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AMA Symposium: Identification of Intimate Partner Violence in Health Care Settings: What’s the Evidence?*

Harriet L. MacMillan** & C. Nadine Wathen***

INTRODUCTION

As intimate partner violence (IPV) has been increasingly recognized as a major public health problem,¹ implementation of IPV screening for women presenting to health care settings has been a high priority for many agencies and organizations.² It is important, however, to consider what is known about the effectiveness of IPV screening and the interventions to which women may be referred once identified, whether that occurs through screening or other approaches.

In this article, we provide an overview of the current scientific evidence published in health and social science journals regarding effectiveness of IPV screening of adult women in health care settings and interventions that are aimed at reducing IPV. We also discuss identification through case finding. The Background section outlines definitions for both screening and case finding and summarizes current

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evidence-based guidelines regarding these approaches. Although both men and women are victims of IPV, we restrict the focus of this article to violence by men against women, as the scientific evidence available to date addresses identification of IPV among women in health care settings in part because the morbidity and mortality for women exposed to IPV is greater than for men.\(^3\) In this article, IPV is defined as "physical and psychological abuse of women by their male partners, including sexual abuse and abuse during pregnancy."\(^4\)

I. BACKGROUND: OVERVIEW OF SCIENTIFIC EVIDENCE REGARDING SCREENING FOR AND PREVENTION OF IPV

A. Screening and Case-Finding

The distinction between IPV screening and case finding is an important one. Screening is a "standardized assessment of patients, regardless of their reasons for seeking medical attention."\(^5\) IPV screening (often referred to as universal or routine screening) in health care settings involves asking all women who present themselves for care about their exposure to violence without taking into account any aspect of their clinical presentation. Case finding entails only asking women about exposure to IPV as part of a diagnostic assessment, as determined by other factors, including one or more of signs, symptoms, and risk indicators.

Within the public health model, there is an important principle that screening for a condition or exposure should only occur if there is an effective intervention available for the screen-positive patient. Any type of screening may be associated with harm, including IPV screening; an important consideration is that the patient is being subjected to a "procedure" that is not necessarily directly related to their reason for seeking care. With case finding, asking about exposure to IPV is part of the diagnostic process regarding a problem for which help is being sought—this is explored more fully in section 3.3 below.


Figure 1: Analytic Framework

B. Analytic Framework for Prevention of IPV

Figure 1 provides a framework showing the links between strategies to identify IPV and interventions for reduction of intermediate and long-term health outcomes. This is based on the generic analytic framework for screening topics developed by the U.S. Preventive Services Task Force (USPSTF) to evaluate evidence for preventive maneuvers within primary care. The USPSTF has two criteria for screening tests: (1) there must be an accurate measure to identify the condition (or exposure); and (2) there must be scientific evidence that adverse outcomes can be prevented through screening. Significant efforts have been devoted to developing screening tools to identify IPV, with less emphasis on evaluating interventions to assist women exposed to this kind of violence. Several reviews summarize the existing tools and their properties. The instruments vary in the

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7 Id.
type of information sought including the nature, frequency, duration, and time period of the abuse; for example, some instruments ask about lifetime IPV, while others focus on shorter periods such as the past year. There is no "gold standard" (definitive approach to determining the presence or absence of a condition or exposure) for assessing the validity of responses to an IPV screening tool. However, research comparing responses to screening instruments with more comprehensive self-report measures of IPV suggests that most screening tools will identify a major proportion of women who subsequently disclose a history of abuse on the more detailed questionnaires. The proportion of women who do not confirm abuse on both a screening instrument and a more detailed questionnaire when in fact they are experiencing violence is unknown. To put this in context referring to Figure 1, we know that screening women within health care settings who are experiencing violence will result in disclosures.

