CenteringPregnancy: A successful model for group prenatal care

SC Birth Outcomes Initiative
June 24, 2015

Ms. BZ Giese, BSN, RN
Director, SC Birth Outcomes Initiative
Disclaimer: The information in this webinar is for educational purposes only, and is not meant to substitute for medical or professional judgment. Medical information changes constantly. Therefore the information contained in this webinar or on the linked websites should not be considered current, complete or exhaustive.

This webinar is being recorded.
OBJECTIVES

- Describe the key differences and similarities between CenteringPregnancy and traditional, individual prenatal care
- Identify the clinical evidence of the benefits of CenteringPregnancy
- Discuss the non-clinical benefits of CenteringPregnancy
- Discuss the process and impact of the statewide scale-up of CenteringPregnancy in South Carolina
I. Key differences between CenteringPregnancy and individual prenatal care
   Mary Alice Grady, MS, CNM

II. Clinical evidence of the benefits of CenteringPregnancy
   Amy Picklesimer, MD, MSPH

III. Non-clinical benefits of CenteringPregnancy
    Sarah Covington-Kolb, MSW, MPH

IV. Process and impact of the statewide scale-up of CenteringPregnancy
    Kristin Van De Griend, PhDc, MPH

V. Q & A

VI. Survey
Mary Allice Grady, MS, CNM
Consultant
Centering Healthcare Institute
group prenatal care

Mary Alice Grady, MSN, CNM
Centering Healthcare Institute Consultant
Centering Components of Care

- Health Assessment
- Interactive Learning
- Community Building
Centering Pregnancy: Design

Initial intake as usual:
- History
- Physical
- Lab work

8-12 women with similar due dates in the group

<table>
<thead>
<tr>
<th>Four sessions every 4 weeks</th>
<th>16, 20, 24, 28 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Six sessions every 2 weeks</td>
<td>30, 32, 34, 36, 38, 40 weeks</td>
</tr>
<tr>
<td>Reunion</td>
<td>1-2 months postpartum</td>
</tr>
</tbody>
</table>
Prenatal Care in a Group

30-40 minutes
Self assessment and individual assessments with the provider in the group space

60-75 minutes
“Circle-up” for facilitated discussion time

Women bring most questions and concerns to group discussion

Interactive learning
Health assessment occurs within the group space

Privacy is protected
Care is normalized
Common concerns discussed in group

Brief Provider Assessment
Medical Care/ Billable Visit
Women active in self assessment

Blood Pressure

Weight
Facilitated Group Discussion
Not a Class

Circle  Interactive  Fun
Each session has an overall plan

Mom’s Notebooks

Facilitator Guide

Stress management

Birth preparation

Nutrition and infant feeding

Infant development

Family Planning

“I’m learning that it doesn’t matter what we don’t talk about because we’re talking about what matters to the group.”
Support

Common life experiences
Community building
Problem solving skills

Trust
Continuity of Care
“...facts do not change feelings, and feelings are what influence behavior. The accuracy and clarity with which we absorb information has little effect on us: it is how we feel about the information that determines whether or not we will use it!”

V. Keane, Bulletin of ACNM, May 1967, pl. 41
Building communities...one group at a time

www.centeringhealthcare.org
Amy H. Picklesimer, MD, MSPH
Maternal Fetal Medicine
Department of Obstetrics and Gynecology
Greenville Health System
Clinical Benefits of Centering Pregnancy: What is the Evidence?

Amy H. Picklesimer, MD, MSPH
Maternal Fetal Medicine
Department of Obstetrics and Gynecology
Greenville Health System
OR for total population – 0.67 (0.44-0.98) p<.045

OR for African-American women - 0.59 (0.38-0.92) p=.02
The effect of CenteringPregnancy group prenatal care on preterm birth in a low-income population

Amy H. Picklesimer, MD, MSPH; Deborah Billings, PhD; Nathan Hale, PhD; Dawn Blackhurst, DrPH; Sarah Covington-Kelb, MSPH, MSW

OBJECTIVE: The purpose of this study was to evaluate the impact of group prenatal care on rates of preterm birth.

