One in 4 women living in the United States has been physically or sexually assaulted or stalked by an intimate partner during her lifetime. One in 4 women living in the United States has been physically or sexually assaulted or stalked by an intimate partner during her lifetime.1,2 Prevalence estimates for current intimate partner violence (IPV) among women receiving care in primary health care settings range between 7% and 29%.3–7 The cost of IPV is conservatively estimated at $5.8 billion per year8; this figure includes $4.1 billion for medical and mental health care, $900 million in lost productivity, and another $900 million in lost earnings from women murdered by their partner. A growing literature has documented the short- and long-term physical and mental health effects of IPV (see Plichta et al.9 for a recent review).

Although IPV is more common than many of the health outcomes for which clinicians routinely screen, few clinicians conduct routine screening for IPV. Yet, validated tools needed for clinical IPV screening exist.10–14 Clinicians’ failure to ask about IPV may negatively affect the patient's trust and confidence in the clinician.15 Many physician and nursing organizations support IPV screening and consider the identification of violence a professional responsibility.16–20 However, the US Preventive Services Task Force recently concluded that there were insufficient data to support IPV screening, stating that additional data are needed to determine whether screening is harmful, whether interventions improve outcomes for women, and whether IPV screening can be adopted in busy clinical settings.21

We report the results of an ongoing screening and intervention study conducted in health care clinics in rural South Carolina. The population consisted largely of low-income women seeking primary health care at participating clinics. Women aged 18 years and older were eligible for IPV screening, with IPV defined as physical, sexual, or psychological abuse by a current or past partner. Women who tested positive for IPV were offered an intervention at their corresponding clinic and participation in a 2-year cohort study. We present an initial report of baseline IPV screening results. Although screening was offered to all women on an annual basis, we report here the results of the first IPV screening. We aimed to (1) describe our efforts at implementing universal IPV screening, (2) describe the overall frequency of victimization by IPV type and timing (i.e., current or past violence), (3) examine the relationship between past and current violence by IPV type, and (4) examine the extent to which women perceive violence to be a problem in their relationship by IPV type. Details of the intervention are provided elsewhere.22

METHODS

Study Setting

Women who sought care at participating rural health care clinics between April 2002 and August 2005 in the Pee Dee region of South Carolina were invited to participate in the current study. The Pee Dee region in South Carolina comprises the following counties: Chesterfield, Darlington, Dillon, Florence, Marion, Marlboro, and Williamsburg. The region is primarily rural with high rates of poverty, infant mortality, poor educational achievement, and partner violence.23,24 All participating clinics serve women of low socioeconomic status. Clinics accept Medicaid and Medicare and offer care on a sliding-fee scale for those without health insurance. The clinics were small, relatively understaffed, and experienced high turnover of clinical staff during the study period. The smallest clinic had 1 part-time physician and 2 nurses, and the largest clinic had 6 full-time physicians or nurse practitioners and 10 nurses. All provided comprehensive services to underserved populations and were located in geographic areas where medical facilities and services were scarce.

Objectives. We sought to determine the frequency of intimate partner violence by type in a large, clinic-based, nurse-administered screening and services intervention project.

Methods. A brief intimate partner violence screen, which included items to measure sexual and physical assaults and psychological battering (using the Women’s Experience With Battering scale) was administered to consenting women receiving care at 1 of 8 rural clinics in South Carolina.

Results. Between April 2002 and August 2005, 4945 eligible women were offered intimate partner violence screening, to which 3664 (74.1%) consented. Prevalence of intimate partner violence in a current (ongoing) relationship was 13.3%, and 939 women (25.6%) had experienced intimate partner violence at some point in the past 5 years. Of those ever experiencing intimate partner violence, the majority (65.6%) experienced both assaults and psychological battering; 10.1% experienced assault only, and 24.3% experienced psychological battering only. Most women (85.5%) currently experiencing both psychological battering and assaults stated that violence was a problem in their current relationship.

