

Primary Care–Based Interventions for Intimate Partner Violence

A Systematic Review

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Context: Primary care providers are uniquely positioned to respond to patients' disclosure of intimate partner violence (IPV). However, the research on primary care–based IPV interventions has not been systematically synthesized, making it difficult for providers, policymakers, and researchers to understand *how* to effectively intervene in the primary care setting. This systematic review summarizes primary care–based interventions for patients experiencing IPV.

Evidence acquisition: PubMed, PsycINFO, and CINAHL were searched from their start through September 2012; this search was augmented by bibliographic review and consultation with experts. Eligible studies included English-language, peer-reviewed articles that assessed patient-level impact of IPV interventions that originated from patients' visits to a primary care provider.

Evidence synthesis: Of 80 potentially eligible studies, 17 met eligibility criteria. The majority of interventions recruited women from reproductive care sites. Interventions tended to be brief, delivered by nonphysicians, and focused on empowerment, empathetic listening, discussion of the cycle of violence and safety, and referral to community-based resources. Thirteen studies demonstrated at least one intervention-related benefit. Six of 11 articles measuring IPV persistence found reductions in future violence; two of five measuring safety-promoting behaviors found increases; and six of ten measuring IPV/community resource referrals found enhanced use. Some studies also documented health improvements.

Conclusions: The majority of studies demonstrated patient-level benefit subsequent to primary care IPV interventions, with IPV/community referrals the most common positively affected outcome.

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Background

The prevalence of intimate partner violence (IPV) is well documented, and IPV has adverse health impact throughout the life span.¹ Nearly one in four women in the U.S. has experienced IPV at some point in her life.² Each year, 2 million women in the U.S. self-report injuries related to IPV.³ Women who experience IPV are 70% more likely to have cardiac disease, 60% more likely to have asthma, and 70% more likely to drink excessively compared to women who have not experienced IPV.² Previous research also indicates that victims of IPV have elevated rates of healthcare visits.^{1,3} In the U.S. in 2003, the cost of IPV was estimated to reach \$8.3 billion each year, accounting for direct medical and mental health services and lost productivity from work.⁴

Primary care providers are uniquely positioned to promote the health and well-being of patients affected by IPV and to prevent future occurrences. In the past 2 years, policy recommendations have acknowledged the central role of healthcare professionals in identifying and intervening in cases of IPV. This represents a shift, and a strengthening, of recommendations. Specifically, a 2004 U.S. Preventive Services Task Force (USPSTF) report gave IPV screening an “I” rating, stating that there was “insufficient evidence to recommend for or against routine screening.”^{5,6}

In 2011, fueled by the accumulating evidence supporting the benefits, the IOM publication *Clinical Preventive Services for Women: Closing the Gaps* recommended that IPV screening become part of routine preventive care for women of childbearing age.⁷ In 2013, the USPSTF upgraded their recommendation to a “B,” stating that clinicians should screen all women of childbearing ages for IPV, benefits of screening outweigh risks, and sufficient evidence supports that IPV intervention can reduce violence, abuse, and physical and mental harm.⁸ Passage of the Affordable Care Act (ACA) codified these recommendations, requiring that insurance cover IPV screening and counseling as an essential health service to women at no additional cost to the patient.⁹

Despite these changing recommendations, to date, the empirical research on primary care–based IPV interventions has not been systematically synthesized. Thus, it is difficult for primary care providers, policymakers, and researchers to easily examine the scope of evidence for primary care–focused IPV interventions, disseminate these interventions, and determine how to best move the field forward. A systematic review of peer-reviewed research was therefore conducted to summarize evidence describing primary care–based interventions for patients experiencing IPV.

Evidence Acquisition

Article Eligibility Criteria

Eligible studies included peer-reviewed research that assessed the impact of IPV interventions that were associated with patients’ visits to a primary care provider. All interventions had to have some delivery component, beyond screening and/or making an outside referral, that occurred *within* the primary care setting, although studies in which interventions *also* extended to outside of the clinic setting were eligible for inclusion. For the purposes of this review, primary care was defined as family medicine, internal medicine, pediatrics, and/or obstetrics–gynecology/reproductive health clinics. For inclusion, studies also had to have involved (1) primary data collection or existing data set analysis, (2) testing a patient-focused intervention designed to address IPV, and (3) quantitatively assessing patient-related outcomes. Studies could be located in any country but had to have been written in English.

