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## Preventing STIs/HIV, Pregnancy, and Mother-To-Child HIV Transmission

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### OBJECTIVES

(A) Prevent HIV/STIs by using a cervical barrier to deliver microbicide. (B) Prevent pregnancy and mother-to child HIV transmission. (C) Enhance adherence, retention and efficacy of Tenofovir microbicide.

### METHODS

We investigated the feasibility of the FemCap, an FDA-approved cervical barrier device with a microbicide delivery system on its cervical and vaginal sides, for delivering Tenofovir. We evaluated acceptability, adherence and retention of a stained vaginal lubricant (substituted for Tenofovir) delivered by the FemCap versus delivery with the vaginal applicator utilized in the CAPRISA 004 study. Thirty women compared using a vaginal applicator to deliver a high-viscosity vaginal lubricant stained with Gentian violet before and after intercourse to using the FemCap to deliver the lubricant before intercourse only. We then used colposcopy to study gel retention over the cervix and vagina.

### RESULTS

Twelve women (40%) missed applying the lubricant with the vaginal applicator before intercourse; 10% missed it after intercourse. Three FemCap users (10%) missed applying the lubricant before intercourse, and all of them inserted it after intercourse. The gel was better retained over the cervix by a single application with the FemCap versus two applications using the vaginal applicator.

### CONCLUSIONS

Study participants preferred one gel application using the FemCap to two applications using the vaginal applicator based on ease of use and elimination of lubricant leakage. We conclude that utilizing the FemCap can prevent pregnancy and mother-to-child HIV transmission, while enhancing compliance and retention of gel over the cervix to potentially prevent STIs and increase the efficacy of Tenofovir.