

AHRQ <http://www.innovations.ahrq.gov/content.aspx?id=1909>

**Innovation Profile:
Group Visits Focused on Prenatal Care and Parenting
Improve Birth Outcomes and Provider Efficiency**

Summary

The Centering Healthcare Institute offers two group care models, one for pregnant woman (known as CenteringPregnancy) and one for new mothers (known as CenteringParenting), that integrate health assessment, education, and support into a unified program. Groups meet in ten 2-hour sessions in which participants receive health assessments, learn care skills, participate in facilitated discussions, and develop a support network. A study of CenteringPregnancy found that group care participants received better prenatal care, had fewer preterm births, were more likely to initiate breastfeeding, and had better prenatal knowledge than those receiving "usual" care. Sites using the model also report an enhanced capacity to serve nonpregnant patients, as the group sessions free up resources previously used to provide one-on-one care.

See the Description of the Innovative Activity section for information on expansion of the languages in which program materials are available, the Context section for an update on current site locations, and the Planning and Development Process section for a description of how the implementation process has been redesigned for new sites (updated May 2009).

Evidence Rating (What is this?)

Strong: The evidence consists primarily of randomized controlled trials that test the impact of the CenteringPregnancy care model on key outcomes, including adequacy of prenatal care, likelihood of a preterm birth, and rates of sexually transmitted infections.

Problem Addressed

Inadequate prenatal care is common (especially among minorities) and associated with poor health outcomes, including preterm delivery and low birth weight. Providing adequate prenatal care in a one-on-one setting can be difficult for busy clinicians who face continued pressure to increase productivity. Because clinicians often provide the same kinds of education and pre- and postnatal care to women in similar stages of their pregnancy and/or parenting, group visits may offer the potential to provide better and more efficient care. However, such visits are often not available.

- **Lack of prenatal care, especially among minority groups:** In 2004, 5.7 percent of non-Hispanic Black women who gave birth received inadequate prenatal care (5.7 percent), followed closely by Hispanic women (5.4 percent). The comparable figure among non-Hispanic White women is 2.2 percent.¹
- **Leading to poor outcomes:** Numerous studies have shown that inadequate prenatal care is associated with poorer pregnancy outcomes, particularly an increase in the risk of preterm delivery, low birth weight, and small-for-gestational-age infants.² For example, one study found that women who received inadequate care had a 2.8 times greater risk of a preterm delivery.³
- **Largely unrealized potential of group visits:** Because education and care needs are quite similar among women in similar stages of pregnancy and/or parenting, the provision of pre- and postnatal care is well suited to group visits. In fact, physicians offering group visits for appropriate patients have increased their productivity by as much as 30 percent and reduced appointment wait times by about two-thirds,⁴ while simultaneously achieving high levels of patient satisfaction; studies show that 96 percent of women

prefer receiving prenatal care in groups.⁵ Despite these potential benefits, group care remains uncommon, although interest and adoption is growing among agencies looking to enhance access and patient satisfaction and reduce costs.

Description of the Innovative Activity

The two models include ten 2-hour sessions that focus on ongoing patient assessment, education, and support provided in a small group setting by a health care clinician (e.g., a physician, nurse practitioner, or midwife) trained in pre- and postnatal care. Key elements of the program are described below:

- **Program logistics:** The CenteringPregnancy model brings together groups of 8 to 12 pregnant women in a similar period in their pregnancy, while the CenteringParenting model brings together 5 or 6 mother-baby pairs. Participants represent a range of ages, educational attainment, socioeconomic levels, and ethnicities. The CenteringPregnancy model includes ten 2-hour prenatal care group sessions, beginning in the second trimester (12 to 16 weeks) and going through 40 weeks. Compared to traditional one-on-one care (which offers approximately 2 hours of prenatal care over the course of the entire pregnancy), CenteringPregnancy offers substantially more time with a provider (20 hours), thus enabling patients to examine issues in greater depth, enhance health behaviors and self-care skills, build social support, address sensitive topics, and reduce stress. Once women complete the CenteringPregnancy model, they can continue with the next phase of group care via the CenteringParenting model that provides well-woman/well-baby care. This program is also structured as ten 2-hour education/assessment sessions that begin postpartum and extend through the baby's first year of life.