Data Sources

PubMed, CINAHL, and PsycINFO were searched from their start dates through September 2012 using the following search terms (which could be anywhere in the article text): (*domestic violence* or *intimate partner violence*) and *intervention* and *healthcare*. In addition, the bibliographies of related review articles were searched for any potentially relevant articles. Two senior IPV researchers (professors with > 50 peer-reviewed publications) were asked to suggest any additional unfound studies.

Study Selection and Data Extraction

The PubMed search yielded 944 articles, CINAHL 817, and PsycINFO 237. Because the initial search terms were intentionally broad, many articles were not applicable and could be deemed non-eligible from the title. If the title did not provide sufficient information to determine an article’s eligibility, the abstract was reviewed. If eligibility could not be determined from the title and abstract, or if a study appeared to be eligible, the full text was retrieved. The full text of 80 articles was obtained, and two independent abstractors read each article to determine its inclusion (Figure 1). If the two abstractors did not agree about an article’s inclusion, then a third abstractor read the article and provided her opinion. Final review of the initial 80 articles was limited to 17 articles that met all inclusion criteria.^{10–26}

Data from the 17 articles included in this review were abstracted using a standardized form that included information on the following: study design, recruitment and intervention location, sample size, sample demographic characteristics, intervention length and content, and outcomes. All abstracted information was verified for accuracy by two additional authors who went back to the original articles and checked for consistency between these articles and the abstracted data. Although the authors did not use a specific systematic review protocol like PRISMA, the methods met most of PRISMA’s 27-item checklist.

Evidence Synthesis

Study Design

Appendix A (available online at www.ajpmonline.org) summarizes the 17 included studies. Of note, four additional peer-reviewed papers^{27–30} discussed the same

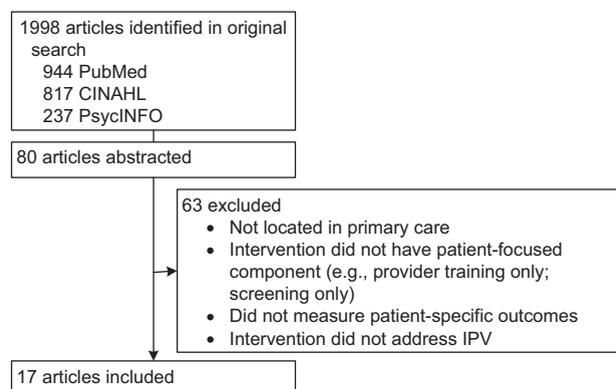


Figure 1. Flowchart of study inclusion

intervention described by Kiely et al.¹⁵ Of the five overlapping papers, we elected to include Kiely because this is the manuscript that centers most on IPV. Similarly, the intervention described by Parker and colleagues²⁵ was also written about by McFarlane et al.³¹ Parker²⁵ and McFarlane³¹ were counted as one IPV intervention study, but we have included the results reported in both manuscripts.

Total sample size ranged from 18 to 2708 women.^{16,17} Randomized designs were used by 11 (61%) of included studies.^{10–13,15,16,20,21,23,24,26} Two studies^{17,18} used pre-post test designs, two^{22,25} were prospective cohorts with a nonrandomized control group, and two^{14,19} were descriptive studies, with one¹⁴ of these two combining quantitative and qualitative methods.

Sample Composition

Study location spanned the globe, although the majority were based in the U.S.: U.S. (14 studies in both urban and rural sites)^{10,12,13,15–25}; Peru (1)¹¹; South Africa (1)¹⁴; and Hong Kong (1).²⁶ All studies focused their interventions on women; no studies were located that described primary care-based interventions for men. The mean age of participating women ranged from 22.95²³ to 43¹³ years. All U.S.-based studies except three^{12,17,22} enrolled a predominantly African American and/or Latina sample.

Intervention Content

Intervention location. The majority of studies ($n=10$) recruited women seeking reproductive health care in obstetrics–gynecology or family planning clinics.^{11,12,15,17,19,20,23–26} The remainder enrolled women from other primary care sites including family and internal medicine. None of the included studies prioritized recruitment in pediatrics.