STUDY DESIGN: We conducted a retrospective cohort study of 316 women in group prenatal care that was compared with 3787 women in traditional prenatal care. Women self-selected participation in group care.

RESULTS: Risk factors for preterm birth were similar for group prenatal care vs traditional prenatal care: smoking (16.9% vs 20%; P = .17), parental nutrition. Other complications of prematurity, such as cerebral palsy and retinopathy, can lead to life-long handicap.1,2 The annual cost of treatment for these and other complications that arise from preterm birth has been estimated at >26 billion dollars in the United States alone.3

Risk factors for spontaneous preterm delivery are well described and include a history of previous preterm birth, multiple gestation, vaginal bleeding, low prepregnancy weight, gestational weight gain, and poor social support.4-6 We hypothesized that participation in group care would decrease the risk of preterm birth.

CONCLUSION: Among low-risk women, participation in group care improves the rate of preterm birth compared with traditional care, especially among black women. Randomized studies are needed to eliminate the bias in this study. Other studies have shown that delivery at <32 weeks’ gestation (1.3% vs 3.1%; P = .03). Adjusted odds ratio for preterm birth for participants in group care was 0.53 (95% confidence interval, 0.34 – 0.81). The racial disparity in preterm birth for black women, relative to white and Hispanic women, was diminished for the women in group care.

Adjusted Odds Ratio 0.53 (95% CI 0.34 – 0.81) for preterm birth
OBSTETRICS

Group prenatal care: model fidelity and outcomes
Gina Novick, PhD, CNM; Aliecia E. Reid, PhD; Jessica Lewis, CMFT; Trace S. Kershaw, PhD; Sharon Schindler Rising, CNM, MSN; Jeannette R. Ickovics, PhD

OBJECTIVE: CenteringPregnancy group prenatal care has been demonstrated to improve pregnancy outcomes. However, there is likely variation in how the model is implemented in clinical practice, which may be associated with efficacy, and therefore variation, in outcomes. We examined the association of fidelity to process and content of the CenteringPregnancy group prenatal care model with outcomes previously shown to be affected in a clinical trial: preterm birth, adequacy of prenatal care, and breastfeeding initiation.

STUDY DESIGN: Participants were 519 women who received CenteringPregnancy group prenatal care. Process fidelity reflected how facilitative leaders were and how involved participants were in each session. Content fidelity reflected whether recommended content was discussed in each session. Fidelity was rated at each session by a trained researcher. Preterm birth and adequacy of care were abstracted from medical records. Participants self-reported breastfeeding initiation at 6 months postpartum.

RESULTS: Controlling for important clinical predictors, greater process fidelity was associated with significantly lower odds of both preterm birth (β = −0.43, Wald χ² = 8.65, P = .001) and intensive utilization of care (β = −0.29, Wald χ² = 3.91, P = .05). Greater content fidelity was associated with lower odds of intensive utilization of care (β = −0.03, Wald χ² = 9.31, P = .001).

CONCLUSION: Maintaining fidelity to facilitative group processes in CenteringPregnancy was associated with significant reductions in preterm birth and intensive utilization of care. Content fidelity also was associated with reductions in intensive utilization of care. Clinicians learning to facilitate group care should receive training in facilitative leadership, emphasizing an atmosphere that can play a key role in group prenatal care.

Key words: CenteringPregnancy, group prenatal care.

NIH Public Access
Author Manuscript
_Psychol Health_. Author manuscript, available in PMC 2012 March 23.