A crucial question, however, is whether IPV screening of adult women in health care settings does more good than harm. This requires evaluation of the interventions to which screening might lead, and what effects these interventions have on outcomes important to women—the intermediate and long-term health outcomes that are outlined in Figure 1. To consider the overarching question of whether IPV screening leads to effective interventions for women, we need to first consider the scientific evidence regarding effectiveness of interventions aimed at reducing IPV.

C. Interventions to Reduce Intimate Partner Violence against Women

We conducted a systematic review of the IPV literature to identify approaches to reduce and respond to IPV in women, focusing the review on interventions used by primary care clinicians, including nurses and physicians. But we also provided a narrative summary of what is known about interventions outside the scope of primary care (for example, protection orders). The complete methods and results are summarized in our 2003 publication. Briefly, the databases—

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9 Id.


11 Id.
MEDLINE, PsycINFO, CINAHL, HealthStar, and Sociological Abstracts—were searched from their respective start dates to March 2001 (then updated in December 2002) using appropriate keywords. We then reviewed all titles and abstracts according to a priori study selection criteria, and we included any additional articles identified by external reviewers and hand searching. A total of 2207 citations were identified by these processes; from this list, 237 articles appeared to match the selection criteria, and after further review, the final pool included ninety-seven, of which twenty-two described IPV interventions meeting the criteria for critical appraisal. We (HLM and CNW) then both independently reviewed each article using the methods of the Canadian Task Force on Preventive Health Care. The quality of individual studies was determined using a set of criteria specific to design categories (e.g. systematic review, randomized controlled trial, cohort study, case-control study) developed with the USPSTF. Quality ratings of “good,” “fair,” and “poor” were assigned according to the USPSTF criteria. If a study receives a quality rating of “poor,” the implication is that the methods are of insufficient quality to draw any meaningful inferences from the results, regardless of whether they are positive or negative.

1. Interventions for Women

The first category included any interventions to which women experiencing violence could be referred. Four such interventions were identified: shelter stay, advocacy counseling following shelter stay, See generally Steven H. Woolf et al., Assessing the clinical effectiveness of preventive maneuvers: Analytic principles and systematic methods in reviewing evidence and developing clinical practice recommendations, 43 J. CLINICAL EPIDEMIOLOGY 891 (1990).

13 Harris et al, supra note 6.


personal and vocational counseling, and prenatal counseling. None of these studies received a quality rating of "good," only a program of advocacy counseling following shelter stay received a rating of "fair," and it will be reviewed in detail.

An advocacy counseling program for women who had stayed at least one night in a shelter was evaluated using a randomized controlled design; the articles reporting on this study include a description of the pilot work, as well as results of the trial over a range of follow-up periods. The study with the largest sample, published in 1999, was the most recent report available at the time of our systematic review. Women were randomly assigned either to receive a ten-week program of advocacy services four to six hours a week after leaving the shelter, or to have no contact other than for follow-up interviews. The program focused on assisting women with developing safety plans as needed and accessing community resources such as social support, housing, and employment, among others. The original sample included 284 women of which 278 remained in the trial and complete follow-up data were available for 242 of them. At the two-year follow-up, those women who received the program of advocacy services reported less reabuse (76%), compared with those in the control group (89%). Quality of life was also statistically significantly better for women in the advocacy program group, compared with those in the control group. Women in the advocacy program group also reported improvement in the intermediate outcomes, including social support


18 Sullivan, supra note 15; Sullivan & Davidson, supra note 15.
19 Six-Month Follow-Up, supra note 15; Initial Evaluation, supra note 15; Tan et al., supra note 15; Sullivan & Bybee, supra note 15.
21 Id.
and effectiveness in obtaining resources. Not all outcomes showed improvement: there were no differences in reports of psychological abuse or depression between the two groups. Bybee and Sullivan have since completed and published the three-year follow-up, which will be discussed below because it was published after our systematic review.

For our systematic review, within the overall category of interventions for women, only the Sullivan & Bybee study was of sufficient methodological quality to have confidence in the results. It is important to note, however, that all women participating in this program stayed in a shelter for at least one night; it is not clear whether the results would be applicable to a broader population of women.