Conclusions. The intimate partner violence screening technique we used was feasible to implement, acceptable to women seeking health care at the targeted clinics, and indicated a high proportion of women reporting intimate partner violence in the past 5 years, with a majority of those women stating that such violence was a problem in their relationships. These findings demonstrated the viability of the screening technique, which supports the growing importance of implementing intimate partner violence screenings in clinical settings in order to reduce the prevalence of violence in intimate relationships. (Am J Public Health. 2007;97:1319–1325. doi:10.2105/AJPH.2005.085357)
Screen Instrument and Process

Screening for IPV was limited to women because prior research in South Carolina found that rates of victimization from partner violence were approximately 3 times higher for women than for men.25 Regardless, it would be unethical to screen men, as no IPV services were available in the region for men who had experienced abuse.26

Women aged 18 years or older who attended 1 of 7 participating clinics in rural South Carolina were offered IPV screening by a nurse. Grant funds provided up to 1 part-time (50% time) clinic staff position in each large clinic to increase staff availability to conduct the screens. Clinic nursing staff explained the study to eligible women (those who had the mental capacity to give consent), obtained consent, and administered the IPV screening instrument. The explanation of the study, consenting process, and IPV screen instrument were administered in a private examination room with only the nurse and the woman present. Intimate partners were generally not present during the examination; however, if they were, the IPV screen was not conducted and was rescheduled for the woman’s next visit. Given the potentially low reading level of patients in the clinics, nurses administered the screening questionnaire. This screening took place early in the clinic visit and on an annual basis.

Screening Tool

As recommended by the Centers for Disease Control and Prevention, we used a definition of IPV that included physical violence, sexual violence, and psychological or emotional abuse.27 Both physical (and sexual) abuse and psychological battering were assessed because both are associated with the same range of adverse physical and mental health outcomes28 and have the same set of correlates (e.g., substance abuse by intimate partners, IPV in the woman’s family of origin), yet they identify women experiencing different forms of IPV.29

During the IPV screening, nursing staff asked consenting women to think about their current male partner or, if they did not have a current partner, their most recent male partner. Partner was defined as “someone you have been married to, doted, or had a sexual relationship with.” Women were then asked a series of questions assessing battering including 10 items from the Women’s Experience With Battering (WEB) scale.30–32 2 items addressing physical or sexual abuse in their current or most recent relationship, and 2 items assessing battering in any other past relationship (within 5 years; see the box on this page). To rapidly assess battering in any other past relationship (within 5 years), we included 1 item based on the 3 most commonly endorsed WEB items (items 2, 4, and 9; see the box on this page).

Intimate Partner Violence Assessment Items Used in Domestic Violence Services in Rural Clinics Intervention: South Carolina, April 2002 to August 2005

**Women’s Experience With Battering**

1. Your partner makes you feel unsafe even in your own home.
2. You feel ashamed of the things your partner does to you.
3. You try not to rock the boat because you are afraid of what your partner might do.
4. You feel like you are programmed to react a certain way to your partner.
5. You feel like your partner keeps you prisoner.
6. Your partner makes you feel like you have no control over your life, no power, no protection.
7. You hide the truth from others because you are afraid not to.
8. You feel owned and controlled by your partner.
9. You feel scared without laying a hand on you.
10. Your partner has a look that goes straight through you and terrifies you.

**Assault questions**

11. Is (was) this partner physically violent toward you? By violent, I mean does (did) he punch, kick, hit, shove, slap, choke, or physically attack you in other ways that could result in an injury? It also means being made to do sexual acts when you don’t want to.
12. Do (Did) you feel that violence or abuse is (was) a problem in your relationship with this partner?*

**Intimate partner violence in the past 5 years**

13. Has any other partner, in the past 5 years, made you feel scared without laying a hand on you, made you ashamed of the things he does to you, or made you feel like you have to react in a certain way to him?
14. Has any other partner, in the past 5 years, been physically violent toward you? By violent, I mean did he punch, kick, hit, shove, slap, choke, or physically attack you in other ways that could result in an injury? It also means being made to do sexual acts when you don’t want to.

