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Improving Prenatal Care for Minority Women

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Abstract

Since the inception of prenatal care in the early 1900s, the focus of care has been on risk reduction rather than on health promotion. Prenatal care began as individualized care, but more recently group prenatal care has been documented to be very successful in improving birth outcomes. For all women, an emphasis on improving health behaviors is important at this critical time while women are engaging regularly with the health care system. An emphasis on mental health promotion may decrease some of the disparities in birth outcomes that are well documented between minority and majority women, as minority women are known to experience increased levels of stress, anxiety, and depression. Providing support for pregnant women and incorporating knowledge and skills through prenatal care may promote both physical and mental health in minority women.

Keywords

Keywords: Prenatal care; Health Promotion; Minority Health; Mental Health

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Prenatal care is one of the most widely used forms of preventive health care in the United States (Alexander & Kotelchuck, 2001). However, minority women receiving prenatal care still experience a disproportionate rate of poor birth outcomes, including preterm birth, operative birth, and low birthweight (Lu, Kotelchuck, Hogan, Jones, Wright & Halfon, 2010). Various reasons for poor birth outcomes among minority women have been suggested, including differences in the quality of care provided as well as increased exposure to environmental hazards (for those who live in congested urban areas, near

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roadways, or with poor air quality) and stress (thought to be related in part to the experience of being a minority) (Culhane & Goldenberg, 2011).

Currently, the majority of minority women in the United States receive prenatal care early in pregnancy. Sixty-three percent of Black women and 67.4% of Hispanic women receive prenatal care in their first trimester (United States Department of Health and Human Services [US DHHS], 2011). Increased use of prenatal care among minority women has been linked to improvements in availability of insurance, including the expansion of Medicaid coverage (Krans & Davis, 2012). Improved access to prenatal care is a public health gain as late entry into prenatal care or no prenatal care is known to contribute to poor birth outcomes, especially an increase in low birthweight and preterm babies (Ayoola, Neitelman, & Stommel, 2010).

Even though approximately two thirds of minority women access prenatal care in the first trimester, it has not ensured improved birth outcomes (Culhane, & Goldenberg, 2011). Questions remain about whether enhancing the method of prenatal care delivery or the content of prenatal care might also be necessary to improve birth outcomes. The purpose of this paper is to review the current state of prenatal care delivery and content and to make recommendations about further changes in prenatal care that should be tested to meet the needs of minority women in the United States, specifically Black and Hispanic women.

History of prenatal care

In the United States, prenatal care originally focused on decreasing fetal abnormalities, but quickly moved in the early 1900s to an emphasis on decreasing toxemia (Alexander & Kotelchuk, 2001). The first outpatient prenatal care clinic was started in 1911. The first prenatal care guidelines were published by the Children's Bureau in 1924 (Children's Bureau, 1924) and focused on screening and risk reduction.

Since the 1920s, periodic evaluation of prenatal care in the United States has occurred. In 1989, a landmark report was published that recommended that the content of prenatal care should focus on health promotion as well as risk screening, in addition to psychosocial and medical interventions using standardized documentation (Public Health Services Expert Panel on the Content of Prenatal Care, 1989). Care for the whole family throughout the first year of life and further research were two other recommendations of the report (Public Health Services Expert Panel on the Content of Prenatal Care, 1989). Yet Kogan and colleagues found that only slightly more than half of women who were surveyed in 1988 were receiving prenatal care that was in accord with the national guidelines in the 1989 report on the content of prenatal care (Kogan, Alexander, Kottelchuk, Nagey, & Jack, 1994). Further, minority women were less likely to receive health promotion advice than were other women (Kogan et al.). In 1985, the importance of improving access to prenatal care and enriching the content of prenatal care was recommended by another highly regarded report sponsored by the Institute of Medicine (Institute of Medicine, 1985). This report recommended that the access to prenatal care be widened through existing Federal insurance such as Medicaid and the acceptance of this recommendation insured that many more women had access to prenatal care. This has had a major influence on health policy and has

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resulted in an increase not only in access but also in use of prenatal care for poor women in the United States (Krans & Davis, 2012).