Since the publication of our systematic review, three new trials of note have been published. As referred to above, Bybee and Sullivan conducted a follow-up to their 1999 publication. Of the 141 women enrolled in the first half of the study (a subsample of the total of 284 women), 124 were available for the three-year interview; this represents 88% of the original subsample, and the loss to follow up did not differ between groups, nor did non-completers significantly differ from completers. The main finding of interest at year three was the loss of the intervention’s effect on repeat violence—there was no difference between groups in rates of re-victimization. However, very few of the women—less than 20%—were still involved with the partner who had abused them at the time of enrolment into the study. Of note is that the women who received the advocacy intervention still reported significantly higher quality of life ratings than did women in the control group.

McFarlane and colleagues compared in a randomized trial a brief nurse case-management intervention (n=161) to a standard care condition in which women received an information card about IPV resources (n=158). Their primary outcome measures were abusive events, assessment of homicide threat, safety behavior/planning, and use of community resources for abused women. Two years post-randomization, there were no differences between groups on any of the

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22 Id.
24 Id.
25 Id.
primary outcome measures, although women in both groups experienced less abuse and showed general improvement on the other outcome measures. The authors conclude that simply asking about abuse leads to these improvements.\textsuperscript{27} However, because there was no non-screened control group, alternate interpretations of these results include, as the authors state, "a simple regression toward the mean or the natural history of IPV, which may wax and wane for many women"\textsuperscript{28} or other unmeasured co-interventions across time.\textsuperscript{29}

A second trial was conducted in an antenatal clinic in Hong Kong.\textsuperscript{30} Pregnant women (N=110) with a history of IPV were randomized to receive either a specialized empowerment training for addressing IPV in their relationships (n=55), or no intervention (n=55). The thirty-minute intervention was based on a model developed by Parker\textsuperscript{31} and included advice on safety planning, making choices and problem-solving with an added component of empathic understanding. This trial shows some promise for starting to see how abused women identified in health care settings—in this case perinatal clinics—might be helped in addressing violence. However, the study involved a relatively small sample, and hence wide confidence intervals around main outcome measures. This becomes especially important given that the difference between groups on the physical abuse outcome was significant for minor physical violence, but not severe physical violence and for psychological abuse, but not for sexual abuse. Also, no primary outcome or sample size determination was specified a priori. Several other concerns about the study (for example the lack of control for various potential confounds or co-interventions in the analysis, and a brief follow-up period of only six weeks postnatally) make the results of this study promising, but not conclusive.

2. Interventions for Batterers and/or Couples

In our systematic review,\textsuperscript{32} we identified ten studies and one systematic review of batterer and/or couple programs. Interventions included group treatment such as anger management or education,

\begin{itemize}
  \item \textsuperscript{27} Id.
  \item \textsuperscript{28} Id. at 59.
  \item \textsuperscript{29} Id.
  \item \textsuperscript{30} A. Tiwari et al., \textit{A randomised controlled trial of empowerment training for Chinese abused pregnant women in Hong Kong}, 112 BRIT. J. OBSTETRICS & GYNAECOLOGY 1249 (2005).
  \item \textsuperscript{31} Parker et al., \textit{supra} note 17.
  \item \textsuperscript{32} Wathen & MacMillan, \textit{supra} note 4.
\end{itemize}
varied types of counseling (e.g. using a cognitive-behavioral approach) and referrals for other services such as substance abuse treatment. Some interventions were aimed at men only while others included both men and their partners. This systematic review received a quality rating of "fair"; it appraised six studies, including four quasi-experimental and two randomized trials (effect sizes for five studies was determined), and concluded that there was some evidence of effectiveness for interventions aimed at batterers and/or couples.