Total = WEB score*

Note. WEB = Women’s Experience With Battering.
*Item not used to score intimate partner violence.
*Questions (1–12) were asked about the woman’s current or most recent partner. For all 14 questions, a positive response (“agree” or “yes”) was scored as “1” and a negative response (“disagree” or “no”) was scored as “0.” Screening administrators added scores and identified the woman as experiencing IPV if the score was ≥2. If the woman did not have a current partner, she was asked to think about her most recent partner in the past 5 years.
of the WEB scale indicated that the dichotomous response option of agree or disagree with 2 or more of the 10 statements has a sensitivity of 79.8%, a specificity of 99.4%, and a positive predictive value of 96.6% when compared with the full scale of response options.24

One question from a draft of the Centers for Disease Control and Prevention Behavioral Risk Factor Surveillance Survey IPV module was used to assess both physically and sexually violent acts by a current, recent, or any other partner in the past 5 years. The question states: “Has any partner been physically violent toward you? By violent, I mean he punch, kick, hit, shove, slap, choke, or physically attack you in other ways that could result in an injury? It also means being made to do sexual acts when you don’t want to.” This item will hereafter be referred to as assault. Women who agreed with this statement were asked whether they felt that violence or abuse is or was a problem in their relationship with this partner (item 12; see the box on page 1320). Reporting IPV as a problem in the relationship was an indicator of the significance or impact of IPV in that woman’s life. Data was not available on the psychometrics of this item from the Centers for Disease Control and Prevention Behavioral Risk Factor Surveillance Survey.

Women who agreed with 2 or more WEB items regarding their current partner, or agreed with item 11, which addressed physical or sexual assaults (see the box on page 1320), were defined as experiencing current IPV. Current physical assault was defined based solely on item 11. Women who were scored as WEB-positive (endorsing 2 or more items) but did not concurrently experience physical or sexual assault were considered to be psychologically battered. Past abuse was defined by (1) endorsing 2 or more items on the WEB or agreeing with item 11 when reporting on their most recent partner, or (2) agreeing with items 13 or 14, which addressed relationships in the past 5 years. Item 12 was not used to define partner violence.

We categorized responses to screening into 3 groups: (1) current IPV (assault or psychological battering by a current partner), (2) past but not current IPV (assaulted or psychologically battered in a relationship within the past 5 years), or (3) IPV-negative (no reported assault or psychological battering in any current or past relationship). Women in the first 2 groups were offered the intervention available at their clinic.

Statistical Methods
All analyses were conducted using SAS version 9 (SAS Institute Inc, Cary, NC). The distribution, including the mean, standard error, and Cronbach’s $\alpha$, were calculated for the WEB scale. Rates of IPV were analyzed by timing (current partner or by another partner in the past 5 years) and type of violence (assault, psychological battering, or both). We then determined characteristics of the screened population that were correlated with IPV status. Odds ratios and associated confidence intervals (CIs) may be overestimated when outcomes are not rare (greater than 10%); therefore, when exploring the association between past abuse and current IPV, prevalence ratios were calculated after adjusting for age.

RESULTS
Response Rates for Intimate Partner Violence Screening
Between April 2002 and August 2005, nurses attempted to conduct IPV screening for 6064 women attending participating clinics (Figure 1). Three hundred eighty-one women (6.3%) were not approached for screening because of illness (n=121) or presence of family members (n=156) or intimate partners (n=104). Women in the first 2 groups were offered the intervention available at their clinic.
partners (n = 104) during the interview. Screening for IPV was attempted for an additional 738 women who were found to be ineligible because they had not had a male partner in the past 5 years (n = 705), could not speak English (n = 11), or were mentally incapable of providing consent (n = 22). Twenty-six percent of women (n = 1281) refused screening. Women who otherwise refused screening were older (44.2 ± 13.3 years) than those who consented (39.5 ± 12.6 years; P < .001). Although we did not formally assess reasons for refusals, anecdotally, older women were less likely to perceive a need for screening for IPV. Data were unavailable to examine differences in acceptance of screening by other demographic characteristics.

Overall, 74% (n = 3664) of eligible and at-risk women completed the IPV screening. The screening took an average of 15 minutes to complete, including time to recruit and consent. On the basis of clinic data for the number of women available for screening over this time period, we estimate that 71% of eligible women were invited to participate. Estimates differed somewhat by clinic.