Although most interventions were delivered completely in the primary care office, four^{12,13,19,20} also included intervention-related outside contact, during which women received home visits, phone calls, or had around-the-clock access to a case manager. For example, Curry et al.¹² used a multi-pronged, participant-adapted intervention including the following: (1) connection with a nurse case manager who was available around the clock; (2) watching a video about IPV; and (3) a care plan tailored to each participant's needs.

Intervention length. The interventions tended to be brief; nine studies^{11,12,15,17,19,21,23,25,26} discussed the length of the primary care-based intervention, which ranged from 10 minutes¹⁷ to 16 hours²³ (which was divided into eight 2-hour sessions), with six^{11,15,17,21,25,26}

lasting between 10 and 35 minutes. Two studies^{18,22} included 30 minutes and 120 minutes of clinician training about IPV.

Intervention content. Interventions typically were delivered by paraprofessionals/IPV advocates (three studies^{10,19,24}); social worker/counselors (five studies^{11,15,18,20,22}), or nurses (six studies^{12,14,17,21,25,26}). In one study,¹³ the intervention was delivered by a nurse and a trained community health worker. One study²³ did not identify the background of the people delivering the intervention, and one¹⁶ was administered via computer. In two studies,^{18,22} physicians were educated about IPV and were encouraged to screen; however, no studies tested a physician-led response to IPV disclosure.

Common themes emerged in the intervention content. The included interventions all sought to empower women, helping them to identify and meet their personal goals. In general, interventions were framed around empathetic, supportive discussion of the following: (1) cycles of violence; (2) safety-promoting behaviors; (3) referral to local IPV community-based resources; and (4) referral to other community-based organizations to address additional needs (e.g., housing and child care).

One intervention study¹⁵ screened participants for four risk factors for poor pregnancy outcomes, including smoking, environmental tobacco exposure, depression, and IPV. The intervention was then adapted according to a woman's risk profile, such that women received risk-specific psychobehavioral counseling. Three additional studies counseled women not only about IPV but also about HIV and sexually transmitted infection (STI) prevention and reproductive coercion.^{17,23,24}

Outcomes

Studies investigated a variety of outcomes, including reduction in IPV, improvement in physical and emotional health, safety-promoting behaviors, and use of IPV and community-based resources/referrals (Table 1). These outcomes were measured between 1 month¹⁴ and 2 years^{10,21} post-intervention. A summary of the findings for each of these outcomes, by outcome, is presented below. However, it should be noted that 76% (13/17) of included studies demonstrated at least one intervention-related benefit for patients. Curry,¹² Cripe,¹¹ Klevens,¹⁶ and McFarlane²¹ and colleagues did not demonstrate any significant benefit. Examining more closely the studies that did not find intervention-related benefit, Curry et al.¹² found decreases in total stress scores in both the intervention and control groups, although differences were not significant; Cripe et al.,¹¹ the only study located in Peru, found increased use of safety-promoting behaviors in the intervention as compared to the control group,

Table 1. Summary of outcomes related to primary care intimate partner violence (IPV) interventions

Outcome	Number of studies measuring outcome	Number (%) of studies finding significant improvement in outcome after IPV intervention
Reduction in IPV	11	5* (45)
Improvement in health, total	12	6 (50)
Specific areas of health		
Fewer very low birth weight and preterm babies	1	1 (100)
Improved health-related quality of life	4	1 (25)
Reduced depressive symptoms	2	2 (100)
Unprotected sex/pregnancy coercion	2	2 (100)
Perceived stress	1	0 (0)
Healthcare use	2	0 (0)
Safety-promoting behaviors	5	2 (40)
Use of IPV and community-based resources/referrals	10	6 (60)

*One additional study found a statistical trend for IPV reduction

but differences were not significant; Klevens et al.¹⁶ was the only study in which the intervention was delivered by computer; and McFarlane et al.²¹ demonstrated decreases in IPV and increases in safety behaviors over time but did not find significant differences between groups.