However, the only study to receive a quality rating of "good" in our review concluded that three types of interventions were not effective in reducing IPV against women. This randomized trial, "the San Diego Navy Experiment," published after the systematic review by Davis and Taylor, tested (1) group sessions for men; (2) group sessions for men and their female partners; and 3) individual counseling sessions for men with rigorous monitoring compared to a control group. The interventions were all twelve months in duration. Female partners in all groups including the control arm received stabilization and safety planning. The study had many strengths: it involved a large sample of couples (n = 861), had minimal attrition and included both self-report and police arrest record measures. The results of this study are limited in their generalizability because only US Navy couples were studied. Of particular note, the recidivism rates were low in all intervention groups (range 3% to 6%) and in the control group (4%) compared with rates reported in other studies, leading the authors to conclude that none of the three interventions were effective in reducing recidivism of IPV beyond the control group. Perhaps employment in the Navy leads to lower recidivism rates compared to those in non-military settings.

3. Other Interventions

Additional interventions exist that have the goal of reducing IPV that were not included in our systematic review, because they did not concern primary care. Hospital emergency departments (EDs) have

35 Id.
36 Davis & Taylor, supra note 33.
37 Wathen & MacMillan, supra note 4.
been a focus of other reviews, given the high prevalence of IPV among women presenting to EDs. Fanslow and colleagues evaluated a protocol of care for women abused by their partner in a comparative study of two EDs. The protocol included such elements as providing staff training about recognition of IPV, asking appropriate questions to identify violence, and providing appropriate assessment and treatment such as safety planning and referral to community resources. Although the authors reported that positive changes, such as increased use of safety assessment, counseling and referral to other services, were observed initially, these effects were not maintained at the one-year follow-up.

Davis and Taylor conducted a randomized trial to evaluate a unique public education program aimed at preventing IPV. The primary prevention component involved random assignment of sixty-four housing projects to intervention or control groups; the intervention group received a public education anti-violence campaign through tenant meetings, leaflets and posters. A secondary prevention intervention involved random assignment of households of 436 individuals who experienced family violence to receive either a home visit follow-up from a social worker and police officer or to a control group that received no intervention. Neither the primary nor secondary prevention programs led to reduction in new violence or severity of violence.

Interventions involving specific police responses have also been evaluated. The original Minneapolis Domestic Violence Experiment examined the impact of having police officers respond to misdemeanor IPV calls with one of three randomly selected protocols: (1) provide advice; (2) separate the couple; or (3) arrest the perpetrator. Of those arrested, the subsequent rate of violence was significantly lower six

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41 Id.
42 Id.
months later compared to the other groups. However, in the Spouse Abuse Replication Program—a series of six replication studies—there were mixed findings; there was an increase in recidivism of violence among arrested men in some sites, while other sites confirmed the original findings. Subsequent analyses showed that there was an interaction between characteristics of male perpetrators and arrest; recidivism was lower among arrested men who were employed, compared with those who were not employed.

There have been some recent promising findings associated with use of protection orders. Holt and colleagues conducted a retrospective cohort study to examine the association between civil protection orders and subsequent police-reported violence. There was a decrease in the reported incidence of violence following the initial incident when permanent (twelve-month), but not temporary (two-week), protection orders were used. Bell and Goodman used a quasi-randomized design to evaluate a law-based advocacy intervention for women seeking civil protection orders through the courts. There was less recurrence of abuse among women in the intervention group compared with a control group, although this pilot study had a high loss to follow-up in the control group. Despite the encouraging results of both these studies, neither one will be an intervention to which women screened for IPV in a health care setting will be referred, although the findings certainly suggest that a referral to police services may be important to consider. Some of this information may be useful in designing future programs to which women can be referred.