An updated review of the literature on how prenatal care content has changed since the 1989 report found risk assessment rather than health promotion continues to be a hallmark of prenatal care (Gregory, Johnson, Johnson, & Entman, 2006). Health promotion, including smoking cessation, nutrition counseling, and improvement in other healthy behaviors such as stress reduction, exercise, improved coping techniques was not found to be well incorporated into prenatal care (Gregory et al.,). Women report that they want more education and support during pregnancy and information about healthy lifestyles, not just healthy pregnancies (Novick, 2009). However health promotion is often minimized in the healthcare system of the United States because of how we pay for services and because health systems focus on tertiary rather than primary care.

Delivery of prenatal care

Although the content of prenatal care in the United States has been slow to incorporate health promotion with a more lifespan focus, rather than just on the pregnancy, there have been promising results in changing the delivery of prenatal care. In 1994, CenteringPregnancy, a program of group prenatal care was developed (Rising, 1998). The CenteringPregnancy group prenatal care model is structured around key components which include: health assessment and self-care, educational content and facilitated discussion, as well as support and socialization (Ickovics et al., 2003). Currently CenteringPregnancy is practiced around the United States in over 400 clinical sites and differs from individual prenatal care, where a woman is seen by one or more health care providers in private sessions, in a number of important ways. Women still have time for an individual check in but most time is spent in peer support or in the group receiving information from the healthcare provider. In a randomized trial with more than 1,000 women (80% of whom were Black), a risk reduction of 33% in preterm birth was found for women receiving CenteringPregnancy group care (Ickovics et al., 2007).

Since the initiation of CenteringPregnancy in 1994, other models of group prenatal care have arisen, with content being developed and studied that is specific to the needs of the population being served and of specific healthcare systems. Group prenatal care has been found to be sustainable and cost-effective (Ickovics et al., 2007). In a systematic review of group versus individual care, group prenatal care was found to result in longer gestation and higher birthweights (Thielan, 2012).

Group prenatal care, not limited to the CenteringPregnancy model, has also been found to improve birth outcomes including decreasing preterm birth and low birth weight (Ruiz-Mirazo, Lopez-Yarto, & McDonald, 2012). In a randomized trial of group prenatal care, not using the CenteringPregnancy model, the group care model was found to significantly increase infant birth weight and improve maternal nutrition, especially micronutrient intake (Jafari, Eftekhar, Fotouh., Mohammad, & Hantoushzadeh, 2010).

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Group prenatal care is a promising model of prenatal care delivery which could be enhanced to incorporate more knowledge and skills known to improve both mental and physical health, such as those found in cognitive behavioral training. Cognitive behavioral training has been used by practicing nurses to improve health outcomes in other groups (Melnyk, Kelly, & Lusk, 2014) and might be equally effective when used by nurses with pregnant women.

Content of Prenatal Care

Improving health behaviors is an essential part of health promotion. Factors such as nutrition, weight, smoking, and drug use play a major factor in physical and mental health. Mental health promotion is especially critical for pregnant minority women because they are known to have increased stress, anxiety, and depression, each of which is related to poor pregnancy outcomes (Dunkel-Schetter & Tanner, 2012; Grote et al., 2010). Further, less than a quarter of those affected by mental health problems receive any treatment (Substance Abuse and Mental Health Services Administration, 2015).

Stress

Independent of biomedical risk, maternal stress has been consistently associated with increased levels of preterm birth and with low birth weight (Hobel, Goldtein, & Barrett, 2008). Minority women are very likely to experience stress with 46.4% of Black women having high stress levels in one recent study (Gennaro, 2008).

Anxiety

Estimates of maternal prenatal anxiety differ from conservative estimates of 15-16%, to rates closer to 54% (Lee et al., 2007). A meta-analysis of anxiety and birth outcomes found that increased state anxiety is related to preterm birth and low birthweight (Ding et al., 2014). Race might increase the effect of anxiety on birth outcomes as increased trait anxiety in Black women was also found to be related to preterm birth (Catov, Abatemarco, Markovic, & Roberts, 2010), although this same relationship was not found in White women nor studied in Hispanic women. Prenatal state anxiety is related to other poor health outcomes, such as preeclampsia, high blood pressure, weight gain and poor maternal eating habits (Atwood, 2013).