Published in final edited form as:

Effects of group prenatal care on psychosocial risk in pregnancy: Results from a randomised controlled trial
Jeannette R. Ickovicsa,1, Elizabeth Reed2, Urania Magriples3, Claire Westdahl4, Sharon Schindler Rising5, and Trace S. Kershaw3

aYale School of Public Health and the Yale Center for Interdisciplinary Research on AIDS, 60 College Street, New Haven, CT 06520-8034, USA
bDepartment of Obstetrics and Gynecology, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06520, USA
cDepartment of Gynecology and Obstetrics, Emory University, Atlanta, GA 30322, USA
dCentering Healthcare Institute, 558 Maple Avenue, Cheshire, CT 06410-2100, USA
Breastfeeding rates

<table>
<thead>
<tr>
<th>Year</th>
<th>Breastfeeding @ discharge</th>
<th>Breastfeeding at 6 weeks postpartum</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>60%</td>
<td>32%</td>
</tr>
<tr>
<td>2010</td>
<td>73%</td>
<td>31%</td>
</tr>
<tr>
<td>2011</td>
<td>77%</td>
<td>37%</td>
</tr>
<tr>
<td>2012</td>
<td>83%</td>
<td>46%</td>
</tr>
<tr>
<td>2013</td>
<td>82%</td>
<td>48%</td>
</tr>
<tr>
<td>2014</td>
<td>90%</td>
<td>52%</td>
</tr>
</tbody>
</table>
Cost Savings

22 Needed to treat in Centering to avoid one preterm birth ($14,110)
30 Needed to treat in Centering to prevent one NICU admission ($29,287)

Study population*

Centering Pregnancy (CP)
- From 7 sites
- N = 674

Individual Care (IPNC)
- Same 7 sites
- Same months
- N = 9,886

*All women are Medicaid eligible
Study Design

• Retrospective cohort using birth certificate data

• Exclusions:
  – Multiple gestation
  – Pre-gestational diabetes
  – BMI > 45 kg/m²
  – Entered prenatal care > 4 months

• Final sample for the analysis:
  – CP: N = 604
  – Individual care: N = 6807
<table>
<thead>
<tr>
<th>Characteristics</th>
<th>CP N=604</th>
<th>IPNC N=6,807</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (±SD)</td>
<td>24.5 (5.3)</td>
<td>25.0 (5.2)</td>
<td>0.03</td>
</tr>
<tr>
<td>Married</td>
<td>12%</td>
<td>17%</td>
<td>0.02</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;HS</td>
<td>23%</td>
<td>24%</td>
<td>0.005</td>
</tr>
<tr>
<td>HS/GED</td>
<td>35%</td>
<td>34%</td>
<td></td>
</tr>
<tr>
<td>&gt;HS</td>
<td>42%</td>
<td>41%</td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>45%</td>
<td>48%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Black</td>
<td>40%</td>
<td>46%</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>13%</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Characteristics</td>
<td>CP N=604</td>
<td>IPNC N=6,807</td>
<td>P-value</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>----------</td>
<td>--------------</td>
<td>---------</td>
</tr>
<tr>
<td>Nulliparity</td>
<td>60%</td>
<td>39%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Previous PTB</td>
<td>2%</td>
<td>5%</td>
<td>0.002</td>
</tr>
<tr>
<td>STI in current pregnancy</td>
<td>12%</td>
<td>10%</td>
<td>0.08</td>
</tr>
<tr>
<td>Tobacco use</td>
<td>12%</td>
<td>19%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Entry to PNC &lt;2 mos</td>
<td>53%</td>
<td>43%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Adequacy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inadequate</td>
<td>1%</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>Intermediate</td>
<td>2%</td>
<td>8%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Adequate</td>
<td>23%</td>
<td>32%</td>
<td></td>
</tr>
<tr>
<td>Adequate +</td>
<td>74%</td>
<td>58%</td>
<td></td>
</tr>
</tbody>
</table>
Breastfeeding

- CP: 78.2%
- IPNC: 62.9%
- SC Medicaid: 58.7%

P < 0.001
Preterm births < 37 weeks

- CP
- IPNC
- SC Medicaid

Percentage:
- CP: 8.8%
- IPNC: 10.7%
- SC Medicaid: 12.1%

Statistical significance:
P = 0.036
Adjusted odds ratio* 0.66 (95% CI 0.45-0.97, P = 0.03)

