Microbicide Delivery

Health need

In the midst of the growing AIDS pandemic, microbicides could provide urgently needed options for women and men seeking protection from HIV and other sexually transmitted infections. With numerous microbicide products in preclinical or clinical trials, most research has focused on the safety and effectiveness of candidate products, with much less research targeted on devices for delivering these products.

Technology solution

Microbicide delivery devices will be critical in ensuring safe and effective use of microbicide products. The device impacts the overall product's safety (relationship with product purity and stability, avoidance of local trauma associated with insertion or use), efficacy (consistent delivery of the required amount of product in the intended location), and acceptability (comfort, ease of use, disposability). PATH's goal is to ensure that safe, acceptable, and appropriate delivery devices are available for introduction and use with microbicides in low-resource settings. Since 2003, PATH has conducted a wide range of activities to inform and advance the development of new microbicide delivery methods including stakeholder research; clinical and acceptability research; bench testing; commercialization activities; regulatory work; and product development.

Current status and results

In collaboration with microbicide sponsors, researchers, device manufacturers, design companies, and universities, PATH is advancing five novel microbicide delivery methods to help reduce cost, ensure microbicide efficacy, and increase user acceptability. Methods include:

- SILCS Diaphragm: We are evaluating the feasibility of the SILCS Diaphragm as a controlled release delivery method. This combination of barrier method and microbicide could enable prevention of both pregnancy and disease.
- PATH Woman's Condom: We have demonstrated feasibility of incorporating a microbicide into the film capsule of the Woman's Condom. This multipurpose method could also protect against pregnancy and disease.
- Paper applicator with dosage stop: This user-filled applicator is low cost, easily disposable, and prevents over-filling, making it an important option for microbicide gel delivery in low-resource settings.
- Rectal applicator: This applicator has been designed specifically for rectal delivery of microbicide products.
- Reusable applicator: This first-generation prototype has been designed to ensure accurate and precise dosing at each use and reduce cost through repeated use.

PATH/Jesse Schubert

Microbicide in a tube with applicator.

Devices used to deliver microbicide products must be acceptable, affordable, and appropriate for women and men around the world to ensure optimum access and use of microbicides.

Availability

For more information regarding this project, contact Jessica Cohen at jcohen@path.org.

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