ISA: 255  CTS: 230	ISA: 64 (51 to 76)  CTS: 71 (59 to 82)	ISA: 80 (74 to 86)  CTS: 84 (78 to 90)	ISA: 3.3 (2.3 to 4.6)  CTS: 4.6 (3.1 to 6.8)	ISA: 0.4 (0.3 to 0.6)  CTS: 0.3 (0.2 to 0.5)

**Appendix F Table 2. IPV KQ 2: Results of Included Randomized, Controlled Trials**

First Author, Year Quality Rating	Timing of IPV Exposure	Screening Tools; Number of Items; Item Coverage  Scores Used; Criteria for Positive Screen	Reference Standard(s) Number of Items, Item Coverage  Criteria for Positive Score	Prevalence of IPV in Analyzed Population Based on Reference Standard	Total N Analyzed	Overall IPV Sensitivity, % (95% CI)	Overall IPV Specificity, % (95% CI)	Overall IPV Positive Likelihood Ratios, % (95% CI)	Overall IPV Negative Likelihood Ratios, % (95% CI)
Hegarty, 2021 <sup>64</sup>  Fair	Past year	ACTS binary (yes/no) response format; 4 items; Overall abuse; positive screen: $\geq 1$	CAS; 30 items; dimensions: Physical, sexual, emotional abuse	10.5%	1,067	51 (NR)	97 (NR)	17 (NR)	0.5 (NR)
		ACTS Ordinal (5-point) response format; 4 items; Overall abuse; positive screen: "rarely" or above on any item	Overall abuse cut score: NR			66 (NR)	94 (NR)	11 (NR)	0.4 (NR)
Iverson, 2013 <sup>39</sup>  Fair	Past year	HITS; 4 items; physical, psychological abuse  Scores: Overall abuse; positive screen: Score $\geq 6$	CTS-2; 39 items; dimensions: Physical assault, sexual coercion, severe psychological aggression  Overall IPV cut score: $\geq 1$ on physical, sexual or severe psychological aggression	Overall IPV in past year: 29% (N=46) Physical IPV in past year: 14% <sup>†</sup> Sexual IPV in past year: 14% <sup>†</sup> Psychological IPV in past year: 18% <sup>†</sup> More than one type of IPV: 14% <sup>d</sup>	160	78 (63 to 89)	80 (71 to 87)	3.9 (2.6 to 5.8)	0.3 (0.2 to 0.5)

**Appendix F Table 2. IPV KQ 2: Results of Included Randomized, Controlled Trials**

First Author, Year Quality Rating	Timing of IPV Exposure	Screening Tools; Number of Items; Item Coverage Scores Used; Criteria for Positive Screen	Reference Standard(s) Number of Items, Item Coverage Criteria for Positive Score	Prevalence of IPV in Analyzed Population Based on Reference Standard	Total N Analyzed	Overall IPV Sensitivity, % (95% CI)	Overall IPV Specificity, % (95% CI)	Overall IPV Positive Likelihood Ratios, % (95% CI)	Overall IPV Negative Likelihood Ratios, % (95% CI)
Iverson, 2015 <sup>73</sup>	Past year	HITS; 4 items; physical, psychological abuse Overall IPV; positive screen: score $\geq 6$ E-HITS; 5 items; 4 HITS items (physical, psychological abuse) and 1 sexual violence item Scores: Overall IPV; positive screen: Score $\geq 7$	CTS-2; 39 items: Physical assault, sexual coercion, severe psychological aggression Overall IPV cut score $\geq 1$ on physical, sexual, or severe psychological aggression CTS-2; 39 items; dimensions: Physical assault, sexual coercion, severe psychological aggression Overall IPV cut score: $\geq 1$ on physical, sexual or severe psychological aggression	Overall IPV in past year: 25% More than one type of IPV: 45% Overall IPV in past year: 25% More than one type of IPV: 45%	80	75 (55 to 95) 75 (55 to 95)	83 (73 to 92) 82 (72 to 90)	2.3 (1.4 to 3.7) 2.1 (1.4 to 3.4)	0.2 (0.1 to 0.4) 0.2 (0.1 to 0.4)

**Appendix F Table 2. IPV KQ 2: Results of Included Randomized, Controlled Trials**

First Author, Year Quality Rating	Timing of IPV Exposure	Screening Tools; Number of Items; Item Coverage Scores Used; Criteria for Positive Screen	Reference Standard(s) Number of Items, Item Coverage Criteria for Positive Score	Prevalence of IPV in Analyzed Population Based on Reference Standard	Total N Analyzed	Overall IPV Sensitivity, % (95% CI)	Overall IPV Specificity, % (95% CI)	Overall IPV Positive Likelihood Ratios, % (95% CI)	Overall IPV Negative Likelihood Ratios, % (95% CI)
Koziol-McLain, 2001 <sup>74</sup> Fair	Prediction of future (3 to 5 months) partner abuse	BRFSS-administered violence screen, 3 items Scores: Physical violence, feeling unsafe, police called; positive screen: $\geq 1$ yes	Combined CTS and CTS-2;* 22 items; dimensions: Verbal aggression, physical violence, severe physical violence Sexual coercion Any partner abuse cut score: $\geq 13$ or more verbally aggressive events or $\geq 1$ physically violent, severe physically violent, or sexually coercive events	Any partner abuse: 24% Verbal aggression: 19% Sexual coercion: 10% Physical violence: 4% Severe physical violence: 1%	409	20 (13 to 30) <sup>†</sup>	96 (93 to 98) <sup>†</sup>	4.8 (2.4 to 9.3)	0.8 (0.8 to 0.9)
MacMillan, 2006 <sup>75</sup> Fair	Past year	PVS; 3 items; physical abuse, safety Scores: Overall abuse; positive screen: Endorsing Q1 or 3 or not endorsing Q2	CAS; 30 items; dimensions: Physical, sexual, emotional abuse Overall abuse cut score: $\geq 7$	NR <sup>§</sup>	NR <sup>  </sup>	49 (NR)	94 (NR)	NR	NR
MacMillan, 2006 <sup>75</sup> Fair	Past year	WAST; 8 items; physical, sexual, emotional abuse Scores: Overall abuse; positive screen: Endorsing question “a lot of tension” or question “great difficulty”	CAS; 30 items; dimensions: Physical, sexual, emotional abuse Positive IPV cut score: $\geq 7$	NR <sup>§</sup>	NR <sup>  </sup>	47 (NR)	96 (NR)	NR	NR

**Appendix F Table 2. IPV KQ 2: Results of Included Randomized, Controlled Trials**

First Author, Year Quality Rating	Timing of IPV Exposure	Screening Tools; Number of Items; Item Coverage  Scores Used; Criteria for Positive Screen	Reference Standard(s) Number of Items, Item Coverage  Criteria for Positive Score	Prevalence of IPV in Analyzed Population Based on Reference Standard	Total N Analyzed	Overall IPV Sensitivity, % (95% CI)	Overall IPV Specificity, % (95% CI)	Overall IPV Positive Likelihood Ratios, % (95% CI)	Overall IPV Negative Likelihood Ratios, % (95% CI)
Mills, 2006 <sup>67</sup> Fair	Past year	HITS; 4 items; physical, psychological abuse  Scores: Overall abuse; positive screen: Score >10	CTS-2; 78 items (perpetrator and victim); psychological aggression, physical violence, negotiation, sexual coercion, injury  Psychological aggression cut score ≥21.7% Physical violence cut score ≥7.4%	Psychological aggression: 39%  Physical violence: 20%	53	Psychological aggression: 30 (13 to 54)  Physical violence: 46 (18 to 75)	Psychological aggression: 88 (71 to 96)  Physical violence: 88 (74 to 96)	Psychological aggression: 2.5 (0.8 to 7.7)  Physical violence: 3.8 (1.3 to 10.9)	NR
Mills, 2006 <sup>67</sup> Fair	Past year	PVS; 3 items; physical violence and safety  Scores: Combined abuse; positive screen: Yes to any question	CTS-2; 78 items (perpetrator and victim)  Dimensions: Psychological aggression, physical violence, negotiation, sexual coercion and injury Psychological aggression score ≥21.7%; physical violence score ≥7.4%	Psychological aggression: 39%  Physical violence: 20%	53	Psychological aggression: 35 (16 to 59)  Physical violence: 46 (18 to 75)	Psychological aggression: 84 (67 to 94)  Physical violence: 83 (68 to 92) <sup>†</sup>	Psychological aggression: 2.3 (0.9 to 6.3)  Physical violence: 2.7 (1.1 to 7.0)	NR