* adjusted for age, education, race, parity, Kotelchuck index, time of entering prenatal care, and previous preterm birth history.
Preterm birth by race

Adjusted odds ratio* 0.40 (95% CI 0.18-0.78, P = 0.009)

African American
- CP: 5.2% (P=0.01)
- IPNC: 11.7%
- SC Medicaid: 14.3%

White
- CP: 8.3% (P=0.50)
- IPNC: 9.8%
- SC Medicaid: 10.3%
NICU Admission

- CP: 6.8% (N=40)
- IPNC: 7.8% (N=532)
- SC Medicaid: 7.6%

P-value: 0.365
Sarah Covington-Kolb, MSW, MSPH
CenteringPregnancy South Carolina Coordinator
Greenville Health System
Other benefits of Centering Pregnancy

Sarah Covington-Kolb, MSW, MSPH
Centering Pregnancy South Carolina Coordinator
Centering Pregnancy

Why do it?

• Patient satisfaction
  – More time with provider
  – Address more of their concerns

“What I like best about Centering is the people in the group. Make you feel like a family and I've learned a lot.”

“We all kind of bond over our common symptoms and problems. It's kind of funny. We spend a lot of time laughing together.”

“I’m able to voice questions and get multiple opinions and answers.”

“We have fun and if there are any questions or concerns we can talk freely and not be embarrassed”
Centering Pregnancy

Why do it?

• Patient satisfaction
  – No waiting room
  – Effective use of time

“It is personal. I know the people here and I am not just another patient.”

“I don’t have to wait in the waiting area for a long time and I can do some of my own prenatal care.”
Centering Pregnancy

Why do it?

• Patient satisfaction
  – “I didn’t feel alone”
Centering Pregnancy
Why do it?

- Provider satisfaction
  - More time with patients
  - Less repetition
  - Fun
Centering Pregnancy
Why do it?

• Provider satisfaction
  – Fulfilling career goals
  – Shared responsibility with the patient
Centering Pregnancy
Why do it?

• Benefits to the practice
  – More satisfied patients and providers
  – Frees exam rooms
Centering Pregnancy

Why do it?

• Benefits to the practice
  – Marketing

The Greenville News

Prenatal program improves outcome.

Liv Osby, losby@gannett.com  6:14 a.m. EDT April 28, 2014

Centering Pregnancy is a model of care that provides enhanced education, support and health care for a group of women who are due to have babies at the same time.

Jeannie Hammond thought she knew a lot about childbirth when she joined a new kind of prenatal program in Greenville — after all, she'd already had one baby.

But not too long into the six-month program, she realized she had a lot more to learn.

"It was really interesting," she said. "Like how they told you about the stages of labor."

Hammond, 24, was one of seven women who went through prenatal care in a group as part of a new program called Centering Pregnancy. And last week, the Piedmont woman and her 6-week-old baby, Rylee, joined the other women and their babies for a reunion.
Better births, informed moms result from centering program

Tuesday, April 8, 2014

One of the first centering groups recently held a reunion to share their experiences and show off their new babies.

Traditionally, pregnant women have seen their doctor one-on-one.
The impact of Centering Pregnancy Group Prenatal Care on postpartum family planning

Nathan Hale, PhD; Amy H. Picklesimer, MD, MSPH; Deborah L. Billings, PhD; Sarah Covington-Kolb, MSPH, MSW

OBJECTIVE: The objective of the study was to evaluate the impact of group prenatal care (GPN) on postpartum family-planning utilization.

STUDY DESIGN: A retrospective cohort of women continuously enrolled in Medicaid for 12 months (n = 3637) was used to examine differences in postpartum family-planning service utilization among women participating in GPN (n = 570) and those receiving individual prenatal care (IPNC; n = 3057). Propensity scoring methods were used to derive a matched cohort for additional analysis of selected outcomes.