- **Key model elements:** Both group-class models have 13 “essential elements” as described below:
 - **Health assessment:** One-on-one health assessments are provided within the group space; assessments occur on a mat placed in the corner of the meeting room. Basic privacy is maintained by the use of a low-to-the-ground assessment area, the playing of music, and the general activity associated with check-in and socializing that occurs at the snack table. Assessment activities that demand greater levels of privacy can be performed after the group session in an examination room.
 - **Structured session plans:** Each session has an overall, structured plan of activities.
 - **Core content:** The Centering Healthcare Institute has developed a framework to guide the content of the sessions. Although topic emphasis may vary, all essential content is covered over the course of the 10 sessions. Institute-developed materials are referenced at meetings and used for self-care. In addition to being available in English and Spanish, the materials have been translated into Arabic, Vietnamese, and Chukese (as of May 2009). Providers complete a tracking form at the end of each session to document the content provided.
 - **Circle format:** The group is conducted in a circle to facilitate learning, social interaction, and problem-sharing.
 - **Group composition:** The composition of the group is stable but not rigid, which promotes supportive relationships while still allowing for new members.
 - **Group size:** Between 8 and 12 patients participate in each group, a

size considered optimal to promote the process.

- **Self-care:** Participants are empowered to embrace self-care activities. They take their own blood pressure and weight and record the results on their chart. If program leaders recommend it, they also check their own urine with urine dipsticks. (This process is considered educational, despite the lack of evidence that urine dipstick use improves outcomes.) CenteringParenting participants weigh and measure their babies (including head circumference) and continue to monitor their own weight.
- **Facilitative leadership:** Group leaders adopt a facilitative leadership style, which enables participants to contribute to the discussion and problem-solving (as opposed to a didactic leadership style, which involves one-way communication of information).
- **Consistent leadership:** Leaders tend to stay with their groups throughout all sessions, thus providing continuity of care from a single provider.
- **Culture of respect:** Group conduct honors the contribution of each member. The group facilitators try hard to listen to each woman as she shares her own cultural beliefs and values. Occasionally, a talking stick is passed among participants.
- **Outside support:** Group members have the opportunity to involve family members/partners in pre- and postnatal care if they so desire.
- **Social interaction:** Sessions include opportunities for socializing within the group, so that participants can build a community that provides support.
- **Outcomes evaluation:** Ongoing evaluation of outcomes ensures that patients receive high-quality care.

- **Insurance reimbursement:** Insurers reimburse providers as they would for an individual encounter with a provider; a chart note is made at every visit for documentation purposes.

References/Related Articles

Centering Healthcare Institute Web site. Available

<http://www.centeringhealthcare.org>

Baldwin K. Comparison of selected outcomes of CenteringPregnancy versus traditional prenatal care. J Midwifery Womens Health. 2006;51(4):266-72.

[PubMed]

Carlson NS, Lowe N. CenteringPregnancy; a new approach in prenatal care. MCN Am J Matern Child Nurs. 2006;31(4):218-23. [PubMed]

Grady MA, Bloom K. Pregnancy outcomes of adolescents enrolled in a CenteringPregnancy program. J Midwifery Womens Health. 2004;49(5):412-20.

[PubMed]

Ickovics J, Kershaw T, Westdahl C, et al. Group prenatal care and perinatal outcomes: a randomized controlled trial. Obstet Gynecol. 2007;110(2 Pt 1):330-9.

[PubMed]

Contact the Innovator

Sharon Schindler Rising, CNM, MSN, FACNM

Centering Healthcare Institute, Inc.