Appendix F Table 2. IPV KQ 2: Results of Included Randomized, Controlled Trials

First Author, Year Quality Rating	Timing of IPV Exposure	Screening Tools; Number of Items; Item Coverage Scores Used; Criteria for Positive Screen	Reference Standard(s) Number of Items, Item Coverage Criteria for Positive Score	Prevalence of IPV in Analyzed Population Based on Reference Standard	Total N Analyzed	Overall IPV Sensitivity, % (95% CI)	Overall IPV Specificity, % (95% CI)	Overall IPV Positive Likelihood Ratios, % (95% CI)	Overall IPV Negative Likelihood Ratios, % (95% CI)
Paranjape, 2003 <sup>68</sup> Fair	Lifetime	STaT; 3 items; Physical violence Scores: Any IPV; positive screen: ≥1 yes	Semistructured interview that followed a published interview guide to elicit a history of lifetime IPV Classification of IPV based on specific acts	Overall lifetime IPV: 63% past 12 months: 15% IPV subtype: Physical abuse: 11% Physical and emotional abuse: 36% Physical, emotional, and sexual abuse: 38%	75	STaT score: ≥1: 96 (90 to 100) ≥2: 89 (80 to 98) ≥3: 64 (50 to 78)	STaT score: ≥1: 75 (59 to 91) ≥2: 100 (NA) ≥3: 100 (NA)	StaT score: ≥1: 3.8 (2.0 to 7.3) ≥2: Infinity (NA) =3: Infinity (NA)	STaT score: ≥1: 0.1 (0.05 to 0.2) ≥2: 0.1 (0.05 to 0.2) =3: 0.4 (0.2 to 0.5)
Paranjape, 2006 <sup>72</sup> Fair	Current or most recent relationship	STaT; 3 items; physical violence Scores: Any IPV; positive screen: ≥1 yes response	ISA; 30 items; dimensions: Physical, nonphysical (emotional and sexual abuse) Positive IPV: Positive ISA-Physical (ISA-P) or ISA Nonphysical (ISA-NP); Positive ISA-P ≥10 Positive ISA-NP ≥25	IPV during most recent relationship: 33% Current IPV: 15%	240	STaT Score: ≥1: 95 (90 to 100) ≥2: 85 (77 to 93) =3: 62 (51 to 73)	STaT score: ≥1: 37 (29 to 44) ≥2: 54 (46 to 62) =3: 66 (58 to 73)	StaT score: ≥1: 1.5 (1.3 to 1.7) ≥2: 1.8 (1.5 to 2.2) =3: 1.8 (1.4 to 2.4)	StaT score: ≥1: 0.1(0.05 to 0.4) ≥2: 0.3 (0.2 to 0.5) =3: 0.6 (0.4 to 0.8)
Sohal, 2007 <sup>38</sup> Fair	Past year	HARK; 4 items; psychological, physical, sexual abuse Scores: Overall abuse; positive screen: Score ≥1	CAS; 30 items; dimensions: Physical abuse, emotional abuse, severe combined abuse, harassment Overall abuse cut score: ≥3	23%	232	81 (69 to 90)	95 (91 to 98)	Multilevel LR 16 (8 to 31) <sup>#</sup>	NR

**Appendix F Table 2. IPV KQ 2: Results of Included Randomized, Controlled Trials**

First Author, Year Quality Rating	Timing of IPV Exposure	Screening Tools; Number of Items; Item Coverage  Scores Used; Criteria for Positive Screen	Reference Standard(s) Number of Items, Item Coverage  Criteria for Positive Score	Prevalence of IPV in Analyzed Population Based on Reference Standard	Total N Analyzed	Overall IPV Sensitivity, % (95% CI)	Overall IPV Specificity, % (95% CI)	Overall IPV Positive Likelihood Ratios, % (95% CI)	Overall IPV Negative Likelihood Ratios, % (95% CI)
Wathen, 2008 <sup>40</sup>  Fair	Past year	WAST; 8 items; physical, sexual, and emotional abuse  Scores: Overall abuse; positive screen: Score $\geq 4$	CAS; 30 items; dimensions: Physical abuse, emotional abuse, severe combined abuse, harassment  Positive IPV cut score: $\geq 7$	14%	5,604	Overall: 88 (85 to 90) Screen group: 87 (83 to 90) No-screen group: 88 (85 to 91)	Overall: 89 (88 to 90) Screen group: 89 (88 to 90) No-screen group: 89 (87 to 90)	Overall: 7.8 (7.2 to 8.5) Screen group: 8 (7 to 9) No-screen group: 7.7 (6.9 to 8.7)	Overall: 0.1 (0.1 to 0.2) Screen group: 0.2 (0.1 to 0.2) No-screen group: 0.1 (0.1 to 0.2)
Weiss, 2003 <sup>76</sup>  Fair	Current	AAS; 5 items; physical violence, emotional abuse safety, sexual assault  Scores: Overall abuse; positive screen: $\geq 1$ yes response	ISA; 30 items; dimensions: Physical abuse, nonphysical abuse (emotional and sexual abuse)  Positive IPV cut score: NR	19%	856	92 (87 to 96)	55 (52 to 59)	2.1 (1.9 to 2.3)	0.1 (0.1 to 0.2)
Weiss, 2003 <sup>76</sup>  Fair	Current	OAS; 5 items; physical violence, emotional abuse safety, sexual assault  Scores: Overall abuse; positive screen: $\geq 1$ yes	ISA; 30 items; dimensions: Physical abuse, nonphysical abuse (emotional and sexual abuse)  Positive IPV cut score: NR	19%	856	60 (52 to 67)	90 (87 to 92)	5.8 (4.5 to 7.5)	0.4 (0.4 to 0.5)

**Appendix F Table 2. IPV KQ 2: Results of Included Randomized, Controlled Trials**

First Author, Year Quality Rating	Timing of IPV Exposure	Screening Tools; Number of Items; Item Coverage  Scores Used; Criteria for Positive Screen	Reference Standard(s) Number of Items, Item Coverage  Criteria for Positive Score	Prevalence of IPV in Analyzed Population Based on Reference Standard	Total N Analyzed	Overall IPV Sensitivity, % (95% CI)	Overall IPV Specificity, % (95% CI)	Overall IPV Positive Likelihood Ratios, % (95% CI)	Overall IPV Negative Likelihood Ratios, % (95% CI)
Zapata-Calvente, 2022 <sup>63</sup>	Current	AAS; 4 items; Emotional, physical, and sexual IPV  Scores: Overall IPV; positive screen: a positive response to any of the items	WHO IPV Questionnaire  Emotional, physical, and sexual IPV  Positive IPV cut score: NR	9.5%	592	12 (NR)	100 (NR)	38.2 (NR)	0.8 (NR)
						37 (NR)	96 (NR)	9.25 (NR)	0.7 (NR)
Fair		WAST-Short; 2 items; IPV overall  Scores: Overall IPV; positive screen: 2							
Zapata-Calvente, 2022 <sup>63</sup>	Past year	AAS; 4 items; Emotional, physical, and sexual IPV  Scores: Overall IPV; positive screen: a positive response to any of the items	WHO IPV Questionnaire  Emotional, physical, and sexual IPV  Positive IPV cut score: NR	19.4%	592	51.4 (NR)	86.5 (NR)	3.8 (NR)	0.6 (NR)
						25.9 (NR)	96.3 (NR)	7 (NR)	0.8 (NR)
Fair		WAST-Short; 2 items; IPV overall  Scores: Overall IPV; positive screen: 2							

**Appendix F Table 2. IPV KQ 2: Results of Included Randomized, Controlled Trials**

First Author, Year Quality Rating	Timing of IPV Exposure	Screening Tools; Number of Items; Item Coverage Scores Used; Criteria for Positive Screen	Reference Standard(s) Number of Items, Item Coverage Criteria for Positive Score	Prevalence of IPV in Analyzed Population Based on Reference Standard	Total N Analyzed	Overall IPV Sensitivity, % (95% CI)	Overall IPV Specificity, % (95% CI)	Overall IPV Positive Likelihood Ratios, % (95% CI)	Overall IPV Negative Likelihood Ratios, % (95% CI)
Zink, 2007 <sup>71</sup> Fair	Current	Unnamed screener;** 5 items using nongraphic language; relationship quality, safety  Scores: Overall IPV; positive screen: A response >1 on at least 1 of the questions	CTS-2; 39 items; Dimensions: Verbal aggression, physical violence, injury, and sexual coercion  Positive verbal aggression, physical violence, injury, and sexual coercion ≥95th percentile on subscale; positive IPV: A positive score on ≥1 subscale	11%	393	DV combinations in which at least 1 of the questions had a response >1: Q1 and 3: 39 (NR) Q1, 3, and 4: 46 (NR) Q1 to Q5: 40 (NR)	DV combinations in which at least 1 of the questions had a response >1: Q1 and 3: 95 (NR) Q1, 3, and 4: 95 (NR) Q1 to Q5: 91 (NR)	DV combinations in which at least one of the questions had a response >1: Q1 and 3: 7 (4 to 12) Q1, 3, and 4: 7.7 (4.5 to 13) Q1 to Q5: 4.4 (2.7 to 7.3)	DV combinations in which at least one of the questions had a response >1: Q1 and 3: 0.7 (0.51 to 0.82) Q1, 3, and 4: 0.6 (0.4 to 0.8) Q1 to Q5: 0.7 (0.5 to 0.8)

\* Percentages refer to the number of respondents who endorsed that a partner had done any of the items on the subscales to them at least once in the past year.