RESULTS: Utilization of postpartum family-planning services was higher among women participating in GPN than among women receiving IPNC at 4 points in time: 3 (7.72% vs 5.15%, \( P < .05 \)), 6 (22.96% vs 15.10%, \( P < .05 \)), 9 (27.02% vs 18.42%, \( P < .05 \)), and 12 (29.30% vs 20.38%, \( P < .05 \)) months postpartum. Postpartum family-planning visits were highest among non-Hispanic black women at each interval, peaking with 31.84% by 12 months postpartum. After propensity score matching, positive associations between GPN and postpartum family-planning service utilization remained consistent by 6 (odds ratio [OR], 1.42; 95% confidence interval [CI], 1.05–1.92), 9 (OR, 1.43; 95% CI, 1.08–1.90), and 12 (OR, 1.44; 95% CI, 1.10–1.90) months postpartum.

CONCLUSION: These findings demonstrate the potential that GPN has to positively influence women’s health outcomes after pregnancy and to improve the utilization rate of preventive health services. Utilization of postpartum family-planning services was highest among non-Hispanic black women, further supporting evidence of the impact of GPN in reducing health disparities. However, despite continuous Medicaid enrollment, postpartum utilization of family-planning services remained low among all women, regardless of the type of prenatal care they received.

Key words: Centering Pregnancy, family planning, group prenatal care, postpartum, prenatal care


The interconception period from the postpartum visit and until the
following pregnancy is an important time...
Centering Pregnancy

Why do it?

Postpartum family planning visits

- Centering: n=570
- IPNC: n=3067

- 3 months: 7.7%
- 6 months: 23.0%
- 9 months: 27.2%
- 12 months: 29.3%

- 3 months: 5.2%
- 6 months: 15.1%
- 9 months: 18.4%
- 12 months: 20.9%
Centering Pregnancy
Why do it?

- Higher rates of satisfaction with PNC
- Higher rates of attendance at PNC visits
  - Low-income Latinas in Florida
  - RCT @ Air Force Hospital patients in the Pacific NW
  - RCT @ Connecticut and Atlanta
  - One study found no significant difference in participation or satisfaction with care

More likely to establish a medical home for their child

More likely to attend their postpartum visit
Centering Pregnancy
Why do it?

- Benefits to the practice
  - Sustainable funding

$\$\$\$ \quad \text{Reimbursable prenatal care}

$\$\$\$ \quad \text{SC Medicaid: $30 additional / patient / visit up to $150}

$\$\$\$ \quad \text{Blue Choice Medicaid and BCBSSC: $30 additional / patient / visit up to $300 plus additional $175 if > 5 Centering sessions}
Centering Pregnancy
Why do it?
Kristin Van De Griend, MPH, PhDc
University of South Carolina
Department of Health Promotion, Education, & Behavior
Statewide Scale-up of Group Prenatal Care in South Carolina

Kristin Van De Griend, MPH, PhDc
University of South Carolina
Department of Health Promotion, Education, & Behavior
Overview

• Introduction & Methods
• Results & Implications
Introduction & Methods
Process Evaluation

Process evaluation involves:
- Examining the strengths and limitations of interventions
- Monitoring implementation in real-time
- Studying influences (context) that could impact implementation

Helps us understand why the intervention has or does not have expected outcomes
- And which features were successful or not