47 Id.
49 Id.
4. Summary of Evidence for Effectiveness of IPV Interventions

No current evidence exists to date of good quality showing that an intervention aimed at reducing violence against women referred to by health care professionals is effective in doing so, or that such an intervention improves health outcomes. The two most encouraging studies involving interventions of relevance to possible referrals following screening include: (1) the trial by Sullivan and Bybee,\(^50\) concluding that quality of life improved following a post-shelter advocacy counseling program; and (2) the trial by Tiwari and colleagues showing that brief empowerment training provided prenatally reduced some subtypes of violence.\(^51\) If we return to Figure 1, as yet we do not have sufficient evidence for the effectiveness of an intervention that improves either intermediate or long-term health outcomes for women.

5. Summary of Evidence for Effectiveness of IPV Screening

Four recent evidence-based systematic reviews have found insufficient evidence for the effectiveness of IPV screening in reducing violence and/or improving health outcomes for women.\(^52\) While many screening tools for IPV exist, it has not been shown that identifying a woman as abused leads to reduction in adverse health outcomes—one of the key principles identified by the USPSTF. Furthermore, as outlined in the USPSTF Recommendation Statement on Screening for Family and Intimate Partner Violence, "[n]o studies have directly addressed the potential harms of screening and interventions for family and intimate partner violence."\(^53\) It is essential that any potential benefits of screening be weighed against potential harms, including prompting

\(^{50}\) Sullivan & Bybee, supra note 15; Bybee & Sullivan, supra note 23.
\(^{51}\) Tiwari et al., supra note 30.
\(^{52}\) MacMillan & Wathen, supra note 8; Ramsay et al., supra note 8; Heidi D. Nelson et al., Screening Women and Elderly Adults for Family and Intimate Partner Violence: A Review of the Evidence for the U. S. Preventive Services Task Force, 140 ANNALS OF INTERNAL MED. 387 (2004); Deirdre Anglin & Carolyn Sachs, Preventive Care in the Emergency Department: Screening for Domestic Violence in the Emergency Department, 10 ACAD. EMER. MED. 1118 (2003).
unintentional disclosure and triggering possible reprisal violence from an abusive partner.\textsuperscript{54}

It is important to acknowledge the position of several organizations and many individuals working in the domestic violence field who recommend IPV screening on the basis that sufficient evidence already exists.\textsuperscript{55} Some argue in favor of IPV screening on the basis of the high prevalence of undetected abuse experienced by women, the potential value of this information in caring for the patient, and the low risks associated with such inquiry.\textsuperscript{56} However, our position is that the question of whether IPV screening does more good than harm can and should be answered before deciding on implementation of IPV screening within health care settings, especially since the risks associated with asking about exposure to IPV and what happens subsequently are unknown.

**II. EMERGING EVIDENCE FOR HOW TO IDENTIFY IPV IN HEALTH CARE SETTINGS**

**A. McMaster VAW Research Program**

The McMaster University Violence Against Women Research Program, funded by the Ontario Women's Health Council, Ministry of Health & Long-Term Care, is an integrated, multi-phased research program that began in 2003. HLM is principal investigator and CNW is a co-investigator of this program. It is providing evidence to answer the question “does routine screening in health care settings for woman abuse do more good than harm?” A number of preliminary projects, including two that ask women (both those who are abused and not) and their health providers how best to identify woman abuse in health care settings, have informed the development of two randomized trials to assess (1) the best approaches to screening for IPV, and (2) the effectiveness of screening versus no screening in four types of health care settings.\textsuperscript{57} Two completed studies examining identification of IPV are described below, and the design of our randomized controlled trial

\textsuperscript{54} Ann Taket et al., *Should Health Professionals Screen All Women for Domestic Violence?*, 1 PLOSMED. 007, 008 (2004).

\textsuperscript{55} Id.

\textsuperscript{56} Cole, *supra* note 5.

\textsuperscript{57} More information on the preliminary studies can be found at our program website, *available at* http://www.fhs.mcmaster.ca/vaw.
examining screening effectiveness is described in section 4 of this paper.