† The numbers refer to overall sample with specific types of IPV (and not percentage of the positive IPV sample).

‡ Sensitivity and specificity refer to prediction of abuse or nonabuse in the months immediately following the screen.

§ 12-month prevalence of IPV ranged from 4% to 18% across settings measured by the PVS and WAST, the two reference measures used.

¶ 2,339 completed the gold standard CAS. Authors reported numbers of participants who completed each screening tool and gold standard, but not the sample analyzed for each comparison.

¶ Document reported 2.4 as upper limit, but it appears to be 92.

# Of individual HARK scores: 3 or 4: Undefined; 2: 15 (4 to 49); 1: 9 (4 to 22); 0: 0.2 (0.1 to 0.4).

\*\* General domestic violence screening questions scored on a 3-point (Q1 to Q2) or 5-point Likert scale (Q3 to Q5) beginning at 0.

**Abbreviations:** AAS=Abuse Assessment Screen; ACTS=Afraid, Controlled, Threatened, Slapped or physically hurt; BRFS=Behavioral Risk Factor Surveillance System; CAS=Composite Abuse Scale; CI=confidence interval; CTS=Conflict Tactics Scale; CTS-2 Conflict Tactics Scale-2; DV=Domestic Violence; E-HITS=Extended HITS; HARK=Humiliation, Afraid, Rape, Kick; HITS=Hurt, Insult, Threaten, Scream; IPV=intimate partner violence; ISA=Index of Spouse Abuse; ISA-NP=Index of Spouse Abuse-Nonphysical; ISA-P=Index of Spouse Abuse-Physical; KQ=key question; LR=likelihood ratio; N/n=sample size; NA=not available; NR=not reported; OAS=Ongoing Abuse Screen; OVAT=Ongoing Violence Assessment Tool; PVS=Partner Violence Screen; STaT=Slapped, Things, Threaten; WAST=Woman Abuse Screening Tool; WAST-Short=Woman Abuse Screening Tool Short Version; WHO=World Health Organization.

**Appendix F Table 3. RCTs Reporting on Harms of IPV Screening (KQ 3) or Interventions (KQ 5)**

First Author, Year	Key Question	Intervention Control	N	Harms Outcomes
Koziol-McLain, 2010 <sup>59</sup>	KQ 3	<p>Screening: In-person screening in a New Zealand ED followed by brief intervention, safety assessment, and information about referrals/resources</p> <p>Control: Usual care (no formal IPV screening)</p>	344	No adverse events were reported by participants, clinicians, or research staff; however, it is not clear whether adverse events were prespecified or how they were monitored.
MacMillan, 2009 <sup>60</sup>	KQ 3	<p>Mixed (primary care, OBGYN clinics, and ED settings)</p> <p>Screening: In-person screening in mixed healthcare settings (primary care, OBGYN clinics, and EDs) prior to visit; clinicians notified of positive results by including copy of positive screening questionnaire in the chart; provision of IPV resource list</p> <p>Control: No screening before visit (IPV screening conducted after clinic visit); provision of IPV resource list</p>	591*	Effects on Quality of Life subscale of COST instrument administered to screened women regardless of abuse status. Mean score of 3.52 (SD 3.24) indicated that being asked IPV screening questions was not harmful to women immediately after screening; scores were similar across abuse categories.
Hegarty, 2013 <sup>85, 93</sup>	KQ 5	<p>IPV intervention: Physician training to respond to women and deliver a brief IPV counseling intervention in primary care settings (137)</p> <p>Control: Usual care (135)</p>	272	<p>At 6 months, no women in the intervention group agreed strongly (on a 5-point scale) that they felt judged negatively by practice staff for being a participant or responded "worse" to the item "As a result of participating in this trial, I see the quality of my own life as..." No adverse events were reported and the authors detected no evidence of a difference in harm or abuse between groups.</p> <p>At 24 months, most survey respondents agreed they were glad they participated (n=145, 87.3%). No differences between groups on the harm-benefit Visual Analogue scale (intervention mean=77.0 (SD 20.5); control mean=73.7 (SD 18.9); mean difference=4.4, 95% CI, -0.8 to 9.6, p=0.092).</p>
Sharps, 2016 <sup>79</sup>	KQ 5	<p>IPV intervention: DOVE, structured brochure-based IPV intervention added to standard home visitation for screen-detected pregnant women</p> <p>Control: Standard home visiting protocol (4 to 6 prenatal visits, 6 to 12 postnatal visits over 2 years)</p>	239	No adverse events, such as IPV-related deaths, were reported in either group.

**Appendix F Table 3. RCTs Reporting on Harms of IPV Screening (KQ 3) or Interventions (KQ 5)**

First Author, Year	Key Question	Intervention Control	N	Harms Outcomes
Tiwari, 2005 <sup>83</sup>	KQ 5	<p>IPV intervention: In-person counseling focused on empowerment and safety advice during routine prenatal care (51)</p> <p>Control: Usual care for abused women (wallet-sized card with information on community resources) (55)</p>	106	In phone interviews at 6 weeks postpartum, women were asked if they had experienced increased frequency of IPV and, if so, whether they attributed the increase to study participation. No adverse events of participation were reported by women in the intervention group or by controls.
Tiwari, 2010 <sup>89</sup>	KQ 5	<p>IPV intervention: Advocacy Intervention, in-person interview, empowerment pamphlet to support the information provided, scheduled weekly telephone calls, 24-hour access to a hotline for additional support (100)</p> <p>Control: Usual care (100)</p>	200	No adverse events resulting from women's participation in the study were reported. No details on how harms were measured and assessed were provided.
Rhodes, 2015 <sup>86</sup>	KQ 5	<p>IPV intervention: Brief motivational intervention during ED visit (239)</p> <p>Assessed control (232)</p> <p>No contact control (121)</p>	592	No harms related to the intervention were identified.

\* This number differs from the sample size for benefit outcomes; the COST questionnaire was administered to a subset of 591 women out of 3,271 screened (227 women who screened positive for abuse, 206 with mixed screen results, and 158 who screened negative).

**Abbreviations:** CI=confidence interval; COST=Consequences of Screening Tool; DOVE=Domestic Violence Enhanced Home Visitation; ED=emergency department; IPV=intimate partner violence; KQ=key question; N=sample size; OBGYN obstetrics and gynecology; RCT randomized, controlled trial; SD=standard deviation.

**Appendix F Table 4. IPV KQ 4: Detailed Characteristics of Interventions for Included RCTs**

First Author, Year	Population Recruitment Setting	Source Population	Intervention Description	Additional (non-IPV) Intervention Components	Delivery Provider	Delivery Setting	No. of Sessions Length of Sessions(s)	Frequency Intervention Duration*
<b><i>Pregnant/Postpartum</i></b>								
Bair-Merritt, 2010 <sup>80</sup>	Hawaiian hospitals, U.S.	Mothers age 18 years or older who gave birth between 1994 and 1995 on Oahu to children rated high risk for child maltreatment	Family-based HV intervention aimed at preventing child abuse/neglect; provided direct services related to parenting, problem-solving skills, emotional support; linked families to community services (i.e., IPV shelters/advocacy groups, mental health treatment).	Multiple (e.g., education on child development, role-modeling positive parenting, offering emotional support)	Paraprofessionals who completed a 5-week training (0.5 day devoted to IPV)	Home	13.6 <sup>f</sup> in year 1 (mean); number of sessions focused on IPV NR  Length NR	Weekly to biweekly to monthly to quarterly as family achieved goals  3 years
El-Mohandes, 2008 <sup>90</sup> Kiely, 2010 <sup>91</sup> El-Mohandes, 2011 <sup>92</sup>	6 prenatal care sites in the District of Columbia, U.S.	African American women age 18 years or older, 28 weeks or under of gestation and reporting any of 4 risk factors; subgroup experiencing IPV screened positive for any IPV in year prior to pregnancy	Individual in-person CBT aimed at reducing behavioral risks (depression, IPV, smoking, and tobacco exposure); sessions targeted toward specific risks reported by women at that session; IPV components emphasized safety behaviors.	Receipt of behavioral counseling for other risks (depression, smoking, tobacco exposure) in intervention group but not control group	Master's-level trained social workers or psychologists	Prenatal care sites	Prenatal: 3.9 (mean), range 4 to 8  36 15 minutes or less  Postpartum: 0.8 (mean), range 0 to 2  38 13 minutes or less	NR (frequency determined by mothers' attendance at routinely scheduled perinatal care visits)  31 weeks (mean 19.3 weeks' gestation to mean 10.3 weeks postpartum)
Flaathen, 2022 <sup>82</sup>	19 Maternal and child health centers, Norway	Women age 18 years or older attending routine antenatal check-ups without their partner or other family members, and who screened positive for any lifetime IPV	Culturally sensitive video using digital storytelling that communicated information about violence and safety behaviors. The video gave information about types of IPV, the cycle of abuse, IPV during pregnancy and health consequences, help-seeking strategies and safety-promoting behaviors.	NA	Midwives	Maternal and child health centers	1  7 minutes	Once, single session

