Chapter 1: Introduction to Male Circumcision and HIV Prevention
Learning Objectives

At the end of this session, participants should be able to:

- Define male circumcision (MC)
- Describe the relationship between MC and HIV
- Demonstrate the public health impact of scaling up voluntary medical male circumcision (VMMC) in priority countries
What Is Circumcision?

- Surgical removal of the foreskin covering the head (glans) of the penis
- An ancient practice done for many years for both religious and cultural reasons
MC and HIV Prevention: Results from Randomized Controlled Trials

- **2005**: Orange Farm, South Africa: protective effect—61%
- **2007**: Kisumu, Kenya: protective effect—60%
- **2007**: Rakai, Uganda: protective effect—51%

**Conclusion**: The findings from the three randomized controlled trials provided compelling evidence that MC reduces the risk of heterosexually acquired HIV infection in men by approximately 60%.
Biological Reasons for MC’s Protective Effect against HIV

- The inner foreskin is much less keratinized thus making it more prone to trauma during sexual intercourse.
- Has numerous Langerhans cells and other immune cell targets. These cells are more susceptible to HIV infection.
- Highly vascularized foreskin mucosa, which can easily tear during sexual intercourse, thus increasing chances of HIV infection,
- Ulcerative sexually transmitted infections (STIs), which are more frequent in uncircumcised men, also facilitate HIV infection.
MC Protection for Women

- A multi-country study found HPV infection was lower in circumcised men.*
- Cervical cancer rates were higher in the female partners of uncircumcised men.

MC Does Not Provide Complete HIV Protection!

MC is part of an HIV prevention strategy.
Modeling studies show the following:

- 80% coverage of MC is needed to achieve a reduction of HIV from 30% to 10%.

- Scaling up VMMC among males 15–49 years old until 2025 in priority countries would:
  - Avert 3.4 million (i.e., 22%) of new infections; and
  - Save US$16.5 billion in net savings (due to averted treatment and care costs).
VMMC Priority Countries

Source: PEPFAR Male Circumcision Technical Working Group
Required for 80% Coverage

Challenges of Scale-Up

- Ambitious targets
- Low uptake of services due to fear of pain, absence from work, fear of injury
- Reaching older clients
- Complex surgical techniques
Summary

- VMMC reduces the risk of HIV transmission from a woman to a man by 60%.
- Scaling up VMMC in priority countries would prevent new infections and save billions of dollars in treatment costs.
- Several approaches have been proposed to overcome challenges in VMMC scale-up.