Reduction of violence. Eleven studies^{10,15–17,20–26} measured whether the intervention reduced women's reports of IPV. Of these 11 studies, five found that the intervention was significantly associated with reductions in IPV and one found a statistical trend indicating IPV reductions in the intervention as compared to the control group.^{10,15,17,20,25,26} Five studies^{16,21–24} found no significant reduction in IPV postintervention. Examining some of the studies that did not find a significant reduction more closely, Melendez et al.²³ and Miller et al.²⁴ incorporated IPV education with education about HIV, STIs, and reproductive coercion, such that the intervention was multi-faceted. McFarlane and colleagues²¹ reported a decrease in IPV for both intervention and control groups over time with no significant difference between groups.

Improvement of physical and emotional health. Results with regard to improvement of physical and emotional health outcomes were mixed. Kiely et al.¹⁵ reported that pregnant women receiving the IPV intervention had significantly fewer very low birth weight and

very preterm (<33 weeks) births than control women. Tiwari and colleagues²⁶ found that women receiving the IPV intervention reported significantly improved health-related quality of life at 6 weeks post-delivery. In addition, Tiwari et al.²⁶ and Coker et al.¹⁰ found that the intervention led to decreased depressive symptoms. The interventions tested by Melendez²³ and Miller²⁴ and colleagues both included a focus on education about HIV/STI transmission and sexual coercion as well as teaching about risk reduction. Although neither trial documented a reduction in IPV, they found significant reductions in wom-

en's reports of unprotected sex and in pregnancy coercion, respectively.

In contrast, Klevens,¹⁶ Cripe,¹¹ and Coker¹⁰ and colleagues reported no changes in women's health-related quality of life/perception of physical and emotional well-being post-intervention, whereas Curry et al.¹² reported no significant changes in perceived stress between groups. Klevens¹⁶ and Coker¹⁰ also reported no changes in healthcare use (such as emergency department visits or hospitalizations) for intervention as compared to control women.

Safety-promoting behaviors. Of the five studies^{11,13,17,21,25} that assessed changes in safety-promoting behaviors (e.g., hidden an extra set of house keys), two^{13,25} found that intervention women were significantly more likely to engage in safety-promoting behaviors than control women. Cripe et al.¹¹ noted that women in the empowerment group were more likely to use safety behaviors than women in the control group, but that these differences were not significant. Similarly, McFarlane et al.²¹ reported that safety-promoting behaviors for both groups increased over time, yet there were no significant differences between groups.²¹ With a sample size of 18 women, Laughon et al.¹⁷ may have been underpowered to detect a difference before and after the intervention.

Use of IPV and community-based resources and referrals. Ten studies^{10,11,14,16,18,20,22,24,25,31} examined whether the intervention led to IPV-specific or community-based referrals. Six^{10,14,18,22,25,31} documented that following the intervention, use of IPV and community-based resources significantly increased. In addition, Klevens et al.¹⁶ randomized women into three groups and found that among women experiencing IPV prior to the intervention, those who received a resource list that contained IPV-specific information were more likely to contact an IPV agency than women provided with a more general resource list only. Miller and colleagues²⁴ reported that although there were no differences between the intervention and control groups with regard to IPV service use, knowledge of these services increased significantly in both groups over time. Speculating on their null finding, Cripe et al.¹¹ discussed available resources and potential systematic barriers in the study's location of Lima, Peru, stating that "women in Peru who have sought help from formal sources have experienced a lack of response from the police or found the justice system to be ineffective" (p.2070).

Discussion

In the novel *The Woman Who Walked into Doors*, author Roddy Doyle wrote, "A nurse would look at me and know.... What about the burn on my hand? The missing hair? The teeth? I waited to be asked. Ask me. Ask me. I'd tell her. I'd tell them everything. Look at the burn. Ask me about it. Ask."³² In recent years, official recommendations about IPV screening have substantively shifted such that routine IPV screening of women of childbearing age during preventive healthcare visits is now strongly encouraged.^{7–9} Medical providers, however, face a daunting task: how to respond appropriately and effectively to patients' disclosure. This review highlights the existing empirical data evaluating patient-focused IPV interventions occurring within primary care. Several themes warrant further discussion.

The findings of this review support the IOM and the USPSTF recommendations defining the role of healthcare providers in identifying and responding to IPV in the primary care setting.^{7–9} Although results of the included studies were heterogeneous, the majority demonstrated some intervention-related benefits to patients. In addition, the null findings of some studies potentially relate to being underpowered to detect modest effect sizes of the tested interventions.