**Appendix F Table 4. IPV KQ 4: Detailed Characteristics of Interventions for Included RCTs**

First Author, Year	Population Recruitment Setting	Source Population	Intervention Description	Additional (non-IPV) Intervention Components	Delivery Provider	Delivery Setting	No. of Sessions Length of Sessions(s)	Frequency Intervention Duration*
Heyman, 2019 <sup>84</sup>  Fair  N=368	Maternity units in 2 large hospitals in the exurbs of New York City, U.S.	Couples with 1 partner age 30 years or younger, could speak English, at least 1 partner had been verbally aggressive toward the other in the last 6 months, and no reported male-to-female physical IPV ever	Sessions during the baby's first 8 months. Sessions 1 and 4 were 1-hour home visits, and the others were 30- to 60-minute phone calls. Sessions 1 to 7 involved 2 to 3 segments, including a video, workbook activities, and meeting with a coach. Session 8 was intended to solidify gains for the future.	NA	Coach (training NR)	In-home session or phone call	8  30 minutes to 1 hour	Frequency Varied; earlier sessions occurred more frequently  8 months
Sharps, 2016 <sup>79</sup>  Fair  N=239	Multiple urban and rural perinatal HV agencies, U.S.	Women age 14 years or older, 32 weeks or under of gestation, low income (i.e., Medicaid eligible), enrolled in a perinatal HV program, and who screened positive for current IPV	Brochure-based IPV empowerment intervention embedded into a perinatal HV program; tailored to a woman's expressed needs and level of danger; delivered during routine HVs.	Women in both groups received 4 to 6 HVs prenatally and 6 to 12 postnatally up to 2 years postpartum providing routine perinatal support	Community health workers, nurses; unlicensed and licensed personnel	Home	6 HVs focused on IPV (3 during pregnancy, 3 postpartum)  15 to 25 minutes	NR  1 to 2 years postpartum
Tiwari, 2005 <sup>83</sup>  Fair  N=110	1 public antenatal clinic, Hong Kong	Women age 18 years or older, under 30 weeks' gestation who screened positive for abuse by a partner during their first antenatal appointment	In-person counseling focused on empowerment to enhance independence (advice in areas of safety, choice making, and problem solving), followed by brochure reinforcing information. Content modified to be culturally relevant.	NA	Senior research assistant (described as a midwife with a master's degree in counseling)	Antenatal clinic	1  30 minutes	Once (NA)



**Appendix F Table 4. IPV KQ 4: Detailed Characteristics of Interventions for Included RCTs**

First Author, Year	Population Recruitment Setting	Source Population	Intervention Description	Additional (non-IPV) Intervention Components	Delivery Provider	Delivery Setting	No. of Sessions Length of Sessions(s)	Frequency Intervention Duration*
Zlotnick, 2011 <sup>81</sup>  Fair  N=54	3 primary care and OBGYN clinics in Rhode Island, U.S.	Women ages 18 to 40 years who screened positive for past-year IPV	Individual in-person counseling (based on interpersonal psychotherapy) emphasizing social support, improving interpersonal relationships, and improving social support networks; sessions also included education on IPV and advice on making a safety plan.	Sessions also addressed emotional risks (signs/symptoms of PPD, PTSD, and substance abuse), role transitions into motherhood and self-care	Unclear; delivery personnel trained by first author (PhD-level psychologist)	Primary care and OBGYN clinics	5 (4 during pregnancy, 1 postpartum); mean 3  60 minutes	Pregnant: Weekly  Postpartum: 2 weeks or less post-delivery  14 weeks (mean)
<b>Nonpregnant</b>								
Hegarty, 2013 <sup>85, 93</sup>  Fair  N=272 (52 physicians)	Multiple family practice clinics in Victoria, Australia	Women ages 16 to 50 years who screened positive for fear of their partner in the past 12 months†	Physician training to respond to women who screen positive for IPV and deliver a brief in-person IPV counseling intervention to screen positive women.	NA	Family practice physicians	Family practice clinic	1 (median), range 1 to 6  30 minutes	Intermittent (per authors, frequency and number of visits depended on patient need)  NR (varied per authors)
Miller, 2011 <sup>88</sup>  Fair  N=904	4 family planning clinics in Northern California, U.S.	Women ages 16 to 29 years who agreed to a followup interview	Provider training to deliver in-person enhanced IPV screening, education, and counseling for IPV/reproductive coercion and response to IPV exposure; all women received brief education and inquiry, those who disclosed IPV received more resources/counseling.	NA	Trained paraprofessional reproductive health specialists	Family planning clinics	1  Less than 1 minute to “longer” for those who disclosed IPV/sexual coercion	Once (no followup described for those who disclosed abuse)  NA
Miller, 2016 <sup>87</sup>  Fair  N=3,540	25 family planning clinics (17 clinicians) in Western Pennsylvania, U.S.	Women ages 16 to 29 years who agreed to a followup interview	Clinician and staff training to deliver in-person universal screening/education, and counseling (emphasizing harm reduction strategies) for IPV/reproductive coercion; additional support, including referrals to victims’ services, provided to those who screened positive.	NA	Medical assistants, health educators, or clinicians	Family planning clinic	1  Less than 1 minute, plus “additional time” for those who disclosed IPV/sexual coercion	Once (no followup described for those who disclosed abuse)  NA

**Appendix F Table 4. IPV KQ 4: Detailed Characteristics of Interventions for Included RCTs**

First Author, Year	Population Recruitment Setting	Source Population	Intervention Description	Additional (non-IPV) Intervention Components	Delivery Provider	Delivery Setting	No. of Sessions Length of Sessions(s)	Frequency Intervention Duration*
Rhodes, 2015 <sup>86</sup>  Fair  N=592	2 affiliated urban academic EDs in Philadelphia, Pennsylvania, U.S.	Women ages 18 to 64 years who screened positive for IPV and heavy drinking	Brief in-person motivational intervention, manual-guided; focused on identifying reasons for change and personal goals.	Intervention encouraged participants to identify any linkages between drinking and IPV	Master's-level therapists	ED	2 (1 in-person session followed by telephone call from the same therapist)  20 to 30 minutes (in-person session, telephone call NR)	One telephone call 10 days after initial visit
Saftlas, 2014 <sup>94</sup>  Fair  N=204	2 family planning clinics in rural Iowa, U.S.	Women age 18 years or older who screened positive for current partner IPV	In-person motivational interviewing focused on individual goal setting to improve health and increase safety.	NA	Trained field coordinators	Family planning clinic	4 (1 baseline face-to-face session followed by 3 telephone calls)  Baseline: 60 minutes (in person)  Followup: 10 to 15 minutes (telephone)	Baseline, 1 month, 2 months, and 4 months  4 months
Tiwari, 2012 <sup>95</sup> Tiwari, 2010 <sup>89</sup>  Good  N=200	1 community outpatient center, Hong Kong	Women age 18 years or older who screened positive for IPV	Advocacy intervention comprising in-person empowerment (e.g., individual safety plan), informal counseling, telephone support, and linkage to community resources; women received a pamphlet reinforcing intervention content.	NA	Trained research assistants (registered social workers)	Community health center	13 (1 in-person, 12 telephone)  Baseline: 30 minutes (in person)  Followup: 15 to 20 minutes (telephone)  24-hour access to hotline for additional support	Weekly (88% completion)  12 weeks

\* Refers to the duration of the active intervention and not the timing of outcome assessment.

† Over the course of the intervention, 13.6 weekly visits occurred in year 1 (on average), tapering to 25 percent participation by year 3.

#### Appendix F Table 4. IPV KQ 4: Detailed Characteristics of Interventions for Included RCTs

‡ Eligible physicians (for training) included those who worked 3 or more sessions per week, used electronic records, and who had 70 percent or more of their patients who spoke English. Patients of eligible providers were mailed a survey regarding participant and screening for fear of partner.