558 Maple Avenue

Cheshire, CT 06410

(203) 271-3632

E-mail: srising@centeringhealthcare.org

Jeannette R. Ickovics, PhD

Yale University

School of Public Health

60 College Street, Room 432

New Haven, CT 06520

E-mail: Jeannette.Ickovics@yale.edu

■ **Did It Work?**

[[Back to Top](#)]

Results

A randomized control trial (RCT) of the CenteringPregnancy model found that group care participants received better prenatal care, had fewer preterm births, were more likely to initiate breastfeeding, and had better prenatal knowledge than those receiving "usual" care. Another RCT found that the program reduced sexually transmitted infections, which are associated with increased risk of preterm delivery. Sites using the model also report an enhanced capacity to serve nonpregnant patients and to meet payer documentation requirements.

- **Better pregnancy outcomes:** An RCT found that CenteringPregnancy participants were less likely than those enrolled in usual care to receive inadequate prenatal care (26.6 percent of program participants received inadequate care, compared to 33 percent of those getting usual care) or to deliver prematurely (9.8 percent vs. 13.8 percent). Participants were also more likely to initiate breastfeeding (66.5 percent vs. 54.6 percent) and had better prenatal knowledge, greater readiness for labor and delivery, and higher satisfaction with their prenatal care.
- **Fewer sexually transmitted infections among African-American teens:** Another RCT found lower rates of chlamydia and gonorrhea among teenage African-American CenteringPregnancy participants than among

those receiving usual care (8.9 percent vs. 22.8 percent); in addition, those with no history of sexually transmitted infections who were assigned to CenteringPregnancy were more likely to remain infection-free up to 1 year postpartum (4.6 percent vs 10.8 percent).

- **Enhanced access for other patients and services:** Some participating sites have found that CenteringPregnancy frees up capacity and space to serve nonpregnant patients, thus reducing waiting times for appointments and/or enhancing the ability to accept new patients. Essentially, by removing prenatal care patients from one-on-one care, sites add clinical capacity that can be used for other billable activities.
- **Enhanced documentation:** Participating sites report an enhanced ability to meet payer documentation requirements related to various components of prenatal care and education.

Evidence Rating (What is this?)

Strong: The evidence consists primarily of randomized controlled trials that test the impact of the CenteringPregnancy care model on key outcomes, including adequacy of prenatal care, likelihood of a preterm birth, and rates of sexually transmitted infections.

■ How They Did It

[[Back to Top](#)]

Context of the Innovation

The Centering model was developed by Sharon Schindler Rising, a Connecticut nurse-midwife, after she found herself facing an overwhelming demand for prenatal care and realized that much of this care was duplicative across patients. The model was piloted in 13 groups (3 of which were teen groups) in 1993 and 1994; positive quantitative and qualitative outcomes prompted the development of a formal 2-day training workshop and broader dissemination of the program in 1998. As of May

2009, the models have been implemented in more than 300 sites in almost every state, several provinces in Canada, the United Kingdom, Australia, Germany, and Sweden. Sites include hospitals, public health clinics, women's and family health centers, private physician offices, birthing centers, and other organizations. The model has also been implemented at several military bases and Indian Health Service sites. New group care programs, including programs focused on diabetes and senior care, are currently in development.

Planning and Development Process

Sites that implement the CenteringPregnancy model have typically followed these key steps:

- **Gathering basic information:** The site gathers initial information about the model from a variety of sources, including Centering Healthcare Institute's information packet, a system assessment, the Biz Card (a PowerPoint presentation that provides an overview of the model, including the results of the RCT), the institute Web site (<http://www.centeringhealthcare.org/>), and published articles.
- **Creating a steering committee:** The site forms a planning/steering committee to oversee the planning process. The committee might include an administrator, a provider, a nurse, a medical assistant, a front desk clerk, a social worker, a consumer, and/or a representative from a relevant community agency. Once the planning committee is formed, the institute will send initial planning materials to guide preparation for a workshop.
- **Training:** Several institute training programs are available for administrators, providers, and clinic staff. An initial 2-day training session provides an overview of the model, room setup, curriculum, program promotion, and participant recruitment, while a second session focuses on training participants to become group facilitators. The institute helps the

planning committee select the training program that best fits its needs.

