Building MPT acceptability during product development through consumer and health systems research

Addressing the needs and realities of consumers and the systems where new products will be distributed will have a greater likelihood of uptake and acceptability. While simple on its face, this principle has not always been included in development of consumer health products or interventions.

In 2009, the field of multipurpose prevention technologies (MPTs) was born when international experts involved in family planning and the prevention of HIV and other sexually transmitted infections (STIs) met to discuss how solutions could be linked to better address women's sexual and reproductive health (SRH) needs.

Building upon decades of contraceptive and microbicide research, MPTs are growing into an exciting strategy for improving SRH, with dozens of products in development, close to two dozen products in development, nearly a dozen in clinical studies, and partners from 15 countries. At the heart of the Initiative for Multipurpose Prevention Technologies (IMPT) is a commitment to improving the health of women and adolescent girls, who continue to experience the significant health and economic impact from unintended pregnancies and HIV/STI infections. However, it is not sufficient for an MPT product to be effective, it must also be desirable – or at least acceptable – to the intended audience and fit within the realities and constraints of the health systems where they will be delivered.

Incorporating Social-Behavioral and Market Access Research into MPT Development

Through consultations and working groups, the IMPT Secretariat and its partners outlined the types of consumer- and systems-related issues that can influence acceptability and uptake of SRH products. Many of these insights were drawn from research and experience in family planning, as well as microbicide clinical trials and strategies from HIV prevention and PrEP introduction. These insights were incorporated into the MPT Market Access Framework as recommended research questions to be addressed at different stages of development to ensure that MPT products will be appropriate, acceptable, affordable, and available for the intended target audiences.

The market access framework is a resource for product developers, researchers, and other stakeholders to guide MPT development, evaluation, and introduction. It outlines questions and activities to be addressed during development, evaluation, and introduction, across a spectrum of topics and through collaborations between diverse stakeholders, to ensure that MPTs meet the needs of intended target audiences and fit the realities of the health system and that market sustainability has been considered. It also aligns with the product introduction framework developed by USAID (2015), “Idea to Impact: A Guide to Introduction and Scale of Global Health Innovations.”

IMPT Secretariat: 1750 Howe Avenue, Suite 550 • Sacramento, CA 95825
IMPT@camil-health.org • www.thelIMPT.org • www.MPTs101.org

To learn more check out www.TheIMPT.org.
Social-behavioral and market research can strengthen MPT product development and introduction by:

- **Exploring attitudes of potential users and their partners, healthcare providers, policymakers to understand the need/demand for MPTs** to guide strategies for development, evaluation, and introduction.

- **Incorporating end-user perspectives** of the target audiences for MPT products, and employing human-centered development strategies to ensure products meet users’ needs.

- **Conducting market assessments** to understand the health need and market demand for particular MPT strategies, including understanding the market landscape, estimating market size, assessing cost and price considerations, and cost effectiveness to inform market development strategies.

- **Conducting health system assessments** to understand the opportunities and challenges for future introduction of MPTs in terms of policy, regulatory, financing, procurement processes, and delivery system.

There are many examples of how product developers and researchers involved in MPT development are incorporating social behavioral research into product development, clinical studies, and planning for product introduction, and also how market introduction research is being used to strengthen MPT development. Below are a few examples:

**Early stage development assessments:**

- Brown University and Duke University researchers assessed user women’s perception of various gel products, and correlated these gel preferences with the physical characteristics of gels formulations across a variety of indicators. This provides guidance for future gels about characteristics that are most acceptable.

- Population Council is implementing a computer-based user consumer survey to assess potential interest and trade-offs for two delivery modes for MPT: fast-dissolving vaginal inserts and vaginal film. Results will inform future development of these delivery systems.

- RTI International and researchers in South Africa assessed consumer acceptability with the concept of an implant that dissolves after the drug has been delivered to eliminate the need for removal. This system is being developed for ARV delivery, but could potentially be used for MPTs.

- PATH and a market research firm in South Africa conducted consumer and provider acceptability testing of the concept of micro-array patches, a novel delivery system initially developed for vaccine delivery but now being assessed for ARV drugs and MPTs.
Assessing preferences among existing delivery systems:

- RTI International led the TRIO study (Tablets, Rings, and Injectables as Options for Women) in South Africa and Kenya, which explored the preference and acceptability of three possible MPT product types.