**Abbreviations:** CBT=cognitive behavioral therapy; ED=emergency department; HV=home visits; IPV=intimate partner violence; KQ=key question; N=number; NA=not applicable; NR=not reported; OBGYN=obstetrics and gynecology; PPD=postpartum depression; PTSD=post-traumatic stress disorder; RCT=randomized, controlled trial; U.S.=United States.

**Appendix F Table 5. IPV KQ 4: Results of KQ 4 Studies Reporting on Subtypes of IPV Exposure**

First Author, Year Study Design Study Name Quality Rating	Intervention (N) Control (N)	Physical Abuse Exposure Measure Results	Psychological Abuse Exposure Measure Results	Sexual/Other Abuse Exposure Measure Results
<b>Pregnant/Postpartum</b>				
Bair-Merritt, 2010 <sup>80</sup>  RCT Hawaiian HSP  Fair	Home visits: Weekly home visits from paraprofessionals, linkage to services (373)  Usual care (270)	CTS-2 (physical assault), adj. IRR, of events per person-year 3 years: 5.23 vs. 6.68 IRR: 0.85 (0.71 to 1.00) 7 to 9 years: 2.32 vs. 2.72 IRR: 0.87 (0.70 to 1.09)  CTS-2 (injury), adj. IRR, of events per person-year 3 years: 1.18 vs. 1.67 IRR: 0.86 (0.67 to 1.12) 7 to 9 years: 0.55 vs. 0.88 IRR: 0.78 (0.56, 1.08)	CTS-2 (verbal abuse), adj. IRR, of events per person-year 3 years: 18.35 vs. 20.86 IRR: 0.97 (0.87 to 1.10) 7 to 9 years: 15.77 vs. 15.40 IRR: 1.14 (0.97 to 1.34)	CTS-2 (sexual violence), adj. IRR, of average IPV events per person-year 3 years: 1.13 vs. 1.21 IRR: 1.02 (0.81 to 1.28) 7 to 9 years: 0.12 vs. 0.22 IRR: 0.83 (0.56, 1.22)
El-Mohandes, 2008 <sup>90</sup> ; Kiely, 2010 <sup>91</sup> ; El-Mohandes, 2011 <sup>92</sup>  RCT  Fair	Individual cognitive behavioral intervention delivered during prenatal care visits (specific to IPV and other risk factors) (452)  Usual care (461)	CTS-2, physical IPV exposure, baseline <sup>‡</sup> to 22 to 26 weeks' gestation, Adj. <sup>§</sup> OR, (95% CI): 0.49 (0.27 to 0.91) Absolute RD: 0.054  22 to 26 weeks' gestation to 34 to 38 weeks' gestation: Adj. <sup>§</sup> OR, (95% CI): 0.56 (0.27 to 1.17) Absolute RD: 0.054  34 to 38 weeks' gestation to postpartum interview, Adj. <sup>§</sup> OR, (95% CI): 0.47 (0.27 to 0.82) Absolute RD: 0.050	NR	CTS-2, sexual IPV exposure, baseline <sup>‡</sup> to 22 to 26 weeks' gestation, Adj. <sup>§</sup> OR, (95% CI): 0.39 (0.15 to 1.03) Absolute RD: 0.031  22 to 26 weeks' gestation to 34 to 38 weeks' gestation: Adj. <sup>§</sup> OR, (95% CI): 0.99 (0.46 to 2.16) Absolute RD: 0.018  34 to 38 weeks' gestation to postpartum interview, Adj. <sup>§</sup> OR, (95% CI): 0.99 (0.46 to 2.16) Absolute RD: 0.001

**Appendix F Table 5. IPV KQ 4: Results of KQ 4 Studies Reporting on Subtypes of IPV Exposure**

First Author, Year Study Design Study Name Quality Rating	Intervention (N) Control (N)	Physical Abuse Exposure Measure Results	Psychological Abuse Exposure Measure Results	Sexual/Other Abuse Exposure Measure Results
Heyman, 2019 <sup>84</sup> RCT Fair	Couple CARE for Parents [CCP] (188 couples)  24-month waitlist control – CCP for toddlers (180 couples)	Male victimization, Cohen's d (95% CI) 8 months postpartum: 0.81 (0.46 to 1.43) 15 months postpartum: 0.75 (0.41 to 1.38) 24 months postpartum: 1.02 (0.57 to 1.82)  Female victimization, Cohen's d (95% CI) 8 months postpartum: 0.83 (0.47 to 1.45) 15 months postpartum: 0.80 (0.42 to 1.52) 24 months postpartum: 1.25 (0.68 to 2.29)	Male victimization, Cohen's d (95% CI) 8 months postpartum: -0.07 (-0.33 to 0.19) 15 months postpartum: -0.19 (-0.48 to 0.1) 24 months postpartum: -0.09 (-0.35 to 0.17)  Female victimization, Cohen's d (95% CI) 8 months postpartum: -0.10 (-0.36 to 0.16) 15 months postpartum: -0.10 (-0.39 to 0.19) 24 months postpartum: 0.01 (-0.25 to 0.27)	NA
Tiwari, 2005 <sup>83</sup> RCT Fair	In-person counseling focused on empowerment and safety advice (51)  Usual care for abused women (wallet-sized card with information on community resources) (55)	CTS-2, mean score (SD) Minor physical violence Baseline: 1.3 (3.0) vs. 0.7 (1.6) 6 weeks postpartum 0.05 (0.4) vs. G2: 0.51 (1.3) Mean difference (95% CI) -1.0 (-1.8 to 0.17); p=0.05  Severe physical violence Baseline 0.82 (3.0) vs. 0.35 (1.2) 6 weeks postpartum 0.25 (1.2) vs. 0.17 (0.54) Mean difference (95% CI) 0.08 (-0.26 to 0.42); p=NS	CTS-2, mean score (SD) Psychological aggression Baseline: 3.1 (2.8) vs. 2.8 (2.5) 6 weeks postpartum 0.79 (1.0) vs. 1.6 (2.2) Mean difference (95% CI) -1.1 (-2.2 to -0.04); p=0.05	CTS-2, mean score (SD) Sexual abuse Baseline 0.16 (0.63) vs. 0.18 (0.80) 6 weeks postpartum 0.03 (0.11) vs. 0.12 (0.55) Mean difference (95% CI) -0.07 (-0.30 to 0.16); p=NS

**Appendix F Table 5. IPV KQ 4: Results of KQ 4 Studies Reporting on Subtypes of IPV Exposure**

First Author, Year Study Design Study Name Quality Rating	Intervention (N) Control (N)	Physical Abuse Exposure Measure Results	Psychological Abuse Exposure Measure Results	Sexual/Other Abuse Exposure Measure Results
<b>Nonpregnant</b>				
Miller, 2011 <sup>88</sup>	Nonpregnant			Pregnancy coercion (past 3 months, using investigator developed 4-item scale); total sample, N (% positive) Baseline: 41 (9.3) vs. 35 (7.9) 3 to 6 months: 31 (7.5) vs. 32 (7.6)
Cluster RCT by clinic	Clinician training to deliver enhanced IPV screening, education, and counseling for IPV and appropriate referrals (453; 96 IPV exposed)			Pregnancy coercion in subgroup of women with recent IPV exposure at baseline; N (% positive) Baseline: 22 (23.2) vs. 15 (25.4) 3 to 6 months: 9 (10.5) vs. 14 (23.7) AOR, (95% CI): 0.29 (0.09 to 0.91)
Fair	Usual care (2 violence screening questions on intake form, usual clinic protocol for positive disclosures) (451; 60 IPV exposed)			Birth control sabotage (past 3 months, 5-item investigator developed scale); Total sample, N (% positive) Baseline: 47 (10.7) vs. 31 (7.0) 3 to 6 months: 18 (4.4) vs. 20 (4.8)
	<i>Co-intervention: Card listing local violence-related resources</i>			Birth control sabotage in subgroup of women with recent IPV exposure at baseline, N (% positive) Baseline: 23 (24.2) vs. 10 (17.0) 3 to 6 months: 8 (9.3) vs. 5 (8.5) AOR, (95% CI) 0.71 (0.17 to 2.94)
Miller, 2016 <sup>87</sup>	Clinicians and staff IPV education training (half-day), discussion of IPV encouraged for all encounters, guided by palm-sized brochure (1,429)	NR	NR	Recent reproductive coercion (10 items measuring exposure over past 3 months) baseline to 12 months, Overall sample: Adjusted RR <sup>1</sup> (95% CI): 1.50 (0.95 to 2.35)
Cluster RCT by clinic	Usual care (standard IPV question on intake sheet; referral if IPV disclosed) (1,396)			Subgroup reporting recent IPV at baseline Adjusted RR <sup>1</sup> (95% CI): 1.19 (0.63 to 2.22)
Fair				

