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Best practices: community-based postpartum depression screening: Results from the CARE study

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Abstract

This paper describes the features, findings and best practice recommendations from the CARE Study, a prospective randomized study in which 5,169 mothers were screened for postpartum depression 4 weeks after delivery. Data were analyzed to determine postpartum depression prevalence rate, risk factors, and characteristics of women who were and were not asked about their emotional health. The screening initiative was successful and is ready for testing in clinical practice. Results support use of the EPDS with diagnostic confirmation for accurately identifying women at risk for postpartum depression. A major observation from this study was that a large number of women with positive screens were not asked about their emotional state by clinicians. Referral and follow-up of affected women links screening to treatment options. Best practice strategies for implementing a screening protocol include education for both postpartum women and providers.

Introduction

Undiagnosed and untreated, postpartum depression can lead to chronic depression for affected mothers and ongoing negative effects for their children. (1,2,3) Legislative mandates in the United States requiring postpartum depression screening that began with New Jersey in 2006 (4) continued with Illinois, and culminated in the introduction of Bill S 1375 the Mothers Act introduced to Congress in January 2009, (5), have accelerated the need for accurate and feasible procedures for screening postpartum women. Community-based screening initiatives that follow the evidence-based framework set forth by the Agency for Healthcare Research and Quality (AHRQ) (6) can be successfully implemented in research and clinical settings to identify women at risk for postpartum depression and connect them to treatment options.

The CARE study (Communicating And Relating Effectively), is a relationship-focused nursing intervention designed to promote responsive interaction over time between depressed mothers and their infants. (7) The investigators employed an experimental design

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involving random assignment of eligible participants in three phases. Phase 1 involved establishing an effective postpartum screening mechanism for women in the community and determining study eligibility for enrollment with DSM IV diagnostic evaluation. Phases 2 and 3 involved the participation of research subjects in the randomized clinical trial and follow-up interviews with enrolled mothers. Successful strategies, findings and recommendations from Phase 1 are presented to help clinicians in research and clinical settings initiate effective postpartum screening initiatives.

Screening Women at Risk for Postpartum Depression

The evidence-based Agency for Healthcare Research and Quality (ARHQ) screening framework begins by identifying a cohort of postpartum women with unknown mood state, proceeds to formal postpartum screening, diagnostic evaluation for those with positive screens, and random group assignment with follow-up evaluation. (6) Applying this framework, research nurses visited women recovering on the postpartum units of two Harvard teaching hospitals from August 2004 through September 2007. Research nurses visited women previously identified by staff who met all eligibility criteria: English-speaking, medically stable and sufficiently recovered from labor and birth, with uncomplicated delivery of full-term, singleton infants cared for in the newborn nursery. Interested mothers were approached by research nurses and asked to complete the Permission to Be Contacted Form for depression screening at 4 weeks postpartum. As postpartum blues resolve by 2 weeks and postpartum depression is defined as beginning by 4 weeks (8), this was an appropriate time for screening. Materials were also given to mothers take home.

Key Features of an Effective Postpartum Depression Screening Protocol

Research nurses telephoned all mothers who signed a permission form and who did not return an opt-out card. The 10-item Edinburgh Postnatal Depression Screening Scale (9) and the Mothers Information Tool (MIT-brief) to elicit demographic information and responses to a series of open-ended questions were administered on the telephone. (7) If the nurse failed to contact a woman within one week, the EPDS and MIT-brief were sent by mail. Data from this study support the recommendations of Gaynes and colleagues and others (6,10,11) that the EPDS merits continued use as a standard postpartum depression screening measure as it continues to demonstrate strong reliability and validity. For phone or mail-in screens, if a woman's EPDS score was > 10 , she was informed about the research study and invited to have a diagnostic interview with possible enrollment in the clinical trial. As the authors of the EPDS recommend the lower score of 9/10 to reduce failed detection to less than 10%, EPDS > 10 was selected as the cutoff score. Cox and colleagues also suggest that mental health referral is indicated whenever a woman scores 13 or higher. (9)