Rates of Current vs Past Partner Abuse by Type of Abuse

Table 1 presents the prevalence of any IPV in the past 5 years and in the current relationship by type of violence. Among women consenting to the IPV screen, 13.3% were scored as experiencing violence (IPV-positive) from a current male partner and 25.6% had experienced IPV in the past 5 years. Among those experiencing IPV in the past 5 years, the majority (65.6%) experienced both assault and psychological battering. Assault only was fairly uncommon (10.1% of women experiencing abuse), whereas psychological battering only was comparatively more common (24.3%). Younger women were less likely to report experiencing psychological abuse or assault in any relationship in the past 5 years (P < .001), yet age was not associated with either measure in a current relationship (P = .48; data not shown).

Perceptions of Violence as a Problem

Table 1 also presents the proportion of currently abused women, by type, who reported that violence was a problem in their current relationship. Women who were psychologically battered only were not more likely than women who were assaulted only to acknowledge IPV as a problem in their current relationship (37.0% vs 36.9%, respectively). However, those who experienced both assault and psychological battering were more likely to see IPV as a problem (85.5%) compared with those psychologically battered only (P < .001) or assaulted only (P < .001).

Relationship Between Past and Current Intimate Partner Violence Type

Table 2 shows our analysis for the correlation of IPV in a prior relationship as a risk factor for violence in a current relationship among those who reported having a current partner (n = 3008). Assault in a prior relationship was not associated with assault by a current partner (age-adjusted prevalence ratio [APR] = 1.1; 95% CI = 0.7, 1.6). Past assault was, however, associated with current psychological battering alone (APR = 5.3; 95% CI = 4.0, 6.7). Past battering (according to the WEB scale) was associated with current assault (APR = 2.3; 95% CI = 1.8, 2.9) and with current psychological battering only (APR = 3.6; CI = 2.7, 4.8).

**DISCUSSION**

Our results add to the existing literature that indicates that clinic-based IPV screening is feasible, even in clinics that are small and understaffed. In this study, nursing staff in participating clinics recruited study participants and completed IPV screening for 74% of eligible women who were offered screening. Although it was not formally measured, we received no reports of women being offended by IPV screening. To the contrary, a number of patients commented that such screening is an important part of the clinic procedure. Additionally, we received no reports of harmful effects resulting from IPV screening from any primary care providers, nurses, or IPV specialists.

The IPV screening technique used in this study was feasible, acceptable, and indicated a high proportion of women reporting IPV (25.6%) in the past 5 years. Moreover, the majority of women reporting both psychological battering and physical or sexual assault stated that violence was a problem in their relationships. These findings suggest that the current screening tool measured IPV that had an impact on women’s lives.

Our estimate of IPV in a current (ongoing) relationship (13.3%; Table 1) was consistent...
with other clinic-based IPV screening studies that used both the WEB scale and a measure of physical or sexual assault. Because the majority of studies did not estimate IPV experienced in the past 5 years, it was difficult to compare these findings with existing literature.

Consistent with prior studies, we found that rates of IPV were higher for women reporting on a past relationship (in the past 5 years: 25.6%) than on a current relationship (13.3%). These findings were consistent with limited literature in which the WEB scale had been used. Also consistent with this literature was our finding that almost half of those identified as currently experiencing IPV were scored as battered but not assaulted (termed psychologically battered). Although this pattern differed slightly for IPV in the past 5 years, overall findings indicate that the WEB scale identified a significant proportion of all women who may be at increased risk of adverse health effects of IPV.

Psychological abuse has been shown to precede physical abuse. Indeed, in this sample, past psychological battering, unlike past assault, predicted both current assault and current psychological battering. Both past assault and past psychological battering were strongly associated with increasing current psychological battering scores. This finding indicates that the phenomena of psychological battering as measured by the WEB scale may be predicted more consistently than physical or sexual assaults.

