Fertility Awareness Based Methods of Family Planning (FABMs): What are they and how do they work webinar?

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My story

Presentation Overview

• What are Fertility Awareness Based Methods of family planning (FABMs)
• The Female Cycle: What Happens and Why?
• Estimating the effectiveness of FABMs
• Overview of Effectiveness of specific FABMs
What are Fertility Awareness Based Methods (FABMs)?

Methods that allow people to track one or more signs of fertility (biomarkers) to determine the days during each menstrual cycle when the chances of conception would be highest and lowest.

FABMs can be used to:
- Avoid pregnancy
- Plan pregnancy
- Monitor health

Who uses FABMs?

- Likely underrepresented in national surveys
- Growing over the last decade in the US
  - US National Survey of Family Growth (NSFG)
  - US Title X (Family Planning)
- Currently: 2% - 3% of all contraceptive users globally
- 0.31% of LHD family planning clinic users in NC

Observable Fertility Signs

- Basal Body Temperature
- Cervical Fluid
- Urinary Hormone Detection
- Cervical Position
- Day of menstrual cycle
### Major Categories of FABMs with some examples

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<th>FABM category</th>
<th>Examples of FABM methods</th>
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**The Female Cycle**

**Brain Signals**

- Ovaries with FSH

**Follicles Develop and Produce Estrogen**

SOURCE: www.replyobgyn.com
The Female Cycle

**Effects of Estrogen**

- SOURCE: www.replyobgyn.com

**Two Types of Cervical Fluid**

- SOURCE: www.replyobgyn.com
The Female Cycle

Effects of Estrogen

Brain is triggered to release LH

LH Triggers Ovulation

Ovulation

SOURCE: www.replyobgyn.com
The Female Cycle

12–24 Hour Window

SOURCE: www.replyobgyn.com

The Female Cycle

Corpus Luteum Produces Progesterone

SOURCE: www.replyobgyn.com

The Female Cycle

Effects of Progesterone

SOURCE: www.replyobgyn.com

• Uterine Lining is Stabilized
The Female Cycle

Effects of Progesterone

• Cervical Fluid Decreases

The Female Cycle

Ending A: Menstruation

The Female Cycle

Corpus Luteum Fades Off

SOURCE: www.replyobgyn.com
The Female Cycle

Ending A: Menstruation

Ending B: Pregnancy

What if the Egg has Company?
The Female Cycle
What is the Typical Female Cycle Length?

2309 Cycles
426 Women

Why Do Cycle Lengths Vary?
What is “normal” variation?

- FIGO: more than 20 days of variation is “irregular” (>95%)
- For some FABMs, variation of 7 or more days makes it hard or impossible to use the method
- Variable length menses of 7 or more days may need clinical investigation

The Female Cycle

Day of Ovulation

![Graph showing the percentage of cycles by day of ovulation.]

- 2309 Cycles
- 426 Women

Day of Ovulation

Stanford et al., unpublished data

The 8 Phases
Woman’s Reproductive Lifespan

![Image depicting the 8 phases of a woman’s reproductive lifespan: Pre-Birth, Pre-Puberty, Puberty, Fertile (unmarried), Pregnant, Post-Partum, Peri-Menopause, Menopause.]

“Typical use” and “perfect use” contraceptive effectiveness

- **Perfect use effectiveness**: reflects how effective a method *can be* in preventing pregnancy when used consistently and correctly according to instructions.

- **Typical use effectiveness**: reflects how effective a method is for the average person who does not always use methods correctly or consistently.
  - May vary widely by individual characteristics, especially for methods requiring substantial effort for adherence.
Effectiveness estimates for "any FABM" from nationally representative retrospective surveys

<table>
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<th>Region</th>
<th>Publication (survey date)</th>
<th>12-month typical use FABM* failure rate</th>
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<tr>
<td>United States</td>
<td>Kost 2008 (2002 NSFG data)</td>
<td>25%</td>
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<tr>
<td>United States</td>
<td>Sundaram 2017 (2006-2010 NSFG data)</td>
<td>15%**</td>
</tr>
<tr>
<td>International</td>
<td>Polis 2016 (1990-2013 DHS data from 43 countries)</td>
<td>14%***</td>
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* Includes all who self-report use of ANY FABM, given low overall use of FABMs. Thus, estimate primarily reflects rhythm users, who comprise the majority of FABM users in contexts studied.
** Unlike US estimates, data unavailable to adjust for abortion underreporting.
*** Other US estimates, data unavailable to adjust for abortion underreporting.

Summary of FABM effectiveness measurement

- Effectiveness can be estimated from retrospective or prospective studies; each has pros and cons.
  - Nationally representative retrospective surveys: most recent failure rate for "any FABM" (largely rhythm) in US is 15%
  - Prospective studies: Small number of moderate quality studies for 12 FABMs; best case scenario estimates
    - Highest effectiveness estimates: Sensiplan and Marquette
    - For other FABMs, typical use estimates ranged from 10-33
- We need more data.
As with all methods of pregnancy prevention, not every FABM is right for every person!

Major Categories of FABMs with some examples

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Calendar Methods
Dynamic Optimal Timing (DOT)***

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<tr>
<td>For use only by women with 20-40 day cycles and less than 10 days of variation</td>
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<tr>
<td>Proprietary algorithm on app predicts days of high fecundity based on previous cycle lengths</td>
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<tr>
<td>Fertile window shortens over time</td>
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<tr>
<td>No learning or teaching required</td>
</tr>
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<td>Cost: Free App</td>
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<td>Requires tracking of only last menstrual period</td>
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<td>Only works with regular cycles (20-40 days)</td>
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<td>Less useful for trying to conceive or health monitoring and management</td>
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***Disclaimer: Recent method not reviewed in the systematic review for quality though in my opinion meets at least moderate quality criteria
### Calendar Methods

**Standard Days**

#### Considerations
- For use only by women with 26-32 day cycles.
- Uses a 12-day fixed fertile window on CD 8-19 for all cycles.
- Uses calendar, cycle beads, or free app to track cycles.
- Method is self-taught and easy to learn/teach (30 mins).
- Cost: approx. $14 for beads; free App.