The majority of interventions were tested in reproductive health (obstetrics–gynecology or family planning) settings. This finding is not surprising given that a substantive portion of healthcare expenditures for women of childbearing age relate to reproductive health

needs.³³ In addition, it is possible that there is increased IPV awareness and research in reproductive health settings because the natural focus is on women's health. Focus on IPV within the reproductive health setting is important because women in the perinatal period are not immune from IPV, with rates of abuse during this time period ranging from 3% to 19%³⁴; evidence supports the adverse impact of IPV on the mother, fetus, and neonate.³⁴

However, this review identified an important gap, finding that none of the included studies were based primarily in pediatrics. Rates of IPV are disproportionately high among families with young children³⁵ and among mothers accompanying a child to a pediatric office visit.³⁶ Mothers feel that the pediatric setting is an important site for IPV screening and feel comfortable discussing IPV with their child's provider.³⁷ Perhaps most importantly, the majority of children in the U.S. visit pediatricians at least annually, with even more frequent visits in children aged <1 year³⁸; in addition, mothers experiencing abuse may be more likely to seek medical attention for their children than for themselves.³⁹ Given that the rates of IPV are highest in families with young children, healthcare providers may be some of the few professionals to have dependable access to women at elevated risk of IPV.⁴⁰ Thus, future research should consider testing the effectiveness of pediatrics-based IPV interventions.

With new recommendations supporting the role of healthcare providers in identifying and responding to IPV, it is important to consider barriers to implementation and dissemination. Previous research^{41,42} documents that providers describe lack of comfort in screening, concerns over limited time with the competing demands of primary care, and a paucity of evidence-based approaches to responding to IPV. The current data suggest that there are evidence-based models of IPV intervention that are compatible with busy primary care practices. Most of the models described in these results are brief in duration. However, none of the interventions were primarily physician-delivered, and all were designed to be administered within the context of a multidisciplinary care team.

Implementation of intervention models with similar parameters is well aligned with current healthcare reform efforts to transform primary care systems into Patient-Centered Medical Homes (PCMHs).⁴³ The PCMH model represents a shift from physician-delivered care to physician-directed care.⁴³ Physician-directed care involves the development of care teams where nurses, social workers, case managers, and other support staff mobilize each of their profession-specific skills in concert to provide optimal patient care. As the PCMH model is

further adapted and conceptualized, our results suggest that it is prudent to develop medical teams that include members who are responsible for responding to IPV.

In this review, the focus was on interventions that were delivered, at least in part, within a primary care setting. It is important to note, however, that integrating interventions into primary care is only one model. Although not the focus of this review, another viable option is to make physicians responsible for screening, with positive disclosures followed by the provision of referrals to outside agencies or community-based resources. Two notable studies tested this paradigm. Taft conducted an RCT in Australia in which mothers were identified at a primary care visit, with intervention women then paired with a nonprofessional mentor.⁴⁴ After 12 months of follow-up, mean IPV scores were significantly lower for the intervention as compared to the control group. In an RCT in the United Kingdom, Feder similarly depended on primary care providers to identify abused women and then, once identified, referred abused women to an outside IPV advocate.⁴⁵ Future research should compare the acceptability, feasibility, and efficacy of on- versus off-site interventions.

The challenges of disseminating and implementing the strategies described by the included studies relate mostly to issues of external validity. Each study design was specific to the patient population and practice site and was built on site- and community-specific resources. However, the data suggest domains of successful interventions that appear to include (1) interventions focused on increasing self-efficacy and empowerment; (2) interventions focused on access to IPV-related resources; and (3) use of brief, nonphysician models of intervention delivery.

There is a need for continued rigorous research to better assess (1) which intervention components are most effective, and for which populations; (2) how interventions can be feasibly replicated and enhanced to further improve outcomes, specifically, how multifaceted interventions, like those conducted by Miller and Melendez, can be strengthened to reduce IPV while achieving improvement in other risk behaviors^{23,24}; and (3) what additional clinically relevant outcomes (health-care costs, child outcomes) should be measured.

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Appendix

Supplementary data

Supplementary data associated with this article is available at <http://dx.doi.org/10.1016/j.amepre.2013.08.022>.