If a mother scored EPDS > 13 or her response to EPDS item 10 (thoughts of self-harm) was anything other than zero, the nurse (a) encouraged the woman to contact her clinician immediately if she was currently receiving mental health treatment, or (b) encouraged her to contact her Primary Care Provider or the Department of Psychiatry at the delivery hospital for follow-up evaluation. An advanced practice psychiatric nurse (c) also contacted her to provide a brief evaluation and to assist her to seek follow-up. If nurses were unable to contact a mother with an EPDS > 13 or higher by phone, (d) a scripted note providing CARE study contact information that suggested the woman contact her doctor, midwife or other clinician, was mailed. All women with EPDS > 13 , and/or with a positive response to item 10 received personal guidance/assistance to seek a referral via existing health systems.

Diagnostic Evaluation

All women with EPDS > 10 were invited to participate in the Structured Clinical Interview for DSM IV administered by the advanced practice nurse in their homes. The diagnostic interview conducted by a qualified clinician is the “gold standard” for confirming a depression diagnosis. (11) Mothers with confirmed diagnoses of minor or major depression were invited to enroll in the clinical trial. Enrolled women were offered the same assistance as indicated in a–d above.

Results of the Screening Process

Over 2 ½ years, 5,169 women aged 14–49 were screened by nurses on the telephone, or by self administering and returning mailed questionnaires. Of this group, 674 (13%) women had scores on the EPDS >10. The prevalence rate for the women who self-administered the screening questionnaire was 19% (260/1359), which was higher than the 11% prevalence rate for the women screened by phone (425/3806).

A number of women (267) declined the diagnostic interview and subsequent enrollment in the 9-month study for reasons including: lack of interest, no time, moving, or returning to work. Other women responded too late to meet study timelines or were unable to be contacted. One hundred eighty five (185) women with positive EPDS screens received diagnostic interviews. Of this group, 111 were diagnosed with major depression, 24 with minor depression, 8 with depression not otherwise specified and 1 with mixed depression and anxiety. Forty-one mothers were not diagnosed as depressed and dropped from the study.

The majority of women screened were Caucasian/White (66%), followed by Hispanic/Latina, (12%), African American/Black, (9%), Asian/Pacific Islander (8%), and “Other” (5%). The women averaged 32.2 years of age, 16.3 years of education, and 48% were primiparas. Fewer than expected Caucasian women (11%) met criteria for a positive EPDS when compared to Hispanic (18%), Asian American (17%), “Other” (16%), and African American women (14.5%) (Pearson Chi Square 32.47; $p = .000$). Women who were not high school graduates met criteria more often than women in categories with higher levels of educational attainment (Pearson Chi Square 32.62; $p = .000$).

How often were postpartum women asked about their emotional state?

Of the 4,419 women who had seen a clinician by 4–6 weeks postpartum 2,806 (55%) indicated that they had been asked about how they were feeling emotionally. In contrast, 1,613 (32%) indicated they were not asked about their emotional state by a clinician. There were no significant differences for age, education or depression status (yes/no) groupings between women who were/were not asked about their emotional state. However, multiparous women were asked less often than primiparous women about how they were feeling emotionally (Pearson Chi Square: 45.24; $p = .000$). Asian, Caucasian and Hispanic women were asked about their emotional state less often than African American women and women in the “Other” category (Pearson Chi Square: 12.94; $p = .012$). Analyses also revealed that 178 women with EPDS > 10 were not asked by a clinician about their emotional health.

Which clinicians asked postpartum women about their emotional state?

Pediatricians, obstetricians, nurse midwives, and nurse practitioners were the clinicians most often identified as having inquired about the women’s emotional state. When women were asked to elaborate, the majority indicated that the clinician offered a specific checklist or

questions about how they were feeling, while others were asked only general and/or informal questions about their health.

How did mothers respond when clinicians inquired about their emotional state?