B. What methods and tools should be used in evaluating screening for IPV in health care settings?

If screening for IPV were implemented, what approach would perform best (i.e., correctly identify the greatest number of abused women while missing the fewest, and yielding the lowest rates of missing data) and be most acceptable to women? These were the questions asked in the “testing trial” completed by the McMaster VAW Research Program. Approximately 2,500 women aged 18-64 who visited one of three types of health care setting (emergency care, primary care and specialty care) completed one of two screening tools (the Partner Violence Screen, a three-item tool focusing on physical violence and the Woman Abuse Screening Tool, an eight-item questionnaire asking about several forms of abuse) in one of three ways: on a computer, on a written form, and being asked face-to-face by a health care provider. We compared the women’s responses on the screens to a comprehensive research instrument, the Composite Abuse Scale (CAS), developed to assess the presence of a range of abuse behaviors. This allowed us to determine screening tool performance, and assessment of the methods of screening coupled with responses by women to their preferences for both the screening instruments. This approach led us to conclude the following. First, and perhaps most notable, was that even though we have long assumed that clinicians should ask patients directly about IPV, this study showed that self-completed methods for soliciting such information are preferred by women, and may be more efficient. In fact, using a written form was the “best” method when taking into account the three primary outcome measures (disclosure rate, missing data and preference). Second, we found that the prevalence rate for IPV differs by setting and population and varies significantly from approximately 4% for a specialty clinic to

58 Harriet MacMillan et al., Approaches to Screening for Intimate Partner Violence in Health Care Settings: A Randomized Trial, 296 JAMA 530 (2006).
60 Judith Belle Brown et al., Application of the Woman Abuse Screening Tool (WAST) and WAST-Short in the Family Practice Setting, 49 J. FAM. PRAC. 896, 896 (2000).
61 Kelsey Hegarty et al., The Composite Abuse Scale: Further Development and Assessment of Reliability and Validity of a Multidimensional Partner Abuse Measure in Clinical Settings, 20 VIOLENCE & VICTIMS 529 (2005).
approximately 18% for one emergency department. However, while this study provides evidence on the best methods to solicit information on IPV, it does not tell us if collecting such information improves outcomes for those exposed to such violence.\textsuperscript{62}

C. Clinical risk indicators

While awaiting the evidence regarding screening effectiveness, what should health care providers do to appropriately identify and assist women experiencing partner violence? A first key step is awareness of specific contextual characteristics or circumstances—beyond the more obvious patterns of injury and trauma consistent with abuse—that when present may mean a woman is being, or has recently been, exposed to violence. In an effort to understand these indicators of exposure to IPV, we undertook a study to assess the relationship between several evidence-based, clinically important risk indicators identified in previous literature, and current or recent exposure to IPV.

Data for this cross-sectional study was collected and analyzed from 768 English-speaking women aged 18 to 64 years presenting to the two emergency departments participating in the “testing trial.”\textsuperscript{63} Women responded to risk indicator questions and to the research criterion standard (best attempt at a “gold standard”) CAS\textsuperscript{64} to determine their exposure to IPV in the past year. Among our key findings were that among women presenting in these emergency departments, IPV was associated with: being separated, common law or single; being depressed; reporting somatic symptoms (unexplained pain); having a male partner employed less than part-time; having a male partner with an alcohol problem; and, having a male partner with a drug problem. In addition, each of these risk indicators increases a woman’s risk for IPV exposure by four-fold. With three indicators, the risk is over 50%; with four or more, it is over 90% (though the sample was small for 4+ indicators (n = 38)). Other findings of note include that pregnancy was not associated with past-year exposure to IPV, a

\textsuperscript{62} MacMillan et al., \textit{supra} note 58.
\textsuperscript{63} Id. at 531.
\textsuperscript{64} Hegarty et al., \textit{supra} note 61.
finding that should assist in clarifying some of the mixed data currently in the literature regarding whether pregnancy itself is a risk for abuse.\textsuperscript{65}

III. A TRIAL TO DETERMINE WHETHER IPV SCREENING IS EFFECTIVE

With ongoing support from the Ontario Women's Health Council, the McMaster VAW Research Program is currently conducting a randomized controlled trial in twenty-six health care settings to determine whether screening for IPV does more good than harm. Figures 2a and 2b outline the design of the trial and instrument administration during the initial health care visit (study enrollment).

