A new approach to prenatal care

Donna Tuccero, MD
John Ragsdale, III MD
Justine Strand de Oliveira, DrPH, PA-C
Objectives

• Describe the CenteringPregnancy® model for group prenatal care
• Review the evidence for improved mother/baby outcomes
• Discuss patient perspectives on the CenteringPregnancy® experience
Purpose

• Centering:
  – empowers patients
  – strengthens patient-provider relationships
  – builds communities
• *What is it?*

• **Group prenatal care**
  • Facilitative style
  • Group meets after first trimester of pregnancy for 10 sessions
  • Groups of women due around the same time
  • Support/family participation
• Each session includes:
  – Standard physical health assessment
  – Patients take own BP, weight
  – OB check in the group space, behind a screen
  – Facilitated discussion
  – Learning care skills
• Results:
  – Decrease low birth weight
  – Decrease preterm birth
  – Increase breastfeeding rates
  – Enhance parenting skills
  – Better pregnancy spacing
  – Reduces health care disparities
  – Decrease cost
Supporting the Triple Aim

- Better Care – improved satisfaction
- Better health – improved outcomes
- Lower cost
What is the evidence?
Summary of Centering Research

• No *large* randomized control trials
• Smaller trials show benefits
• More research in larger RCTs needed
Cochrane Summary Review

• 4 studies included (2350 Women)
• Overall Results
  – No significant differences in
    • Preterm birth (RR 0.75) CI 0.57 – 1.00
    • Low birth weight of less than 2500 g (RR 0.92) CI 0.68 – 1.23
    • Small for Gestational Age RR 0.92 CI 0.68- 1.24
    • Perinatal mortality: (RR 0.63 CI 0.32- 1.25)

Catling et al Cochran Library Feb 2015
Cochrane Summary Review

• 4 studies included (2350 Women)

• Overall Results
  – No significant differences in
    • Intensive care admission
    • Initiation of breast feeding
    • Spontaneous vaginal birth

Catling et al Cochran Library Feb 2015
Cochrane Summary Review

• 4 studies included (2350 Women)

• Overall Results
  Satisfaction was statistically higher but only measures in one of 4 groups

Catling et al Cochran Library Feb 2015
Cochrane Summary Review

• Take away points
  – Antenatal group visits positively viewed by women
  – No adverse outcomes for moms or babies
  – Limited review (one study included 42% of the women)
  – Additional research is needed

Catling et al Cochran Library Feb 2015
Largest RCT to Date

- Total N of 1047
- Mean Age 20
- 80% African American

Largest RCT available

- significantly less likely to have inadequate care:
  - 26.6% compared with 33% ($P < .01$)
- Greater satisfaction with prenatal care
  - ($P < .001$)
- No significant difference in costs (in U.S. dollars) of prenatal care ($M = \$4,149$ compared with $\$4,091$, $P = .69$)
- Breastfeeding initiation was higher in group care 66.5% compared with 54.6%, $P < .001$

Group Prenatal Care & Birthweight

• N = 458 matched cohort study
• Women predominately black and Latino
• Women matched by age, race, parity and infant birth date
• Multi-city trial

Group Prenatal Care and Preterm Birth Weight: Results From a Matched Cohort Study at Public Clinics Jeannette R. Ickovics, Trace S. Kershaw, Claire Westdahl, Sharon Schindler Rising, Carrie Klima, Heather Reynolds, and Urania Magriples
Group Prenatal Care & Birthweight

Figure 1. Average birth weight for preterm and term infants, stratified by group versus individual prenatal care.


Group Prenatal Care and Preterm Birth Weight: Results From a Matched Cohort Study at Public Clinics. Jeannette R. Ickovics, Trace S. Kershaw, Claire Westdahl, Sharon Schindler Rising, Carrie Klima, Heather Reynolds, and Urania Magriples
Group Prenatal Care & Birthweight

• Higher birth weight in group prenatal care, especially for those who delivered preterm

• Group prenatal care provides structural innovation
  – More time, more interaction

Group Prenatal Care and Preterm Birth Weight: Results From a Matched Cohort Study at Public Clinics Jeannette R. Ickovics, Trace S. Kershaw, Claire Westdahl, Sharon Schindler Rising, Carrie Klima, Heather Reynolds, and Urania Magriples
Centering Pregnancy vs. Traditional Care on Adolescent behaviors

• Retrospective chart review 150 who received prenatal care from 2008 -2012
• Compared
  – SPPC model: individual seen in traditional practice – by one provider
  – MPPC: seen by resident – would not be constant
  – CPPC: Group practice model

# Centering: Adolescents

<table>
<thead>
<tr>
<th></th>
<th>CPPC</th>
<th>MPPC</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visit compliance (100%)</td>
<td>62.0%</td>
<td>38.0%</td>
<td>.02</td>
</tr>
<tr>
<td>Met IOM weight gain guidelines</td>
<td>62.0%</td>
<td>38.0%</td>
<td>.02</td>
</tr>
<tr>
<td>Breast feeding included (not exclusively)</td>
<td>32%</td>
<td>14.0%</td>
<td>.03</td>
</tr>
<tr>
<td>Post-partum depression</td>
<td>0%</td>
<td>4.0%</td>
<td>.03</td>
</tr>
</tbody>
</table>