#### Advantages
- Requires tracking of only last menstrual period.
- No ongoing cost.

#### Disadvantages
- Only works with regular cycles (26-32 days).
- Less useful for trying to conceive or health monitoring and management.

**Perfect Use: 4-6%**  
**Typical Use: 11-14%**

### Cervical Mucus Methods

**Billings Ovulation Method**

#### Considerations
- Helpful for long/irregular cycles.
- Learning time: 3 hours over 3-5 sessions.
- Teachers available online, in person and in a variety of languages.
- Cost: varies; may be billable through insurance.

#### Advantages
- Requires tracking of only cervical mucus sensations.
- Can also be used for health monitoring/management.
- Can be used by reading/visually impaired.

#### Disadvantages
- Abstinence is recommended during first month of use.

**Perfect Use: 1-2%**  
**Typical Use: 3-4%**

### Cervical Mucus Methods

**Two Day Method**

#### Considerations
- Easy to learn and teach.
- Smartphone app available.
- Can be used with long/irregular cycles.
- Cost: no cost to learn nor ongoing cost; free app.
- For more information visit [www.twodaymethod.com](http://www.twodaymethod.com).

#### Advantages
- No charting necessary.
- Requires tracking of only cervical mucus sensations.
- Can be started at any point in the cycle.

#### Disadvantages
- May be difficult for women with constant cervical mucus.
- Less useful for trying to conceive or health monitoring and management.

**Perfect Use: 4-6%**  
**Typical Use: 3-4%**
Symptothermal Methods

**Sensiplan**

**Considerations**
- Cervical mucus is cross-checked with basal body temperature to identify fertile window
- In-person training by certified instructor
- Learning time: 4-6 hours over 4 sessions
- Cost: Varies, may be billable through insurance
- For more information visit www.replyobgyn.com/sensiplan

**Advantages**
- Can also be used for health monitoring and management
- No ongoing cost

**Disadvantages**
- Need literacy and basic math skills
- Potentially long fertile time for those with long cycles

Basal Body Temperature

**Natural Cycles**

**Considerations**
- Computer algorithm predicts daily chance of pregnancy based on woman’s cycle history and daily basal body temperature
- FDA approved
- Learning time: none
- Cost: $10/month or $80/year
- For more information visit www.naturalcycles.com

**Advantages**
- Removes prediction responsibilities from user
- Multiple user options available
- Perhaps a more objective view of fertile window?

**Disadvantages**
- Ongoing cost of test strips
- May not detect urinary hormones of all women

Symptohormonal Methods

**Marquette**

**Considerations**
- Cervical mucus is cross-checked with urinary hormones to identify fertile window
- In-person or online training
- App available
- Learning time: Three 30-min sessions over 3-6 months
- Cost: Varies, may be billable through insurance
- For more information visit www.marquette.edu/nursing/natural-family-planning-teacher.php

**Advantages**
- Can also be used for health monitoring/management
- Multiple user options available
- Potentially long fertile time while computer algorithm learns user patterns

**Disadvantages**
- Ongoing cost of test strips
- May not detect urinary hormones of all women
Lactational Amenorrhea Method (LAM)

Considerations
- A breastfeeding woman MUST meet the following three criteria:
  - Exclusively breastfeeding day and night
  - No return to menses since delivery
  - Baby is less than 6 months old
- Learning time: <60 minutes
- Cost: no cost for online information

Advantages
- Can be used immediately after delivery
- No need to observe and track signs of fertility

Disadvantages
- Temporary
- Cannot be used for health monitoring/management

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- Can be used immediately after delivery
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- Temporary
- Cannot be used for health monitoring/management

Summary and Conclusions
- FABMs are a group of similar but distinct methods that work by allowing users to avoid unprotected intercourse on highly fertile days of the menstrual cycle by tracking changes in one or more biomarkers
- FABMs are used by a small but growing group of users who need accurate, transparent information
- FABMs work through biologically plausible mechanisms
- Some FABMs have undergone effectiveness testing in published studies; others have not
- Counseling tips, apps and case studies coming to another webinar soon!

Next FABM Webinar:
March 4, 2020 (12:30 – 1:30 pm)

How to Use FABMs in the Real World:
Counseling and Applications (Apps) Webinar

Questions?
Earn Professional Development Hours

You may earn continuing education hours for your professional discipline by completing this activity. The NCDHHS, Women’s Health Branch continues to make important information available via the PHNICE program. You can receive continuing education credits for participating in quality educational opportunities at no or reduced cost.

You must complete the activity evaluation to receive a certificate of completion. Everyone should save/print a completion certificate for their records.

The "live" educational activity evaluation will be open from February 05 until February 23, 2020. For participants viewing the archived recording, you must complete the evaluation and save/print the certificate by February 05, 2022.

Please Note: This will be your only opportunity to receive evidence of the professional development contact hours and/or CPH Recertification Credits. You will need to save this certificate.

To complete the evaluation, go to:
https://www.surveymonkey.com/r/0115A

The "archived/enduring" will close on February 05, 2022. No evaluation will be permitted after this date.