Figure 2- Design of the IPV Screening RCT

Women between the ages of eighteen and sixty-four who present to participating health care settings are approached about the study; once written informed consent is obtained, they are randomly assigned to either undergo screening using a written questionnaire, or to the control group. Randomization was by day or shift; a random numbers table was used to assign clinic day or shift to either screening or no screening. If the participant screens "positive," which means that the score on the written questionnaire indicates that she has experienced violence from a partner in the past twelve months, this information is shared with the health care provider who then addresses this with the woman according to the standard practice of the specific health care setting. The majority of our study settings are family practices and EDs, although we have a small number of obstetrics/gynecology clinics so that any differences between such settings can be evaluated. In an ED setting, the woman might be referred to a social worker, whereas in a family practice, the family physician may address any IPV concerns with the woman directly or make a referral. Detailed information about the type of intervention available and received is collected throughout the trial.

All participants are asked to complete the CAS,\textsuperscript{66} our criterion standard for the study; as outlined in Figure 2b, this occurs just before the participant leaves the health care setting and is not shared with any

\textsuperscript{66} Hegarty et al, \textit{supra} note 61.
health care professional. This ensures that we have complete information about exposure of violence in both screened (intervention) and control groups so that we can compare health outcomes in the two groups longitudinally. At the same time, we avoid any "contamination" of the control group; those participants do not experience screening and information sharing with a health care provider leading to a referral. It is emphasized that health care providers are not advised to refrain from asking any woman about exposure to violence based on clinical indicators. Since the screen involves a written questionnaire administered prior to the health care visit, the health care providers are only asked to respond to the information they receive regarding a woman's exposure to IPV as they would in their regular practice. For safety reasons, we provide a training session regarding management of IPV to all health care providers participating in the study. In addition, all women participating in the study receive an information card outlining local IPV resources, regardless of whether they are in the screened or control group. This study has received Research Ethics Board approval from the McMaster University/Hamilton Health Sciences Ethics Board, as well as the research ethics boards of those clinics and hospital settings that have separate boards.

All women enrolled in the study who are "positive" on the screen and on the criterion standard are followed for eighteen months with interviews held every six months and telephone contact at the intervening three-month periods.\footnote{See Figure 2A} The two main outcomes are quality of life and experience of violence. We are also measuring a broad range of secondary outcomes including physical and mental health, intermediate outcomes such as use of safety planning and social supports, and any harm associated with screening.

IV. CONCLUSIONS

In summary, IPV is associated with high morbidity and mortality; increasingly, there is recognition of the need for effective interventions to reduce violence against women. Despite the development of many IPV screening tools for use in health care settings, it is as yet unknown whether screening does more good than
harm for women. As outlined by Ferris in a recent editorial,\textsuperscript{68} there is an urgent need for rigorous trials evaluating the effectiveness of interventions to reduce IPV. We would add that before any further implementation of screening programs occurs, there should be evaluation of such programs with careful determination of the balance between the benefits and harms associated with IPV screening. We hope that the IPV screening trial described above will provide information that assists in determining the effectiveness of IPV screening and referral to existing services. While awaiting results of further research on the effectiveness of IPV interventions, it is essential that clinicians continue to be alert to the signs and symptoms associated with IPV, and refer patients to appropriate services based on their individual needs.\textsuperscript{69}

\textsuperscript{68} Lorraine E. Ferris, \textit{Intimate Partner Violence: Doctors should offer referral to existing interventions, while better evidence is awaited}, 328 \textit{Brit. Med. J.} 595, 596 (2004).

\textsuperscript{69} \textit{Id.}