- **Creating an implementation timeline:** The planning committee creates a timeline for implementation and submits it to the institute, which provides appropriate support and consultation.
- **Applying for site approval:** The site applies for formal approval from the institute, which applies specific standards during the approval process. Site approval involves (1) completing a self-evaluation report; (2) documenting that the 13 essential elements are in place; and (3) undergoing a 1.5-day site visit during which the visitor meets with key organizers, reviews documents, observes a group meeting, and provides technical assistance as needed. After the visit, the site receives a formal written report that provides feedback and approval designation. Site approval is active for 2 years, after which a short updated report must be filed to obtain renewal of approval.
- **Planning for sustainability:** The site should plan for sustainability. For example, the site creates a budget that includes ongoing expenses for patient materials, staffing, food, administrative time, and data collection and evaluation.
- **Requesting consultation as needed:** The site may request consultation from Centering Healthcare Institute at any time. The institute encourages sites to stay in touch with the organization and to be part of the larger network of CenteringPregnancy sites.
- **Redesigning the process for new sites:** As of May 2009, all new sites contract with Centering Healthcare Institute to begin the process of model implementation, with the first step being to redesign the traditional system to accommodate group care. A consultant assigned to the site works with the steering committee during the approximately 2-year process of model implementation, site approval, and sustainability planning.

Resources Used and Skills Needed

- **Staffing:** Sites may use existing staff or hire new staff for the program. Staffing for the models typically include a clinician (e.g., a physician, nurse practitioner, or midwife) who is credentialed to provide prenatal care, along with a nurse or medical assistant. Sites may also have a part-time program coordinator (who devotes perhaps 1 day per week), social worker, translator, and/or administrative staff to handle patient check-in.
- **Costs:** Costs are highly variable across sites; therefore, general estimates cannot be provided. Centering Healthcare Institute can offer cost estimates depending on individual site characteristics, usually by providing cost data from similar sites that have implemented the program. Some general cost guidelines appear below:
 - **Initial costs:** Training costs average roughly \$500 per staff member for the basic training; sites should also budget \$4,000 for the site visit.
 - **Ongoing costs:** Ongoing costs consist primarily of staffing-related expenses, along with patient materials, food, administrative time, and data collection/evaluation. Sites should budget materials cost of \$20 per participant.
- **Physical space:** The program can be implemented wherever prenatal care occurs, such as in community health centers, physician office waiting rooms (during evening hours), birthing centers, hospital clinics, public health clinics, and other locations. The meeting room must be large enough to comfortably provide care, including space to accommodate approximately 20 participants sitting in an open circle (i.e., with no central barrier such as a conference room table), a mat on the floor in the corner of the room (for assessments), a check-in table for measuring blood pressure and weight, and a table for refreshments.

Funding Sources

Centering Healthcare Institute

Centering Healthcare Institute has received several small grants from the national office of the March of Dimes. In addition, National Institutes of Health research grants have funded studies to examine the impact of the program. Although implementing agencies will generally have to commit internal funds to the startup and ongoing operation of the model, grants may be available from local, state, and national foundations and government agencies and from the March of Dimes.

Tools and Other Resources

The Centering Healthcare Institute has developed a table on the 10 Rules for Redesign that is based on the six Institute of Medicine aims; it is available in: Rising SS, Kennedy HP, Klima C. Redesigning prenatal care through CenteringPregnancy. J Midwifery Womens Health. 2004;49(5):398-404. [PubMed] Other tools available from CenteringPregnancy include Mom's Notebook; Facilitator's Guide to the Mom's Notebook; Family Notebook; Group Facilitation Monograph; and many other tools to help facilitate group sessions. Visit <http://www.centeringhealthcare.org> for more information on these materials.

