Centering Pregnancy®

A novel approach to prenatal care

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Goals & Objectives

• Describe the Centering Pregnancy® model for group prenatal care

• Discuss benefits for various types of practice models

• Review the evidence for improved mother/baby outcomes

• Experience the patient perspectives on the Centering Pregnancy® experience
**Centring Pregnancy**

**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
  - Loose set of Learning objectives

**Centring Pregnancy**

- Four sessions every 4 weeks starting at 16 EGA
- Six sessions every 2 weeks starting at 30 EGA
- Postpartum Reunion 1–3 weeks postpartum
- Additional visits scheduled as need for medical or psychological needs
What is Centering Pregnancy?

• Two main aspects:
  – Care assessment
  – Education
• Delivered in a facilitative rather than didactic model
• Fluidity of discussions is key
• Evaluation tools can be used to ID missed topics

Team based care

• Midwives
• Nurses
• Medical assistants
• Residents
• Students
• Support staff
Team Based Care

- Enhances the learning for all
- Grouped by gestational age mixes new and experienced moms
- Dads and grandparents have been critical

System Benefits

- EMR notes are templated and easy to follow and chart
- No waiting time
- Appts for entire pregnancy are scheduled Day 1
- Patients taught self-care: weight, BP, swabbing – then to document
- 1 MA can check in 8-12 patients
Benefits Private Practice

• Improving outcomes with improved clinical revenue
• Group model run by midwife / NP
• Expanded capacity for OB
• Less burnout – better experience for providers

Benefits Academic Practice

• Fulfils continuity requirements from RRC
• Improved provider consistency, improved patient satisfaction
• Early evidence that resident continuity much improved with Centering
• Comprehensive learning environment
  – Breast feeding, contraception, newborn care
Office Staff benefits

- Better intimacy by getting to know patients and their families away from a clinical setting
- They watch you, you watch them
- Less crowded waiting rooms
- Alternate visit times free up space
- Helps with flow

Implementation Tips

- Form a steering group 3–6 months before official implementation
- Have key clinicians and office personal attending facilitative training
- Order supplies, including Mom’s notebooks and facilitator guides in bulk
- Obtain/plan educational aids, games, icebreakers.
Implementation Tips

- Town Hall
- Frequent Reminders
- News coverage
- Mock Centering event
- Patient video

Implementation Tips

- It takes a village
  - Front desk to Medical Assistants
- Messaging: “Do you want to do the old way?”
- Mandate one visit at least
- Hold the book until the second visit
- Show off your model to skeptics
- Patient stories are powerful
Overcoming challenges

• Space issues
  – Waiting room after hours
  – Converted medical records room
  – Co-locate mobile or fixed computer

• Capital: see next slide

Up Front Costs

<table>
<thead>
<tr>
<th>Initial Cost</th>
<th>$20,000</th>
</tr>
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<tbody>
<tr>
<td>Centering Healthcare Institute Training (small)</td>
<td>$850/ participant</td>
</tr>
<tr>
<td>Centering Healthcare Institute Training (large)</td>
<td>$6500 for up to 25 participants</td>
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<tr>
<td>Facilitators guides</td>
<td>$75</td>
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<tr>
<td>Mom’s notebooks</td>
<td>$22</td>
</tr>
<tr>
<td>Advanced workshops</td>
<td>$500 / participant</td>
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<tr>
<td>Table for exams</td>
<td>$250</td>
</tr>
<tr>
<td>Total</td>
<td>$30,000</td>
</tr>
</tbody>
</table>
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

Purpose

• Centering:
  - empowers patients
  - strengthens patient-provider relationships
  - builds communities
  - Improve outcomes
• 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
Cent
tering
Pregnancy*  

• 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 Quadruple Aim  

• Better Care – improved satisfaction  
• Better health – improved outcomes  
• Lower cost which can be significant  
• Happier providers & staff
What is the evidence?

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
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**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

**Figure 1.** Average birth weight for preterm and term infants, stratified by group versus individual prenatal care. Results: Group Care Improves Birth Weight. Obstet Gynecol 2003.
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


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Centering: Adolescents

<table>
<thead>
<tr>
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<th>CPPC (Group)</th>
<th>MPPC (Mixed)</th>
<th>P value</th>
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<tbody>
<tr>
<td>Visit compliance (100%)</td>
<td>62.0%</td>
<td>38.0%</td>
<td>.02</td>
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<td>Met IOM weight gain guidelines</td>
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<tr>
<td>Breast feeding included (not exclusively)</td>
<td>32%</td>
<td>14.0%</td>
<td>.03</td>
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<tr>
<td>Post-partum depression</td>
<td>0%</td>
<td>4.0%</td>
<td>.03</td>
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SPPC model: individual seen in traditional practice – by one provider
MPPC: seen by resident – would not be constant
CPPC: Group practice model

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### Adolescent postpartum contraception

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

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


Centering Cost Savings

• Retrospective five year cohort study
  – N=1262 Centering
  – Traditional care = 5066
• 36% risk reduction in premature birth. $22,667 savings per event
• 27% risk reduction in NICU stay. $27,249 per event
• 44% risk reduction in LBW. Cost savings $29,627 per event

Cost Savings Continued

- “After considering the state investment of $1.7 million, there was an estimated return on investment of nearly $2.3 million.
- Conclusions Cost savings were achieved with better outcomes due to the participation in Centering Pregnancy among low-risk Medicaid beneficiaries.”

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>
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<tbody>
<tr>
<td>N</td>
<td>3,932,181</td>
<td>118,983</td>
<td>4,192</td>
<td>141</td>
<td>39</td>
</tr>
<tr>
<td>% preterm babies</td>
<td>11.3%</td>
<td>11.4%</td>
<td>11.2%</td>
<td>2%</td>
<td>5%</td>
</tr>
<tr>
<td>% low birth weight</td>
<td>8.02%</td>
<td>8.80%</td>
<td>6.6%</td>
<td>5%</td>
<td>8%</td>
</tr>
<tr>
<td>% very low birth weight</td>
<td>1.41%</td>
<td>1.7%</td>
<td>1.9%</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%</td>
<td>77%</td>
<td></td>
<td>84%</td>
<td>59%</td>
</tr>
<tr>
<td>% vaginal birth</td>
<td></td>
<td></td>
<td></td>
<td>68%</td>
<td>74%</td>
</tr>
<tr>
<td>% VBAC</td>
<td></td>
<td></td>
<td></td>
<td>5%</td>
<td>0%</td>
</tr>
<tr>
<td>% C-section</td>
<td>32.7%</td>
<td>30.3%</td>
<td>28.20%</td>
<td>26%</td>
<td>26%</td>
</tr>
</tbody>
</table>

### Centering Pregnancy Goals:
- % Preterm babies = 9.6%
- % Low birth Weight = 7.8%
- % Breastfeeding at discharge = 81.9%

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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)
3 NCDHHS, NC State, 2013 [http://www.schhs.state.nc.us/data/databook/BirthIndicators/NorthCarolina.pdf](http://www.schhs.state.nc.us/data/databook/BirthIndicators/NorthCarolina.pdf)
4 NCDHHS, Durham County, 2013 [http://www.schhs.state.nc.us/data/databook/BirthIndicators/Durham.pdf](http://www.schhs.state.nc.us/data/databook/BirthIndicators/Durham.pdf)
5 NCDHHS, 2013 [http://www.schhs.state.nc.us/data/databook/BirthIndicators/NorthCarolina.pdf](http://www.schhs.state.nc.us/data/databook/BirthIndicators/NorthCarolina.pdf)
Questions?