**Appendix F Table 5. IPV KQ 4: Results of KQ 4 Studies Reporting on Subtypes of IPV Exposure**

First Author, Year Study Design Study Name Quality Rating	Intervention (N) Control (N)	Physical Abuse Exposure Measure Results	Psychological Abuse Exposure Measure Results	Sexual/Other Abuse Exposure Measure Results
Tiwari, 2012 <sup>95</sup> Tiwari, 2010 <sup>89</sup>  RCT  Good	Advocacy intervention, in- person interview, empowerment pamphlet to support the information provided, scheduled weekly telephone calls, 24-hour access to a hotline for additional support (100)  Control (100)	CTS-2, mean score (SD) Physical assault Baseline 1.68 (4.21) vs. 1.55 (4.10) 3 months 1.27 (3.22) vs. 3.21 (6.07) 9 months: 0.23 (1.27) vs. 0.45 (1.74) Adj. difference (3–9 months) <sup>¶</sup> -0.35 (-0.80 to 0.10); p=.013	CTS-2, mean score (SD) Psychological aggression Baseline 18.54 (10.20) vs. 18.95 (10.36) 3 months 23.67 (15.89) vs. 20.84 (10.45) 9 months: 10.07 (5.91) vs. 12.11 (8.57) Adj. differences (3 months to 9 months): <sup>¶</sup> -1.87 (-3.34 to -0.40); p=0.01	CTS-2, mean score (SD) Sexual coercion Baseline 0.68 (3.32) vs. 0.14 (0.73) 3 months 0.33 (1.29) vs. 1.11 (2.70) 9 months: 0.03 (0.30) vs. 0.14 (0.75) Adj. difference (3 months to 9 months): <sup>¶</sup> -0.02 (-0.12 to 0.09); p=0.60

\* Analyses adjusted for missing data; imputed data adjusted for child age, program site, maternal mental health comorbidity, problem alcohol use, and past-year employment with control group as referent.

† The values for the long-term followup reflect the time period when the child was approximately ages 7 to 9 years (4 to 6 years after the home visiting intervention ended).

‡ Baseline information obtained at approximately 13 weeks gestation; numbers refer to women in the overall study who reported any acts of IPV in the year before study entry

§ Adjusted for depression and substance use. Authors also report outcomes at each specific time point during pregnancy and postpartum visit. Women in the intervention group were less likely to be victimized at all time points, but the difference between groups at the postpartum visit was not statistically significant (12.7% vs. 21.2%; p=0.063)

‡ Models adjusted for baseline values, survey time point, interaction between baseline and time point, and clustering; missing data accounted for using multiple imputation.

¶ Between-group difference adjusted for baseline values.

**Abbreviations:** AOR=adjusted odds ratio; CI=confidence interval; CTS-2=Conflict Tactics Scale-2; CCP=Couple CARE for Parents; G=group; HSP=Health Start Program; IPV=intimate partner violence; IRR=incidence rate ratio; KQ=key question; N/n=sample size; NA=not available; NR=not reported; NS=not significant; RCT=randomized, controlled trial; RD=risk difference; RR=risk ratio ; SD=standard deviation.

**Appendix F Table 6. IPV KQ 4: Results of KQ 4 Studies Reporting on Rates of Overall IPV Exposure**

First Author, Year Study Design Study Name Quality Rating	Intervention (N) Control (N)	Baseline	Followup	Between-Group Difference Intervention vs. Control
<b>Pregnant/ Postpartum</b>				
Bair-Merritt, 2010 <sup>80</sup> RCT Hawaiian HSP Fair	Home visits: Weekly home visits from paraprofessionals, linkage to services (373)  Usual care (270)	NR	CTS-2, average IPV events per person-year* 3 years: 7.50 vs. 9.55 7 to 9 years): <sup>†</sup> 3.35 vs. 4.01  CTS-2, N (%) with any IPV event at 1 year: 143 (44) vs. 103 (55)	CTS-2, adj IRR, of average IPV events per person-year* 3 years: IRR: 0.86 (0.73 to 1.01) 7 to 9 years): <sup>†</sup> IRR: 0.95 (0.77 to 1.17)
El-Mohandes, 2008 <sup>90</sup> ; Kiely, 2010 <sup>91</sup> ; El-Mohandes, 2011 <sup>92</sup> RCT Fair	Individual cognitive behavioral intervention delivered during prenatal care visits (specific to IPV and other risk factors) (452)  Usual care (461)	CTS-2, % experiencing IPV, overall sample, N (%) <sup>‡</sup> 169 (37.4) vs. 167 (36.2)	CTS-2, % experiencing IPV Postpartum (recurrence since baseline), N (%) 39 (8.6) vs. 52 (11.3)	CTS-2, % experiencing IPV, overall sample, change in % from baseline to postpartum: -28.8 vs. -24.9; p=0.074  Subgroup of women experiencing IPV at baseline, % with recurrence (baseline to postpartum) Adjusted ORs (95% CI) <sup>§</sup> 0.48 (0.29 to 0.80)
Flaathen, 2022 <sup>82</sup> RCT Fair	Intervention video (147)  Control video (160)	CAS-SF R, mean (SD): 10.70 (7.24 to 14.16) vs. 12.75 (9.18 to 16.33)	CAS-SF R, 3 months postpartum mean score (SD): 11.17 (7.05 to 15.29) vs. 8.54 (3.42 to 13.68)	CAS-SF R, estimated mean difference in IPV scores from baseline to 3 months: 4.68, p=0.918
Sharps, 2016 <sup>79</sup> Cluster RCT by home visiting program DOVE Trial Fair	DOVE, structured brochure-based IPV intervention added to standard home visitation (124)  Standard home visiting protocol (4 to 6 prenatal visits, 6 to 12 postnatal visits over 2 years) (115)	NR	NR	CTS-2, adj <sup>  </sup> mean decrease in IPV scores from baseline to 24 months (SD): -40.82 (NR) vs. -35.87 (NR) Mean difference between groups in change from baseline score (intervention vs. control) -4.95; p<0.01



**Appendix F Table 6. IPV KQ 4: Results of KQ 4 Studies Reporting on Rates of Overall IPV Exposure**

First Author, Year Study Design Study Name Quality Rating	Intervention (N) Control (N)	Baseline	Followup	Between-Group Difference Intervention vs. Control
Zlotnick, 2011 <sup>81</sup> RCT Fair	Interpersonal psychotherapy based (25)  Control, educational material and a listing of resources for IPV (21)	CTS-2: frequency of IPV acts, mean (SD): (past-year incidence): 33.4 (28.4) vs. 38.7 (39.0)	Frequency since last assessment (SD) 6 weeks (from baseline): 7.8 (15.6) vs. 12.7 (24.1) 2 weeks postpartum: 7.3 (11.6) vs. 5.9 (9.0) 3 months postpartum: 16.3 (28.6) vs. 12.7 (24.1)	NR; overall interaction across all groups and time periods: p=0.44
<b>Nonpregnant</b>				
Hegarty, 2013 <sup>85</sup> Hegarty, 2020 <sup>93</sup> Cluster RCT (by physician) Fair	Physician training to respond to women and deliver a brief IPV counseling intervention (137)  Usual care (135)	CAS score of 7 or higher N positive/N analyzed (%) Baseline: 101/135 (75) vs. 93/132 (71)	CAS score of 7 or higher N positive/N analyzed (%) 12 months: 44/93 (47) vs. 40/96 (42) 24 months: 32/80 (40) vs. 34/81 (42)	Change from baseline to 12 months in % with CAS score of 7 or higher (interventionn vs. control): -28 vs. -29  Change from baseline to 24 months in % with CAS score of 7 or higher (interventionn vs. control): -35 vs. -30
Miller, 2011 <sup>88</sup> Cluster RCT by clinic Fair	Clinician training to deliver enhanced IPV screening, education, and counseling (453; 96 IPV exposed)  Usual care (451; 60 IPV exposed)  <i>Co-intervention: Card listing local violence-related resources</i>	Recent IPV (past 3-month physical or sexual violence) <sup>†</sup> Total sample N positive (%) 96 (21.2) vs. 60 (13.5)	Recent IPV (past 3-month physical or sexual violence) <sup>†</sup> Total sample N positive (%) at 3 to 6 months: 97 (22.1) vs. 70 (15.7)	Difference between groups NS per authors; rates of IPV exposure in subgroup experiencing IPV at baseline NR
Miller, 2016 <sup>87</sup> Cluster RCT by clinic Fair	Clinicians and staff IPV education training, discussion of IPV encouraged for all encounters (1,429)  Usual care (standard IPV question on intake sheet) (1,396)	NR	NR	Recent exposure to IPV (3 items, physical or sexual, measuring past 3 months IPV) baseline to 12 months, Adjusted RR <sup>#</sup> (95% CI) (intervention vs. control) Overall Sample 12.16 (0.84 to 1.38) Subgroup reporting IPV at baseline Adjusted RR <sup>#</sup> (95% CI) 1.16 (0.82 to 1.64)

