Acceptability of a Modified Nipple Shield Device to Reduce Breast Milk Transmission of HIV in Developing Countries: A Qualitative Study

Introducion

In low-resource settings, breastfeeding is protective against infant mortality and morbidity, yet can be a significant source of mother-to-child transmission of HIV. The current WHO-recommended method to prevent HIV transmission via breast milk is with expressed breast milk (EBM). This study aimed to explore the hypothetical acceptability of the MNSD in the Western Province of Kenya.

Methods

Qualitative data collections occurred in Nairobi and Western Provence, Kenya. Eleven focus group discussions (FGDs) were held separately with HIV-positive mothers, and 10 in-depth individual interviews (IIs) were conducted with breastfeeding, HIV-positive positive breastfeeding mothers. The conversations were transcribed and uploaded into NVivo Version 8.0 and then analyzed using thematic analysis. The topics discussed during the FGDs included HIV and infant feeding, stigma and discrimination, cultural beliefs, the MNSD concept, how the device kills HIV, and its potential benefits and challenges in the context of the community. In total, six to ten individual interviews were conducted with local maternal and child health care providers. The topics discussed during the in-depth individual interviews were similar to those during the FGDs.

Results

The FGD respondents and healthcare stakeholders identified four primary themes during their discussions about the MNSD: (1) stigma; (2) hygiene; (3) efficacy and safety; and (4) access.

1. Stigma

For most FGD respondents and healthcare stakeholders, their greatest concern regarding the MNSD was counteracting potential stigmatization of mothers as HIV positive. They discussed the following factors:

- Designing the device to ensure a mother’s privacy.
- Disclosure of HIV status to relatives and neighbors.
- Overcoming the fear of HIV testing and being treated as a health risk.
- Education and sensitization of the community.

For me, the challenge is how one would be able to keep the MNSD in a very private area, something that I would feel to be too public. My HIV status is also a private thing because I can’t reveal it to anyone whether it will be my child or not. (Mother, Kilifi)

So...stigma is a major challenge even in HIV management. In whatever we do need to be positive about stigma. The people that we have, those who want to hide same, they are afraid of their friends. If they shared about the future of HIV and AIDS, the stigma is always there to go to the clinic. When a mother is coming, stigma issues within the urban set-up: ‘I am not ready within the urban set-up’: we have had people not wanting to go for HIV test and treatment...sometimes...we had people that were reports that some people would rather not that they (2012) medicate them and go to the clinic. What is causing that? Stigma issues within the urban set-up: ‘I am not sure who’s going to use this thing—mother, children, neighbors’.

The MNSD is countering potential stigmatization of mothers as HIV positive. They discussed the following factors:

- If using the MNSD is part of the PMTCT package, if mothers see one another using the MNSD, they will trust it.
- If mothers see one another using the MNSD at the national level with the Ministry of Health.

2. Hygiene

Most FGD respondents and the healthcare stakeholders agreed that cleaning the shield itself you can re-use, but the disk you have to replace. The shield itself you can re-use, but the disk you have to replace. If mothers see one another using the MNSD, they will trust it. (Mother, Kilifi)

We should have something (short) to prevent killing the HIV shield. The bottle should have water and then we should have some disinfectant put in that water so that if there are any germs they will be killed. If there is no way of killing this then breastfeeding will be a problem for many mothers because with boiling water will be great, but for disinfectant, even if the mother washes with cold water, it will be okay. (Father, Kilifi)

3. Efficiency and Safety

The majority of FGD respondents and healthcare stakeholders agreed that a question that she may not be able to answer. "So if you are going to re-use that you are introducing infection. So how will you control for that infection? So how will you control for that infection? (Healthcare stakeholder, Nairobi)

The MNSD should be something that is AIDS-free. That means it must be something easier to use. If you don’t need to put it in boiling water then okay. (Mother, Kilifi)

4. Access

Most FGD respondents and healthcare stakeholders agreed that any infant feeding options for PMTCT should be AFASS: affordable, feasible, acceptable, sustainable and safe.

The MNSD would be something that is AIDS-free. That means it must be something easier to use. If it is expensive you don’t use it. (Mother, Kilifi)

It’s better to be patient than on the day that they can even ask my child’s life? Isn’t it good to know and not be able to buy it. What will be very poor.” (Mother, Kilifi)

Results, cont.

Conclusions

Respondents felt the MNSD was a promising approach for reducing PMTCT in their communities. The following would need to be addressed to ensure effectiveness and safety implementation:

- Development of an easy and standardized method for cleaning the MNSD.
- Studies to confirm safety and efficacy.
- Reduction or elimination of costs for purchasing MNSD and replacement disks.
- Sensitization of communities to reduce HIV-related stigma.
- Promotion by healthcare professionals beginning at the national level with the Ministry of Health.

Acknowledgments

Funding for this research was provided by the Bill & Melinda Gates Foundation through the Grand Challenges in Global Health initiative, which is supported by the Grand Challenges Explorations (GCE) Program, through Award ID 332101. Additional support was provided by the National Institutes of Health, National Institute of Allergy and Infectious Diseases, under Award Number 1R21AI097302-01.

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