Intervening with women who are psychologically battered but not assaulted may be an opportunity for the primary prevention of physical violence. Women who report psychological battering without assault from their current partner may be on a trajectory to experience physical assault. Such a sequence is clearly preventable. It is also important to identify psychologically battered women, because this form of IPV has been strongly associated with mental and physical health problems. Because the WEB Scale identifies abused women who are and are not concurrently assaulted, this scale may be used as a comprehensive tool for rapid identification of all forms of IPV. The WEB Scale identified 90% of all women abused in the past and 86.2% of all currently abused women; in contrast, the assault measures identified 75%.

It is not altogether surprising that fewer women who were psychologically battered alone compared with those who were psychologically battered and assaulted reported violence as a problem in their relationship (37.0% vs 85.5%). Because representations of IPV have focused on physical assaults, “being hit” has come to define abusive relationships both inside and outside the court room, and visible injuries from assault are often the prerequisite for public recognition of domestic violence. This restricted definition of IPV, which excludes outside the range of real abuse experiences of women, may, paradoxically, also explain why women who experienced assault only were least likely to indicate that the abuse was a problem (36.9%). Women who are physically assaulted but do not experience the loss of power, control, and fear that have come to characterize battering relationships (measured by the WEB scale) are likely a poorly understood group of women.

As with all observational studies, this cross-sectional analysis of women’s first IPV screening has limitations. The cross-sectional design is a limitation when making estimates for IPV beyond prevalence. Not all eligible women were recruited into the study. Selection bias may have occurred because women whose family member or partner would not leave the examination room were not screened. This protocol was established for safety reasons; yet these women may be at greater risk of IPV. The same may also be true for women too sick to be screened. Some women may have refused because they were abuse victims; this self-selection would also result in an underestimate of IPV prevalence. All women included in this analysis lived in a rural setting and there may be unique challenges for abused women in rural settings to disclose abuse; this may bias resulting IPV prevalence.

In contrast with many past studies of IPV prevalence estimates, nursing staff explained the study, obtained written consent, and conducted the screening test for all women. We opted for this approach in order to be more consistent with a clinical implementation of a universal IPV screen. Multiple training sessions were conducted throughout the project for nursing staff to aid in uniform implementation of the recruitment and screening procedures, yet variability in screening and recruitment likely occurred. We were unable to collect demographic information on women who were not offered screening and, thus, do not know how they differed from those who were offered screening.

This study provides increasing support for the feasibility and importance of universal IPV screening in clinical settings. We found that it is feasible, both methodologically and logistically, for nursing staff to screen women for multiple IPV types. One fourth of patients surveyed had experienced IPV...
within the past 5 years. We received no reports of adverse effects resulting from IPV screening.

Using a 17-item IPV screen is not feasible for a busy clinic setting. Using recommendations from Bonomi et al., for a multidimensional screen to address physical, sexual, and psychological abuse, we suggest the following 3 questions as a brief screen: (1) “Do you feel ashamed of the things your partner does to you?” (2) “Do you feel that your partner can scare you without laying a hand on you?” (3) “Is your partner physically violent toward you?” By violent, does he punch, kick, hit, shove, slap, choke, or physically attack you in other ways that could result in an injury? It also means being made to do sexual acts when you don’t want to.” Answering “yes” to any of these 3 questions yields a high sensitivity (95.9%) and specificity (97.1%) for identifying all IPV cases in this study; the positive predictive value for a “yes” to any of these 3 in “predicting” IPV was 87%.

If clinic-based screening is feasible, what additional information is needed to implement universal screening? At a minimum, women who are positively screened for IPV must be referred to local resources. However, more evidence is needed to determine if screening and referral are effective in reducing IPV and improving health. The ongoing evaluation of 2 clinic-based interventions in the current project will provide such data.

Clinic-based IPV screening has traditionally been considered secondary or tertiary prevention (i.e., to prevent revictimization or to help victims to handle the consequences of abuse). However, screening could also be used for primary prevention. Tools that identify early warning signs or risk factors for IPV victimization and perpetration (e.g., marital conflict, nonphysical aggression, substance abuse) could be used to decrease incidence rates of IPV by offering interventions that seek to prevent IPV before it occurs. Given the prevalence and consequences of IPV, it is critical that we seek to expand our repertoire of interventions to prevent violence before it occurs. Because medical professionals are a trusted source of information, IPV screening in clinics offers a prime opportunity to achieve this objective.