SPPC model: individual seen in traditional practice – by one provider  
MPPC: seen by resident – would not be constant  
CPPC: Group practice model

### Centering: Adolescents

<table>
<thead>
<tr>
<th></th>
<th>CPPC</th>
<th>SPPC</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visit compliance (100%)</td>
<td>62.0%</td>
<td>38%</td>
<td>.02</td>
</tr>
<tr>
<td>Met IOM weight gain guidelines</td>
<td>62.0%</td>
<td>38.0%</td>
<td>.02</td>
</tr>
<tr>
<td>Breast feeding included (not exclusively)</td>
<td>32%</td>
<td>12.0%</td>
<td>.03</td>
</tr>
</tbody>
</table>

SPPC model: individual seen in traditional practice – by one provider
MPPC: seen by resident – would not be constant
CPPC: Group practice model

# Adolescent postpartum contraception

<table>
<thead>
<tr>
<th></th>
<th>CPPC</th>
<th>MPPC</th>
<th>SPPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMPA</td>
<td>26.0</td>
<td>22.0</td>
<td>16.0</td>
</tr>
<tr>
<td>Levonogesterol IUD</td>
<td>16</td>
<td>2.0</td>
<td>6.0</td>
</tr>
<tr>
<td>Copper IUD</td>
<td>2</td>
<td>0</td>
<td>4.0</td>
</tr>
<tr>
<td>Etonogestrel Implant</td>
<td>14</td>
<td>4.0</td>
<td>6.0</td>
</tr>
</tbody>
</table>

SPPC model: individual seen in traditional practice – by one provider
MPPC: seen by resident : PCP would vary
CPPC: Group practice model ( Centering )

Trotman etal, J Ped Adolescent Gyncol. 2015 Oct (5) 395-401
Centering Pregnancy vs. Traditional Care on Adolescent behaviors

- Able to show benefit of group model over traditional care with
  - Prenatal visits
  - Uptake of LARC methods of birth control
  - Adequate weight gain
  - Increased rates of breast feeding

What about us?

• Small data set
• We are collecting data with every group
• Initial information looks promising
# Summary of Health Outcomes

<table>
<thead>
<tr>
<th>Metric</th>
<th>National</th>
<th>North Carolina</th>
<th>Durham</th>
<th>DFM Centering Pregnancy</th>
<th>DFM Non-Centering OB</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>3,932,181(^1)</td>
<td>118,983(^3)</td>
<td>4,192(^4)</td>
<td>19</td>
<td>39</td>
</tr>
<tr>
<td>% preterm babies</td>
<td>11.39%(^1)</td>
<td>11.4%(^3)</td>
<td>11.2%(^4)</td>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td>% low birth weight</td>
<td>8.02%(^1)</td>
<td>8.80%(^3)</td>
<td>6.6%(^4)</td>
<td>5%</td>
<td>8%</td>
</tr>
<tr>
<td>% very low birth weight</td>
<td>1.41%(^1)</td>
<td>1.7%(^3)</td>
<td>1.9%(^4)</td>
<td>0%</td>
<td>3%</td>
</tr>
<tr>
<td>% admitted to NICU</td>
<td></td>
<td></td>
<td></td>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td>% breastfeeding at d/c</td>
<td>79%(^2)</td>
<td>77%(^2)</td>
<td>84%</td>
<td>59%</td>
<td></td>
</tr>
<tr>
<td>% vaginal birth</td>
<td></td>
<td></td>
<td>68%</td>
<td>74%</td>
<td></td>
</tr>
<tr>
<td>% VBAC</td>
<td></td>
<td></td>
<td>5%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>% C-section</td>
<td>32.7%(^1)</td>
<td>30.3%(^3)</td>
<td>28.20%(^4)</td>
<td>26%</td>
<td>26%</td>
</tr>
</tbody>
</table>

\(^1\)CDC, National, 2013  
[http://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_01.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_01.pdf)  
\(^2\)CDC, National and by state, 2011  
\(^3\)NCDHHS, NC State, 2013  
[http://www.schs.state.nc.us/data/databook/BirthIndicators/NorthCarolina.pdf](http://www.schs.state.nc.us/data/databook/BirthIndicators/NorthCarolina.pdf)  
\(^4\)NCDHHS, Durham County, 2013  
[http://www.schs.state.nc.us/data/databook/BirthIndicators/Durham.pdf](http://www.schs.state.nc.us/data/databook/BirthIndicators/Durham.pdf)

**Centering Pregnancy Goals:**  
% Preterm babies = 9.6%  
% Low birth Weight = 7.8%  
% Breastfeeding at discharge = 81.9%
Patient Perspective
• Essential elements:
  – Health assessment happens in the group space
  – Patients engage in self-care activities
  – Each session has a plan, but emphasis may vary
  – Groups are facilitated to be interactive
  – There is time for socializing
• Essential elements (cont.)
  – Groups are conducted in a circle
  – Group members, including facilitators and support people, are consistent
  – Group size is optimal for interaction
  – There is ongoing evaluation