STIs and the Increasing Epidemiological Need for Innovative SRH Prevention: The Promise of MPTs

Vanetta M. Thomas MPH, CHES
Research Associate
Initiative for Multipurpose Prevention Technologies

1 November 2016
Vanetta M. Thomas

The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

No relationships to disclose
Overview

- Unintended pregnancy, HIV and other STI incidence in the US
- Multipurpose Prevention Technologies (MPTs)
- Initiative for MPTs (IMPT)
- Prioritization of actions to increase awareness and development of MPTs
- Next steps for the field
Women’s Interlinked Risks

Women need better protection

- Unintended Pregnancy
- HIV
- Other Sexually Transmitted Infections (STIs)
Unintended Pregnancy in the US

- **61 million** women of childbearing age
- **70% at risk** of unintended pregnancy
- **45%** of all pregnancies in the US are unintended

Source: www.guttmacher.org
The Burden of STIs in the US

Youth bear disproportionate share of STIs

Americans ages 15-24 make up just 27% of the sexually active population

But account for 50% of the 20M new STIs in the U.S. each year

Young people account for a substantial proportion of new STIs

- **Gonorrhea**: 70%
  - Total Infections: 820,000
- **Chlamydia**: 63%
  - 2.9 million
- **HPV**: 49%
  - 14.1 million
- **Genital Herpes**: 45%
  - 776,000
- **HIV**: 26%
  - 47,500
  *Ages 13-24*
- **Syphilis**: 20%
  - 55,400
Current SRH Prevention Landscape
Multipurpose Prevention Technologies

MPTs Combine Prevention

Women’s Health
- STI related infertility and cancer risks
- Pregnancy complications
- Unsafe abortions
- Maternal deaths
- HIV/AIDS
- Age at first birth
- Number of years in school
- Women’s earning capacity
- Years in school reduces HIV

Child Health
- Preterm birth and low birth weights
- High-risk pregnancies and births
- Mother-to-child HIV transmissions
- Under-5 mortalities
- Prenatal care
- Birth spacing

Other STIs

Educational Attainment

Economic Benefits

For Healthy Women & Families

The Promise of MPTs

APHA Annual Meeting | 1 November 2016
The MPT Pipeline

- Longer acting intravaginal rings
- Fast dissolving vaginal films and inserts
- Innovative and effective vaginal and rectal gels
- Novel delivery systems
# MPTs in Clinical Trials

## HIV + Other STIs

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>mapp66 (mAb) Vaginal Film</td>
<td>I</td>
</tr>
<tr>
<td>MIV-150 + Zinc acetate in Carrageenan Gel</td>
<td>I</td>
</tr>
<tr>
<td>TDF Intravaginal Ring</td>
<td>I</td>
</tr>
<tr>
<td>Tenofovir Vaginal Film</td>
<td>I</td>
</tr>
<tr>
<td>Tenofovir Intravaginal Ring</td>
<td>I</td>
</tr>
<tr>
<td>Tenofovir Vaginal Insert</td>
<td>I</td>
</tr>
<tr>
<td>TFV/FTC Vaginal Insert</td>
<td>I</td>
</tr>
</tbody>
</table>

## Pregnancy, HIV &/or Other STIs

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amphora Vaginal Gel</td>
<td>I</td>
</tr>
<tr>
<td>Origami Female Condom</td>
<td>III</td>
</tr>
<tr>
<td>TFV + Acyclovir + Ethinyl Estradiol + Etonogestrel IVR</td>
<td>I</td>
</tr>
<tr>
<td>Tenofovir + Levonorgestrel Intravaginal Ring</td>
<td>I</td>
</tr>
</tbody>
</table>

Plus close to a dozen products in preclinical development for:

- HIV + Pregnancy
- HIV + Other STIs
- Pregnancy, HIV & Other STIs
- Pregnancy + Non-HIV STIs
2015 Prioritization

1. Assess the **gaps in social-behavioral knowledge** for MPT development and MPT commercialization potential

2. Understand **hormonal contraceptive** knowledge gaps in the context of MPT development

3. Assess challenges and other issues related to MPT **clinical trial design**

4. Develop a process for achieving a more robust product development pathway for **non-HIV STI MPTs**

5. Engage **modeling efforts** to robustly assess public health impact and cost effectiveness of MPT product options in specific target populations
Next Steps

- Better understanding of epidemiology in order to identify key target populations for MPTs
- Identify key elements on the market side
  - What do women want?
Women need better prevention

- The promise of MPTs is great
- The IMPT has fortified the MPT field
- Continued field-wide guidance and collaboration will be necessary to see impactful MPT products
Learn more about MPTs
www.theIMPT.org & www.MPTs101.org

The Initiative for Multipurpose Prevention Technologies (IMPT) is a project of CAMI Health, an organization dedicated to women’s reproductive health and empowerment, housed at the Public Health Institute.
This project is made possible by the generous support of the American people through the United States Agency for International Development (USAID) under the terms of the Cooperative Agreement #AID-OAA-A-16-00045. The contents are the responsibility of the IMPT, CAMI Health, PHI, and its partners and do not necessarily reflect the views of USAID or the U.S. Government.