The majority of responses indicated that the women were: “fine,” “good,” “ok,” “stable,” or “had no problem”. Other responses were categorized as: had social or healthcare support, felt sad/overwhelmed, felt stress from other sources, was seeking treatment for postpartum depression, or felt stress related to breastfeeding or parenting. Seventy-three (73) women with EPDS > 10 denied feeling sad when asked about their emotional state by the clinician.

How did clinicians follow-up?

A majority of women responded that the clinician offered some type of unspecified intervention, a psychiatric consultation/referral, advice, and/or emotional support. A handful stated that they were offered support but did not act on it. However, a substantial number of mothers (91) were not offered any intervention.

Discussion

Findings from this initiative clearly showed that women were receptive to postpartum depression screening conducted by nurses, both by telephone and mail. Systematic large-scale community-based screening using the EPDS with follow-up DSM IV diagnostic interview was feasible, accurate, and effective for connecting women with treatment options.

The finding that multiparous women were not asked about their emotional state as often as first time mothers, and that members of some racial/ethnic subgroups were asked more often than others, underscores the need for universal systematic screening to reduce the instances of missed cases when screening is done informally based on clinician’s momentary judgments. (6) While race/ethnicity and educational attainment were related to elevated EPDS scores for the women in this study, it is likely that different combinations of biological, psychosocial and economic risk factors play a role in identifying women at risk for postpartum depression in a given clinical population.

Because a significant number of women with positive screens were not asked about their emotional state during the early postpartum period, clinicians must persevere in developing screening strategies that effectively reach out to postpartum women in all settings where they seek care for themselves or their child. Screening can take as little as 5–10 minutes with the EPDS, so any opportunity where women and providers interact is useful for beginning a discussion about women’s well-being following childbirth. Clinicians in obstetric, pediatric and primary care can incorporate screening into the patient interview, discuss results and initiate referral or follow-up through existing mechanisms available to the patient. Women can be screened by a nurse on the telephone at the time of registration or when confirming appointments. Although key features of the AHRQ screening framework were applied for research purposes in the community, they are adaptable to clinical settings.

It is noteworthy that some women with elevated EPDS scores denied feeling sad when they were queried about their emotional well-being. While the reasons women responded in this manner require further study, for some women their feelings of sadness may have been resolving or they may have felt embarrassed. Universal postpartum depression screening may reduce resistance on the part of women who feel stigmatized when singled out for depression assessment that is not a routine part of their care. Postpartum women would benefit from a two-pronged effort that includes education about depression during the

perinatal and postpartum periods and effective screening protocols that include follow-up evaluation.

How can clinicians implement best practice screening protocols in their settings?

First, they need to be aware that postpartum depression screening is feasible, and that there are valid, reliable, free, and easy-to-administer measures, such as the EPDS that take only a few minutes to complete. Second, they should know that while 4–6 weeks is the optimal and recommended time for screening, women can and should be screened whenever they present in well child, obstetrical, or primary care visits during the first year after giving birth. (12,6) Third, as prevalence rates can differ for telephone versus self-administration of the EPDS, clinicians should discuss the EPDS scores with women who self-administer to clarify any ambiguous items and confirm accuracy. Fourth, an effective protocol always begins with education about postpartum depression and its effects on mothers and infants, since beliefs about postpartum depression strongly influence screening practices. (12) Physicians, nurses, social workers and those still in training must have up-to-date information, so that screening for postpartum depression will become integral to their “best practice”. Websites such as www.mededppd.org provide current information about postpartum depression, screening tools, patient materials and care pathways for clinicians. Lastly, and most importantly, a protocol for positive screens that includes referral for DSM IV diagnostic interview and follow-up are essential since screening alone is insufficient for getting affected women into treatment. (12)

Supporting primary care providers and other clinicians in their efforts to incorporate postpartum depression screening as standard practice will enable the front-line in our health care system to ensure the mental health and well being of women during the childbearing years.

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