Depressive symptoms

In national studies, 40-50% of poor women experience symptoms of prenatal depression (Connelly, Hazen, Baker-Ericzen, Landsverk, & Horwitz, 2013). In a healthy group (N=192) of Black pregnant women, 85% had increased depressive symptoms (defined as a CES-D score $\geq$ 16 at 22 weeks gestation) (Gennaro, 2008). Differences in prevalence rates might be, in part, due to differences in socioeconomic status or differences in race or ethnicity. Poor minority women are twice as likely to meet diagnostic criteria for major and minor depression during pregnancy as are middle class women (Grote et al., 2010). In both Hispanic women and Black women those who experience increased depressive symptoms have been shown to experience higher rates preterm birth (Field et al., 2006; Orr, James, & Prince, 2002).

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Although prenatal care currently includes education about health promotion for exercise, nutrition, and domestic violence screening, it does not typically include screening and early intervention for mental health problems, such as stress, depression and anxiety, nor does it have a focus on mental health promotion. If the mental health needs of pregnant minority women are not identified and met, it is unlikely that advice about healthy lifestyle behaviors will be followed.

Nutrition and weight gain during pregnancy

The Institute of Medicine defines appropriate prenatal weight gain as 28 to 40 pounds for underweight women, 25 to 35 pounds for normal weight women, 15 to 25 pounds in overweight women and 11 to 20 pounds for obese women (Rasmussen & Yaktine, 2009). Unfortunately, more than two thirds of pregnant women gain in excess of these recommended guidelines (Moore Simas et al., 2008). Most low-income women report not receiving advice on how much weight to gain during pregnancy (Hackley, Kennedy, Berry, & Melkus, 2014; Phelan et al., 2011).

Exercise

Although 30 minutes of moderate exercise per day is recommended during pregnancy (US DHHS, 2010) most pregnant women do not meet these guidelines (Downs, LeMasurier, & DiNallo, 2009). Moderate intensity walking for most pregnant women is equivalent to walking 1.5-2 miles in a half hour (Artal & O'Toole, 2003).

Minority women are less likely than non-Hispanic Caucasians to participate in moderate physical activity, especially in the first trimester (Evenson & Wen, 2010) and physical activity appears to decrease over pregnancy (Downs et al., 2009). Walking, the most common type of exercise during pregnancy (Clapp, 2000) confers aerobic benefits, is safe and is one form of exercise that can comfortably be continued throughout pregnancy (Ruchat et al., 2012).

The advantages of moderate exercise during pregnancy are well documented and include gaining less weight (Barakat, Pelaez, Montejo, Luaces, & Zakynthinaki, 2011). Additionally, moderate physical activity has been related to fewer obstetrical complications (Dempsey, Butler, & Williams, 2005) and fewer medical interventions (forceps, oxytocin, cesarean birth) (Clapp, 2000).

Smoking

The standard smoking prenatal care guideline is to ask women if they smoke, provide brief counseling based on the Five A's framework, and supplement with pregnancy specific self-help materials (Ershoff, Ashford, & Goldenberg, 2004). Only half of obstetricians report offering treatment to pregnant women who disclose smoking (Melvin & Gaffney, 2004) and discussion of how to avoid second hand smoke is not a standard part of current prenatal care.

Smoking, in part due to the vascular effects on the placenta, is related to low birthweight and preterm infants (Rogers, 2009).

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Comprehensive Health Promotion

Cognitive behavior therapy (CBT) is the gold standard intervention for a variety of mental health conditions, including depression and anxiety. The basic premise of CBT is that an individual's emotions and behaviors are, in large part, determined by the way that he or she cognitively thinks and appraises the world (Beck, Rush, Shaw, & Emery, 1979). Therefore, a person who has negative or irrational/distorted beliefs tends to have negative emotions (e.g. depression) and behaves in negative ways (e.g., overeating, risky behaviors) (Lam, 2005). Negative emotions and behaviors are even more profound when there are skill deficits (e.g. poor emotional regulation, poor problem-solving and assertiveness skills, and cognitive distortions that lead to negative perceptions, negative thoughts, negative views of self and future, and failure to attribute positive outcomes to one's behavior).

Melnyk and colleagues have found that a manualized CBT-based health promotion intervention entitled COPE (Creating Opportunities for Personal Empowerment) is effective in reducing depressive symptoms, improving healthy lifestyle behaviors, and preventing overweight/obesity in high school students, the majority being minority, and young adults (Melnyk, Kelly, & Lusk, 2014). Therefore, a similar CBT-based program that focuses on empowering pregnant minority women to engage in healthy lifestyle behaviors (i.e., nutrition, physical activity, positive strategies to cope with stress, problem-solving, regulation of negative mood, and goal setting) may be effective and seems warranted. It could easily be integrated into routine group prenatal care.

