Can Healthy Timing and Spacing of Pregnancy Help Prevent Preterm Birth?

Maureen Norton, USAID
PTB/LBW Technical Working Group on Implementation Challenges and Solutions
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Overview

Healthy Timing and Spacing of Pregnancies

High-Risk Pregnancies + PTB

Healthy Fertility Study (HFS)

Challenges
Solutions
Outcomes
Impact

Credit: Amy Fowler, USAID
Contraception helps women achieve healthy timing and spacing of pregnancies – by preventing unintended and high-risk pregnancies.

High-Risk Pregnancies defined as:

- Adolescent < age 18
- Short Interval < 24 mos birth to conception (3 years birth to birth)
- High Maternal Age > 35
- High Parity > 4
# FINDINGS: High Risk Pregnancies – Links with PTB

## Study Findings on Association with Preterm Birth

<table>
<thead>
<tr>
<th>Pregnancies</th>
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<tr>
<td><strong>Unintended</strong></td>
<td>ARR 1.82, Orr 2000</td>
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<tr>
<td><strong>Adolescent</strong></td>
<td>&lt; age 15 AOR 1.60</td>
<td>Age 16-17 AOR 1.34</td>
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<td>Ganchimeg 2013 WHO Multi-country (29 countries)</td>
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<td><strong>Short Interval</strong></td>
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<td>PTB AOR 1.58; PTB-SGA AOR 3.04, &lt;18 mos</td>
<td>Ext PTB AOR 1.23 6-11 mos</td>
<td>&lt; age 15, PTB AOR 1.66; Age 16-17 PTB AOR 1.25</td>
<td>Conde-Agudelo 2004 Multi-country</td>
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<td>Kozuki 2013 Meta-analysis</td>
<td>Wendt 2012 Meta-analysis</td>
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<tr>
<td><strong>Adolescent + Short Interval</strong></td>
<td>Very preterm: AOR 1.68 &lt; 6 mos</td>
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<td>Nerlander 2015</td>
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<td><strong>High Maternal Age</strong></td>
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<td>AOR 1.33 Fall, 2015</td>
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<td><strong>High Parity</strong></td>
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<td>Parity &gt;3-35 AOR 1.43</td>
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<td>Kozuki Meta-analysis</td>
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Healthy Fertility Study: Bangladesh

- Quasi-experimental design in eight unions in Sylhet
- Four unions in intervention, four control
- 2,247 women in intervention, 2,257 women in control arm

**Objectives:**
- Demonstrate effectiveness feasibility of adding FP to ongoing community-based maternal and neonatal care program
- Improve pregnancy spacing
- Assess postpartum family planning’s effect on health outcomes
- Methods: Pills, condoms, Lactational Amenorrhea Method (LAM), injectables, referrals for clinical methods

Principal Investigator: Dr. Abdullah Baqui, Johns Hopkins Bloomberg School of Public Health
http://www.ghspjournal.org/content/1/2/262.full
Healthy Fertility Study: Challenges

- Study area – highest mortality rates in Bangladesh
- 57% of non-first births occurred after interval less than 36 months
- Cultural norms prevent women from leaving home unchaperoned
- Birth spacing not perceived as priority
- One-quarter of public sector FP positions unfilled
- 75% of non-sterilized postpartum women not using contraception
- Exclusive breastfeeding <1 month
- 50% in Bangladesh stop using contraception within 12 months
Healthy Fertility Study: Solutions

- Integration - Facilitated targeting antenatal and postpartum women
- Social and behavior change communication – Use of protocol/visit schedule, messages repeated in five home visits
- Risk Information – easy to understand, “if interval is short, baby can be born too soon, too small”
- Messages clearly specified healthy behaviors:
  - After live birth, wait 24 months before attempting a pregnancy \textit{WHO 2005}
  - After miscarriage wait 6 months
  - Fertility can return before menses, do not wait for menses to return to start using a method \textit{Cooper, 2013}
- Lactational Amenorrhea Method of FP – facilitates immediate use of FP post delivery
Healthy Fertility Study: Outcomes

• **Incidence of subsequent pregnancy** lower in intervention arm vs control, 28% vs 34% (p< 0.001)

• **Odds of short birth interval** lower in intervention arm vs control, 14% vs 17 % (p<0.010)

• **No negative effect on MNH services, rather a synergy**

Healthy Fertility Study: Impact

Reduction of Preterm Birth: Forthcoming

Source: Forthcoming

Credit: Amy Fowler, USAID
Possible explanations of impact

- **Result**  Statistically significant difference in use of contraception in intervention arm during 3-6-12-18 months after the birth, compared to control group.

- **Contraception (LAM/Other Methods)** Protected women from pregnancy during timeframe of highest risk for PTB (3-6-12-18 months after birth)
Postpartum Contraceptive Prevalence Rate was sig higher in intervention arm - protecting women from pregnancy *during* 18 mos timeframe of greatest risk for PTB.
Thank you!

Acknowledgements: Elizabeth Noonan, USAID
Unmet Need for Contraception among High-Risk Populations

Adolescents

Sub-Saharan Africa: 40% (Hindin 2009)

Asia: 15-55% (Kennedy 2011)

Postpartum Women

61% (Moore 2015)

In 56 USAID-assisted countries, 21 million adolescents have begun childbearing and of these, 4.2 million have had a second or third child. 95% of adolescent intervals are less than 3 years apart.

(Knowledge Management Services Project Analysis 2015)
Design Elements to Strengthen FP Impact on PTB in Future Interventions

Other clients to target in future designs include:

- Reach/counsel previous PTB/SGA clients
- Reach/counsel adolescents
- Reach/counsel First Time Parents
- Reach high parity and high maternal age clients
New FP activities underway that may reduce PTB in future

• 16 developing country postpartum FP action plans

• Research underway on preventing adolescent rapid, repeat pregnancy

• New counseling tools for advanced maternal age and high parity clients