Adoption Considerations

[[Back to Top](#)]

Getting Started with This Innovation

- **Ensure that group facilitator is a good listener:** A good listener can help participants share ideas and concerns, participate in problem-solving, and become engaged in their own care.
- **Obtain adequate training:** Group facilitation is a special skill that is not necessarily intuitive.
- **Have a champion at the site:** The champion can be an administrator,

physician, midwife, or other individual who believes that the model offers better service to patients.

- **Develop evaluation plan and budget:** Set up a system to evaluate the program's impact, and add the program to the site's budget as a distinct line item.

Sustaining This Innovation

- **Fully embrace the new care model:** Consider transitioning the model to the point that it becomes the primary (or only) option for receiving pre- and postnatal care. Centering Healthcare Institute recommends that a site start with three or four pilot groups but then expand the program quickly so that it serves at least 60 percent of eligible patients, thus making it the primary model of care for patients. Patients should be allowed to opt out of group care if they so desire.

Additional Considerations and Lessons

- Centering Healthcare Institute is in the early stages of piloting the CenteringDiabetes model; in addition, other health population-specific models are being designed. The Centering model's "essential elements" work for almost any population except the acutely ill.

Use By Other Organizations

- Several OB/GYN and family medicine residencies have incorporated Centering group leadership into resident rotations, as have several midwifery schools. In addition, other models of group care, focused mainly on chronic care, are being used in some sites; these are often called "shared medical appointments."

Comment on this innovation/Read other comments.

Disclaimer: *The inclusion of an innovation in the Innovations Exchange does not constitute or imply an endorsement by the U.S. Department of Health and Human Services, the Agency for Healthcare Research and Quality, or Westat of the innovation or of the submitter or developer of the innovation. Read more.*

¹ Late or no prenatal care. Child Trends DataBank. Available at:

<http://www.childtrendsdatabank.org/indicators/25PrenatalCare.cfm>

² Schramm WF. Weighing costs and benefits of adequate prenatal care for 12,023 births in Missouri's Medicaid program, 1988. Public Health Rep. 1992 Nov-Dec;107(6):647-52.

[PubMed]

³ Krueger PM, Scholl TO. Adequacy of prenatal care and pregnancy outcome. J Am Osteopath Assoc. 2000 Aug;100(8):485-92. [PubMed]

⁴ Bronson DL, Maxwell RA. Shared medical appointments: increasing patient access without increasing physician hours. Cleve Clin J Med. 2004;71(5):369-77. [PubMed] Available at:

<http://www.ccjm.org/PDFFILES/Bronson504.pdf> (If you don't have the software to open this PDF, download free Adobe Acrobat Reader® software.)

⁵ Centering Healthcare Institute. The Centering Model for Group Health Care. Cheshire, CT: Centering Healthcare Institute.

Innovation Profile Classification

Disease/Clinical Category: Pregnancy; Premature birth; Sexually transmitted diseases

Patient Population: Age > Fetus; Newborn (0-1 month); Infant (1-23 months);

Adult (19-44 years); Gender > Female; Vulnerable Populations

> Children; Impoverished; Medically or socially complex;

Women

Stage of Care: Preventive care

Setting of Care: Ambulatory Setting > Birthing center, Community social setting; Hospital outpatient facility; Physician office (individual); Physician office (group practice); Public health clinic

Patient Care Process: Preventive Care Processes > Prenatal care; After Care Processes > Follow-up care; Monitoring; Patient-Focused Processes/Psychosocial Care > Improving patient self-management; Patient education; Provider-patient communication

IOM Domains of Quality: Effectiveness; Patient-centeredness

Organizational Processes: Physical environment modification; Process improvement; Staffing; Training, knowledge management

Developer: Centering Healthcare Institute

Funding Sources: Centering Healthcare Institute

Original publication: May 26, 2008.

Last updated: September 16, 2009.

Date verified by innovator: May 20, 2009.