Based on cognitive behavior theory, women could be taught how to cognitively restructure their thinking when negative events/interpersonal situations arise that tend to lead them into negative thought patterns, and how to turn that thinking into a more positive interpretation of the situation/interpersonal interaction so that they feel better emotionally and engage in healthy behaviors. Emphasis is placed on how patterns of thinking have an impact on behavior and emotions (i.e., the thinking, feeling and behaving triangle). Goal setting to promote engagement in healthy lifestyle behaviors and problem-solving for typical challenges are part of the cognitive behavioral skills building (CBSB) component of the program (e.g., unhealthy behaviors to cope with stress and anxiety; making poor nutritional choices). This program could also include educational content to increase women's knowledge of how to lead a healthy lifestyle and homework activities to reinforce skills that are being learned, which can assist in putting what they are learning into daily practice.

Recently, pilot testing of a CBT-based program, adapted from COPE, delivered in a group setting and including skills building and information designed to improve maternal and physical health was found to be acceptable to pregnant Hispanic women (Gennaro, Gibeau, & O'Connor, 2014). All women in the study reported enjoying group sessions and being interested in the experiences of their fellow participants. Although the study was too small to measure changes in health, women in the intervention reported decreased anxiety, stress, and depression and increased vegetable and fruit intake as well as increased walking over the course of the project compared to women in the control group (Gennaro, et al). Large enough numbers of women were not tested to ensure that these findings are significant; however they are encouraging and further research to examine whether group prenatal care

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combined with CBT-based interventions can improve health outcomes in minority women appear to be warranted.

Screening and risk reduction are important aspects of prenatal care. However, developing models that provide support for minority women, including group prenatal care and that incorporate skills and knowledge to promote both physical and mental health are key. We cannot reduce disparities in maternal and infant health without providing the psychosocial interventions and health promotion that we know have long been missing from prenatal care.

Women have made it clear that they are interested in increasing knowledge and skills to improve their health (Novick, 2009). Nurses can incorporate teaching into ongoing prenatal care about the benefits of daily walking, and eating fruits, and vegetables, Additionally, nurses can ask about smoking behaviors, use the 5A framework and for non smokers explain how to avoid second hand smoke (through negotiation with smokers and limiting smoking around babies).

Practice, however, needs to be informed by research that identifies how prenatal care can be designed that is not burdensome and that promotes mental and physical health for minority women. Research is needed to determine if scalable programs of prenatal care that include both mental and physical health promotion are effective in decreasing health disparities especially among women who might already be suffering from increased stress, anxiety, or depression (O'Mahen, Himle, Fedock, Henshaw, & Flynn, 2013).

If group prenatal care programs that incorporate cognitive behavioral training and skill building are effective, they could easily be translated into general practice as part of the group prenatal care that is occurring in many clinical sites. As nurses we must continue to advocate for our patients to promote health policy that offers services to cover their unmet health care needs. We know that health promotion, including both physical and mental health, is an unmet but valued need of pregnant women (Novick, 2009).. An emphasis on improving health behaviors is important at this critical time while women are engaging regularly with the health care system.

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Implications for practice

Nurses can promote the health of pregnant women during prenatal care encounters by:

- Encouraging increased intake of fruits and vegetables and providing information about cost effective places for buying fruits and vegetables
- Asking about smoking at each visit using the 5A framework
- Discussing avoiding second hand smoke and negotiating with smokers in the environment not to smoke around babies
- Encouraging a half hour of walking each day
- Asking about mental health (Research will inform practice as to what kind of mental and physical health promotion programs need to be developed

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Callouts

Although approximately two thirds of minority women access prenatal care in the first trimester, it has not ensured improved birth outcomes.

In 1924, the Children's Bureau published the first set of prenatal care guidelines, focusing on screening and risk reduction.

The content of prenatal care in the United States has been slow to incorporate health promotion with a more lifespan focus rather than an emphasis just on pregnancy.

Group prenatal care is a promising method changing the delivery of prenatal care.

The content of prenatal care should be targeted to the specific needs of women being served rather than assuming a “one size fits all model.”

Mental health promotion is especially critical for pregnant minority women because they are known to have increased stress, anxiety, and depression, each of which is related to poor pregnancy outcomes