**Appendix F Table 6. IPV KQ 4: Results of KQ 4 Studies Reporting on Rates of Overall IPV Exposure**

First Author, Year Study Design Study Name Quality Rating	Intervention (N) Control (N)	Baseline	Followup	Between-Group Difference Intervention vs. Control
Rhodes, 2015 <sup>86</sup> RCT Fair	G1: Brief motivational intervention during ED visit (239)  G2: Assessed control (232)  G3: No contact control (121)  <i>Co-intervention: All received usual care and a standard list of social service resources</i>	Experienced any IPV in past week (CTS-2 score of 1 or higher) G1: 4.5 (3.8 to 5.2) G2: 4.9 (4.0 to 5.7) G3: 5.9 (4.7 to 7.2)  CTS-2 score, mean (95% CI) Baseline G1: 9.8 (8.6 to 11.0) G2: 10.3 (8.9 to 11.6) G3: 12.7 (01.5 to 14.9)	Experienced any IPV in past week (CTS-2 score of 1 or higher) 3 months G1: 5.2 (3.5 to 5.2) G2: 4.7 (3.8 to 5.6) G3: 3.3 (2.3 to 4.3)  6 months G1: 3.0 (2.3 to 3.6) G2: 3.3 (2.6 to 4.1) 12 months G1: 3.1 (2.3 to 3.9) G2: 3.8 (2.8 to 4.8)	Experienced any IPV in past week (CTS-2 score of 1 or higher) At 3 month following, OR, (G1 vs. G2) 1.02; 95% CI, 0.98 to 1.06; p=0.33  CTS-2 score, mean (95% CI) 3 months G1: 10.3 (8.9 to 11.6) G2: 8.5 (7.0 to 10.0) G3: 7.4 (5.4 to 9.4) 6 months G1: 6.2 (5.1 to 7.3) G2: 6.1 (4.8 to 7.4) 12 months G1: 12.7 (10.5 to 14.9) G2: 6.8 (5.2 to 8.4)

\* Analyses adjusted for missing data; imputed data adjusted for child age, program site, maternal mental health comorbidity, problem alcohol use, and past-year employment with control group as referent. Overall IPV rates also adjusted for baseline IPV (continuous term).

† The values for the long-term followup reflect the time period when the child was approximately ages 7 to 9 years (ages 4 to 6 years after the home visiting intervention ended).

‡ Baseline information obtained at approximately 13 weeks' gestation; numbers refer to women in the overall study who reported any acts of IPV in the year before study entry.

§ Adjusted for depression and substance use.

¶ Analyzes adjusted for missing data (multiple imputation), maternal age, maternal depression, and site (urban/rural).

¶ Per authors, recent (past 3 month) experiences of physical and sexual violence were assessed using items modified from the Conflict Tactics Scales and the Sexual Experiences Survey.

# Models adjusted for baseline values, survey time point, interaction between baseline and time point, and clustering; missing data accounted for using multiple imputation.

**Abbreviations:** CAS=Composite Abuse Scale; CI=confidence interval; CTS-2=Conflict Tactics Scale-2; DOVE=Domestic Violence Enhanced Home Visitation Program; ED=emergency department; G=group; HSP=Health Start Program; IPV=intimate partner violence; IRR=incidence rate ratio; KQ=key question; N/n=sample size; NR=not reported; NS=not significant; OR=odds ratio; RCT=randomized, controlled trial; RR=risk ratio ; SD=standard deviation.

**Appendix F Table 7. IPV KQ 4: Results of KQ 4 Studies reporting on Quality-of-Life, Depression, and Other Outcomes**

Author, Year Study Design Quality	G1 (N analyzed) G2 (N analyzed)	Quality-of-Life Measure Results	Depression Measure Results	Other Outcomes Results
<b><i>Pregnant/ Postpartum</i></b>				
El-Mohandes, 2008 <sup>90</sup> Kiely, 2010 <sup>91</sup> El-Mohandes, 2011 <sup>92</sup> RCT  Fair	G1: Individual cognitive behavioral intervention delivered during prenatal care visits (IPV: 452, 169 experiencing IPV at baseline; pregnancy outcomes 403)  G2: Usual prenatal care (IPV: 461, 167 experiencing IPV at baseline; pregnancy outcomes 416)	NR	NA	Pregnancy outcomes Intervention vs. control N positive/N analyzed (%) for women experiencing IPV throughout pregnancy Low birth weight (<2,500 g) G1: 17/150 (12.8) G2: 24/156 (18.5) p=0.204 Very low birth weight (<1,500 g) G1: 1/150 (0.8) G2: 6/156 (4.6) p=0.052 Preterm birth (<37 weeks' gestation) G1: 18/150 (13.0) G2: 27/156 (19.7) p=0.135 Very preterm birth (<33 weeks' gestation) Intervention: 2/150 (1.5) Control: 9/156 (6.6) p=0.030

**Appendix F Table 7. IPV KQ 4: Results of KQ 4 Studies reporting on Quality-of-Life, Depression, and Other Outcomes**

Author, Year Study Design Quality	G1 (N analyzed) G2 (N analyzed)	Quality-of-Life Measure Results	Depression Measure Results	Other Outcomes Results
Flaathen, 2022 <sup>82</sup> RCT Fair	G1: Intervention video (147) G2: Control video (160)	WHOQOL-BREF Estimated mean (95% CI) Overall score Baseline G1: 4.24 (4.11 to 4.37) G2: 4.22 (4.10 to 4.34) 3 months postpartum G1: 4.34 (4.21 to 4.46) G2: 4.32 (4.20 to 4.44) Overall health, baseline G1: 3.87 (3.72-4.02) G2: 3.85 (3.70 to 3.99) Overall health, 3 months postpartum G1: 3.92 (3.77-4.07) G2: 3.74 (3.59 to 3.88) Physical, Baseline G1: 49.92 (47.81-52.03) G2: 48.42 (46.40 to 50.44) Physical, 3 months postpartum G1: 51.59 (49.56 to 53.81) G2: 51.63 (49.58 to 53.67) Psychological, Baseline G1: 67.33 (65.48-69.17) G2: 67.24 (65.50 to 69.02) Psychological, 3 months postpartum G1: 67.6 (65.76 to 69.43) G2: 68.63 (66.86 to 70.40) Social relationships, Baseline G1: 69.96 (66.85-73.08) G2: 70.59 (67.60 to 73.58) Social relationships, 3 months postpartum G1: 67.69 (64.55 to 70.83) G2: 68.13 (65.09 to 71.66) Environmental, Baseline G1: 76.82 (74.58-79.06) G2: 76.57 (74.43 to 78.70) Environmental, 3 months postpartum G1: 76.96 (74.83 to 79.10) G2: 78.87 (76.81 to 80.93)	NA	NA

**Appendix F Table 7. IPV KQ 4: Results of KQ 4 Studies reporting on Quality-of-Life, Depression, and Other Outcomes**

Author, Year Study Design Quality	G1 (N analyzed) G2 (N analyzed)	Quality-of-Life Measure Results	Depression Measure Results	Other Outcomes Results
Tiwari, 2005 <sup>83</sup> RCT Fair	G1: In-person session by midwife counselor focused on empowerment to enhance abused women's independence and control (advice concerning safety, choice making, and problem solving), followed by brochure with reinforcing information (51)  G2: Usual care for abused women consisting of wallet-sized card with information on community resources (55)	SF-36, difference between groups in component scores at 6 weeks (G1 to G2): Physical functioning 10 (2.5 to 18); p≤0.05 Role-physical 19 (1.5 to 37); p≤0.05 Bodily pain -13 (-23 to -2.2); p≤0.05 General health -1.3 (-6.4 to 3.9); p=NS Vitality 0.45 (-5.4 to 6.3); p=NS Social functioning 3.1 (-4.3 to 11); p=NS Role-emotional 28 (9.0 to 47); p≤0.05 Mental health 0.28 (-4.4 to 5.0); p=NS	Postpartum depression EPDS score ≥10 at 5 weeks N positive/N analyzed (%) G1: 9/51 (18%) G2: 25/55 (45%) RR (95% CI) 0.36 (0.15 to 0.88)	NR