New implementing groups can learn from successes and overcoming challenges
<table>
<thead>
<tr>
<th>Site Name</th>
<th>Location</th>
<th>Year initiated CP</th>
<th>Inclusion in this process evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenville Health System</td>
<td>Greenville</td>
<td>2008</td>
<td>No, not an expansion site</td>
</tr>
<tr>
<td>Mountainview OB-Gyn</td>
<td>Easley</td>
<td>2008</td>
<td>No, not an expansion site</td>
</tr>
<tr>
<td>AnMed Health Family Medicine</td>
<td>Anderson</td>
<td>2013</td>
<td>Yes</td>
</tr>
<tr>
<td>Tuomey Healthcare System OB-Gyn</td>
<td>Sumter</td>
<td>2013</td>
<td>Yes</td>
</tr>
<tr>
<td>University of South Carolina School of Medicine Department of Obstetrics and Gynecology</td>
<td>Columbia</td>
<td>2013</td>
<td>Yes</td>
</tr>
<tr>
<td>Carolina OB-Gyn, Georgetown Hospital System</td>
<td>Murrells Inlet</td>
<td>2013</td>
<td>Yes</td>
</tr>
<tr>
<td>Medical University of South Carolina</td>
<td>Charleston</td>
<td>2013</td>
<td>Yes</td>
</tr>
<tr>
<td>Montgomery Center for Family Medicine</td>
<td>Greenwood</td>
<td>2014</td>
<td>No</td>
</tr>
<tr>
<td>Carolina Women’s Center</td>
<td>Clinton</td>
<td>2014</td>
<td>No</td>
</tr>
<tr>
<td>Palmetto Women’s Healthcare</td>
<td>Manning</td>
<td>2015</td>
<td>No</td>
</tr>
<tr>
<td>Lexington Women’s Care</td>
<td>Lexington</td>
<td>2015</td>
<td>No</td>
</tr>
<tr>
<td>Costal Carolina OB-Gyn</td>
<td>Conway</td>
<td>2015</td>
<td>No</td>
</tr>
</tbody>
</table>
Results & Implications
## Site Implementation Monitoring Results

<table>
<thead>
<tr>
<th>Randomized Site Number</th>
<th>Self-reported Fidelity Score (based on 13 Essential Elements and sub-elements)</th>
<th>Observed Fidelity Score (based on 13 Essential Elements)</th>
<th>Self-reported Content Score</th>
<th># CP Patients from September 2013 – September 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>85.7%</td>
<td>95.8%</td>
<td>92.2%</td>
<td>37</td>
</tr>
<tr>
<td>2</td>
<td>86.9%</td>
<td>Not observed</td>
<td>100.0%</td>
<td>51</td>
</tr>
<tr>
<td>3</td>
<td>82.9%</td>
<td>Not observed</td>
<td>90.6%</td>
<td>129</td>
</tr>
<tr>
<td>4</td>
<td>83.8%</td>
<td>87.5%</td>
<td>95.0%</td>
<td>36</td>
</tr>
<tr>
<td>5</td>
<td>84.6%</td>
<td>95.8%</td>
<td>92.4%</td>
<td>60</td>
</tr>
</tbody>
</table>
Health System Implementation

- Coordinated effort
  - Training and technical assistance
  - Strong stakeholder and administrative support
  - Organizational collaborations

- Collaborations within healthcare systems
  - Steering committees

- Organizational capacity
  - Dedication of time and staff
Statewide Scale-up

- Continued critical political support and financial resources
  - Resources to sustain Centering Pregnancy
  - Strong political will
  - Continued enthusiasm
- Advocacy and community engagement
- Training, monitoring, and supervision
- Changes in policies, norms, and guidelines
- Statewide Coordination Team (GHS)
Implications

- This is the first coordinated statewide scale-up of CenteringPregnancy
  - …and the first thorough process evaluation to understand it
- Future decisions about how CenteringPregnancy is implemented and moved to scale
- How the implementation process relates to future studies on outcomes
References


Dissertation Committee
Dr. Deborah Billings (Evaluation PI)
   Dr. Edward Frongillo
   Dr. Ruth Saunders
   Dr. DeAnne Hilfinger Messias

Evaluation Team
   Sarah Kelley
   Noël Marsh

GHS Team
   Sarah Covington-Kolb
   Dr. Amy Picklesimer

Funding Providers
   SC DHHS
   Department of HPEB
Questions?
SC Birth Outcomes Initiative

Thank You!

Please visit:
https://www.scdhhs.gov/boi