- In the Quatro Study, CONRAD in partnership with RTI International, MatCH Research Unit in South Africa and the University of Zimbabwe-UCLA assessed young women’s experience and preferences among four MPT drug delivery systems: vaginal insert, vaginal ring, film, and gel.

- MatCH Research Unit in South Africa assessed acceptability and preference between (microbicide) gel delivered by the SILCS diaphragm compared to gel delivered by vaginal applicator to explore acceptability and build the value proposition for this MPT.

- Through the EMOTION Project, CONRAD and research partners interviewed women, their partners and community members in Kenya, South Africa, and Zimbabwe to better understand drivers for and barriers to use of ARV-based HIV prevention products. This research will inform design, packaging, access and messaging in order to increase demand, use and adherence.

- The Desmond Tutu HIV Centre in South Africa is leading the UChooose study, which is using different contraceptive options (a monthly vaginal ring, bi-monthly injectable or daily oral pill) to examine preferences for PrEP delivery among 16 and 17 year old girls.

Health systems and market research to build the value proposition and develop introduction strategies:

- PATH and researchers in South Africa and India conducted health systems assessments to evaluate opportunities for SILCS introduction as a contraceptive and as an MPT when a microbicide gel is approved. These assessments covered policy, regulatory, and service provision issues, provider and consumer attitudes, and market indicators. Cost effectiveness analyses also were conducted to assess SILCS + microbicide gel relative to other ARV based HIV prevention strategies.

- POWER (Prevention Options for Women Evaluation Research), led by University of Washington, develops cost-effective and scalable models for implementation of ARV-based HIV prevention products for women in Kenya and South Africa.

- Market research conducted by Ipsos assessed the acceptability of MPTs among women in Uganda, Nigeria, and South Africa. The study specifically gauged the level of acceptability for four potential MPTs (injectables, implants, intra-vaginal film, and intra-vaginal ring).

Understanding and incorporating the needs and perceptions of users, providers, and healthcare system stakeholders into MPT development and introduction can lead to greater acceptance of these strategies. Social-behavioral and market research can help ensure MPTs address the needs and constraints of end-users and the health system to reach our goal of improving health for women and girls.

(Plase send us your comments and examples of how you are using social-behavioral and market research to strengthen MPT product development, evaluations, and plan for introduction.)
Using existing data to better understand potential consumers and build successful strategies for introduction:

- FHI 360 and IPM researchers are assessing results from the dapivirine ring studies to develop acceptability assessment scales that can be adapted for use with other vaginal ring studies. That can be learned of who used the vaginal ring for HIV protection, and why women were not able to use it. These data could be used to develop profiles to better understand how to introduce the dapivirine ring, and could also influence future recruitment and support strategies for HIV and MPT clinical trials.

- The OPTIONS (Optimizing Prevention Technology Introduction on Schedule) consortium, led by Wits Reproductive Health and HIV Institute, AVAC, and FHI 360, aims to provide targeted support to expedite and sustain access to ARV-based HIV prevention products in countries and among populations where most needed, including South Africa, Kenya, and Zimbabwe.

- USAID OHA, CII, IPM, and Dahlberg Design Impact Group are working on a human-centered design project for IPM’s dapivirine ring introduction launch.

- The Market Manager project, led by AVAC, aims to ensure the development and efficient use of HIV prevention interventions to maximize reduction of new infections through a comprehensive HIV prevention market landscaping, strategic planning, and provision of guidance and resources to support advancements in the field. As part of this project, AVAC is conducting a study on AGYW in South Africa and PrEP value proposition.

- South African researchers are assessing PrEP roll-out in that country to understand who chooses PrEP and to better understand needs and concerns of those who chose not to use PrEP. This information will help inform future PrEP introduction, and also could inform strategies for MPT interventions.

- MTN 034 is working with Routes2Results on a market research project in South Africa using both quantitative and qualitative methods. For the quantitative phase, 1,200 women, ages 18-20 in four different regions of South Africa will be recruited to determine decision-making influencers and to help understand how to reach this demographic.

This brief highlights some accomplishments from the IMPT and its partners, who have raised awareness and advocacy to help the MPT field grow. Separate briefs highlight accomplishments in the areas of technical and research issues to strengthen MPT product development, and incorporating social-behavioral and market research into product development.

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