Setting the Stage

Overview of the dapivirine vaginal ring

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Meeting the HIV Prevention Needs of Adolescent Girls and Young Women

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Vaginal Rings for HIV Prevention

- Long-acting: monthly or longer
 - Could support improved adherence
 - Thus better effectiveness
- Easy to use, comfortable
 - Flexible ring, can be self-inserted
 - Rarely felt by women or male partners
 - High willingness-to-use
 - Little or no impact on sexual experience
- Suitable for developing countries
 - Relatively low manufacturing cost
 - Good safety and acceptability data
- Potential for drug combinations



What is the dapivirine ring?





- Developed by the International Partnership for Microbicides (IPM) - a nonprofit group
- Intended to be used for a month at a time
 - Women can insert and remove the ring themselves
 - Discreet
- Slowly releases ARV drug dapivirine inside the vagina
- If approved, would be the first HIV prevention method developed specifically for women – and be the first long-acting method



What do we know about the dapivirine ring?

Several studies have been conducted of the ring, including two large Phase III trials – ASPIRE and The Ring Study



- Conducted by the Microbicide Trials Network (MTN)
- Enrolled 2,629 women
 age 18-45 at 15 sites in
 Malawi, Uganda, South
 Africa and Zimbabwe





- Conducted by the International Partnership for Microbicides (IPM)
- Enrolled 1,959 women age 18-45 at 7 sites in South Africa and Uganda

What do we know about the dapivirine ring?

- The ring is very safe
- The ring helps protect against HIV
 - 30% fewer women acquired HIV in the dapivirine ring group than in the placebo group
 - These results include all women including those who didn't use the ring regularly
- The ring is more effective when it's used
 - Among women older than 21 who also used the ring more regularly – HIV risk was reduced by 56%
 - Among 18-21 year-olds no protection (and lowest adherence)
 - Additional analysis as high as as 75% protection with most consistent use across all ages.



Getting used to the ring

- Those who've never used a ring have notions that it will be difficult to use.
- ASPIRE participants said they were unsure about it at first ...

When I first saw it, it was like, WOW!

• But got more confident in using it over time.

It was easy to use ring and it was comfortable, I couldn't feel the ring. Even during my periods, it was no problem at all. During sex, I didn't have doubts about it.



What do we know about the ring in adolescent girls?

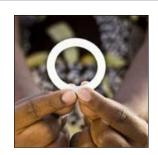
- One study has been conducted in the United States among 96 girls ages 15-17
- Participants were asked to use a ring for a month at a time for 6 months
- The dapivirine ring was safe and acceptable, and adherence was very high





What's happening now?

- IPM is seeking regulatory approval for use by women ages 18-45, based on results of The Ring Study and ASPIRE, and several smaller studies.
 - The earliest approval is 2019
- In the meantime, we are learning more about how women use the ring in "open-label" studies
 - HOPE for former ASPIRE participants
 - DREAM for former Ring Study participants
- We want to learn more about the ring in highrisk populations
 - Adolescent girls and young women REACH
 - Pregnant and breastfeeding women









Regulatory Path: Overview

European Medicines Agency (EMA)

- Scientific opinion on a product's use in developing countries (via Article 58 procedure)
- Submitted June 2017; currently under review





 Following WHO PQ, first submissions to Kenya, Malawi, Rwanda, Tanzania, Uganda, Zambia, Zimbabwe

South African Medicines Control Council (MCC)

Target submission Q2 2018

US Food and Drug Administration (FDA)

Target submission Q4 2018

Why WHO Prequalification?

- Process to evaluate whether a drug meets global standards for quality, safety and efficacy
- Most African regulatory agencies use WHO prequalification to determine which new products to approve



Regulatory Timeline

2016 2018 2017 2019 2020 SPIRE Results **Open-label extension study: DREAM** Open-label extension study: HOPE African adolescents safety study: REACH Safety studies in pregnant and **Supporting safety and** breastfeeding women PK studies **EMA Article 58** African NRAs **WHO PQ** (submission & approval) **US FDA**

S. Afr. MCC (SAHPRA)



When will the ring be available?

Learning from History: Oral PrEP



Pivotal clinical trial data in MSM and heterosexuals

FDA approval

End of open-label extension trials

High impact in demonstration studies

WHO guidelines

First delivery starts at scale in African settings (DREAMS, Kenya & SA scale-up)



Approval pathway for new HIV prevention drug can be more complex than for a drug already approved for treatment (e.g., oral Truvada for PrEP)





Discussion