**Appendix F Table 7. IPV KQ 4: Results of KQ 4 Studies reporting on Quality-of-Life, Depression, and Other Outcomes**

Author, Year Study Design Quality	G1 (N analyzed) G2 (N analyzed)	Quality-of-Life Measure Results	Depression Measure Results	Other Outcomes Results
Zlotnick, 2011 <sup>81</sup>  RCT  Fair	G1: Interpersonal psychotherapy based (25)  G2: Control, educational material and a listing of resources for IPV (21)  Co-intervention: Usual medical care provided at the clinic	NR	Postnatal depression (EPDS scores), mean (SD) Baseline: G1: 7.18 (4.36) G2: 8.77 (6.07) Postpartum (6 weeks from baseline) G1: 6.84 (4.10) G2: 9.84 (6.05) 2 weeks postpartum: G1: 6.68 (5.54) G2: 7.14 (5.18) 3 months postpartum: G1: 6.12 (5.86) G2: 8.00 (5.74) Overall interaction across all groups and time periods: p=0.20  LIFE* structured interview, cases of MDD diagnosed during study period, N cases/N analyzed (%): G1: 6/25 (24%) G2: 5/21 (24%) p=NS per authors	PTSD (Davidson Trauma Scale), mean (SD) Baseline: G1: 9.96 (10.62) G2: 16.11 (23.49) Postpartum (6 weeks from baseline): G1: 5.58 (7.51) G2: 12.08 (17.60) 2 weeks postpartum: G1: 6.04 (7.75) G2: 10.09 (16.09) 3 months postpartum: G1: 8.44 (13.98) G2: 9.19 (14.20) Overall interaction across all groups and time periods: p=0.24

**Appendix F Table 7. IPV KQ 4: Results of KQ 4 Studies reporting on Quality-of-Life, Depression, and Other Outcomes**

Author, Year Study Design Quality	G1 (N analyzed) G2 (N analyzed)	Quality-of-Life Measure Results	Depression Measure Results	Other Outcomes Results
<b>Nonpregnant</b>				
Hegarty, 2013 <sup>85, 93</sup> Cluster RCT (by physician) Fair	G1: Physician training to respond to women and deliver a brief IPV counseling intervention (137)  G2: Usual care if presented with concerns (135)  Co-intervention: All doctors received basic IPV education associated with continuing professional development credit; all women received a list of resources	SF-12 mental health status, G1 vs. G2, adjusted <sup>†</sup> mean difference (95% CI), p-value 6 months: 0.8 (-2.3 to 3.9); p=0.61 12 months: 2.4 (-1.0 to 5.7); p=0.17 24 months: -1.6 (-5.3 to 2.1); p=0.393  WHOQOL-BREF G1 vs. G2, adj. mean difference (95% CI); p-value Physical, 6 months 4.9 (1.1 to 8.6), p=0.01 Physical, 12 months 2.7 (-1.4 to 6.8), p=0.20 Physical, 24 months 1.5 (-2.9 to 5.9); p=0.513 Psychological, 6 months 2.5 (-1.2 to 6.2), p=0.19 Psychological, 12 months 2.3 (-1.5 to 6.1), p=0.23 Psychological, 24 months -0.2 (-4.8 to 4.4); p=0.938 Social, 6 months 4.8 (-1.0 to 10.7), p=0.11 Social, 12 months 2.1 (-4.3 to 8.5), p=0.52 Social, 24 months -1.4 (-8.2 to 5.4); p=0.679 Environmental, 6 months 1.0 (-2.6 to 4.7), p=0.57 Environmental, 12 months 1.9 (-1.7 to 5.5), p=0.29 Environmental, 24 months -0.8 (-4.0 to 2.5); p=0.631	HADS depression score ≥8 Adjusted OR, (95% CI), p-value 6 months: 0.4 (0.1 to 1.0); p=0.05 12 months: 0.3 (0.1 to 0.7); p=0.005 24 months: 1.0 (0.4 to 2.9); p=0.933	HADS anxiety score ≥8 Adjusted OR, (95% CI), p-value 6 months: 0.5 (0.2 to 1.3); p=0.14 12 months: 0.4 (0.2 to 1.2); p=0.11 24 months: 0.6 (0.2 to 2.2); p=0.464

**Appendix F Table 7. IPV KQ 4: Results of KQ 4 Studies reporting on Quality-of-Life, Depression, and Other Outcomes**

Author, Year Study Design Quality	G1 (N analyzed) G2 (N analyzed)	Quality-of-Life Measure Results	Depression Measure Results	Other Outcomes Results
Miller, 2016 <sup>87</sup>  Cluster RCT by clinic  Fair	G1: Clinicians and staff IPV education training (half-day), discussion of IPV encouraged for all encounters, guided by palm-sized brochure (1,429)  G2: Usual care (standard IPV question on intake sheet; referral if IPV disclosed) (1,396)  Co-intervention: Women's health resource sheet	NR	NR	Unintended past-year pregnancy <sup>‡</sup> N positive/N analyzed (%) G1: 50/1,429 (3.5) G2: 40/1,396 (2.9) Adjusted RR <sup>§</sup> (95% CI) 1.03 (0.80 to 1.94) Women with recent IPV/RC at baseline N positive/N analyzed (%) G1: 41/176 (23.2) G2: 32/162 (19.8) Adjusted RR <sup>§</sup> (95% CI) 1.15 (0.67 to 1.96)
Saftlas, 2014 <sup>94</sup>  RCT  Fair	G1: Motivational interviewing conducted by field coordinator (98)  G2: In-person meeting with field coordinator or certified domestic abuse advocate who provided written information on community-based resources and referrals (106)	NR	Depression, Center for Epidemiologic Studies Short Depression Scale (10 items, score range 0 to 30) Score, mean (SD) Baseline G1: 15.7 (6.4) G2: 14.3 (5.9) 6 months G1: 11.7 (5.5) G2: 11.8 (6.1) Difference between groups in mean change from baseline: -4.2 vs. -2.6; p=0.07	NR



**Appendix F Table 7. IPV KQ 4: Results of KQ 4 Studies reporting on Quality-of-Life, Depression, and Other Outcomes**

Author, Year Study Design Quality	G1 (N analyzed) G2 (N analyzed)	Quality-of-Life Measure Results	Depression Measure Results	Other Outcomes Results
Tiwari, 2012 <sup>95</sup> Tiwari, 2010 <sup>89</sup>	G1: Advocacy intervention, in-person interview, empowerment pamphlet to support the information provided, scheduled weekly telephone calls, 24-hour access to a hotline for additional support (100)  G2: Usual care (100)	SF-12, Physical Composite Score, mean (SD) G1: 43.28 (7.67) G2: 43.32(7.59) 3 months: G1: 42.37 (7.22) G2: 42.39 (7.37) 9 months: G1: 44.35 (7.64) G2: 43.55 (7.30) Adj. differences (3 to 9 months): 0.37 (-0.91 to 1.65); p=0.58  SF-12, Mental Health Composite Score, mean (SD) G1: 26.58 (7.64) G2: 25.44 (7.66) 3 months: G1: 34.79 (8.87) G2: 34.39 (8.26) 9 months: G1: 38.26 (8.56) G2: 37.89 (8.08) Adj. differences (3 to 9 months): <sup>¶</sup> 0.80 (-1.16 to 2.77); p=0.42	Depression CBDI-II, <sup>  </sup> mean score (SD) Baseline G1: 37.88 (14.90) G2: 39.33 (15.60) 3 months: G1: 24.38 (14.45) G2: 39.33 (15.60) 9 months G1: 16.10 (10.69) G2: 18.25 (11.40) Adj. difference (95% CI) over 3 to 9 months: <sup>¶</sup> -2.66 (-5.06 to -0.26); p=0.03	NR

\* At 3 months postpartum, the longitudinal Interval Followup Examination (LIFE) structured interview was administered to assess for MDD and PTSD diagnoses.

† Adjusted for baseline measures and practice location in addition to missing data (using multiple imputation). For QoL between-group differences, “estimated effect size” refers to mean difference in scores.

‡ Based on 7-item investigator developed tool.

§ Adjusted for baseline value, time point, interaction term between baseline outcome value and time point, age, race, education, number of clinics in cluster and cluster rural/urban status, and accounting for clients within clinics within the cluster randomization.

|| Chinese version of the Beck Depression Inventory-II; range of scores is from 0 to 36, with higher scores indicating higher levels of depression.

¶ Between-group difference (intervention-control) adjusted for baseline values.

**Abbreviations:** CAS-SF R=CAS Short Form (Revised); CBDI-II=Chinese Beck Depression Inventory-II; CCP=Couple CARE for Parents; EPDS= Edinburgh Postnatal Depression Scale; G=group; HADS =Hospital Anxiety and Depression Scale; IPV=intimate partner violence; KQ=key question; LIFE=Longitudinal Interval Follow-up Examination; MDD=major depressive disorder; N/n=sample size; NR=not reported; NS=not sufficient; OR=odds ratio; PTSD=post-traumatic stress disorder; QoL=quality of life; RC=reproductive coercion; RCT=randomized, controlled trial; RR=relative risk; SD=standard deviation; SF-12=12-Item Short Form Survey; SF-36= 36-Item Short Form Survey; WHOQOL-BREF=World Health Organization Quality of Life-Bref.