

Summary:

# External Evaluation and Cost-Benefit Analysis of mothers2mothers' Mentor Mother Programme in Uganda



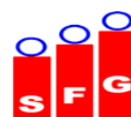
As implemented as part of the USAID-funded JSI Research & Training Institute Inc's, STAR-EC Project.

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## Acknowledgements

The external evaluation was funded by Johnson & Johnson and conducted by HealthNet Consult and Service for Generations (SFG) International. mothers2mothers (m2m) commissioned the evaluation in December 2013. Fieldwork was conducted March to June 2014. The study team was comprised of: Dr. Charlotte Muheki Zikusooka (Principal Investigator), Dr. Daniel Kibuuka-Musoke (Co-Principal Investigator), John Baptist Bwanika (Statistician), Dr. Dickens Akena (Psychiatry Specialist), Brendan Kwesiga (Health Economist), Christabel Abewe (Health Economist), Agnes Watsemba (Study Coordinator), and Aida Nakitende (Field Coordinator). Technical support and guidance was provided by a steering committee that was comprised of staff from the Uganda Ministry of Health, m2m, and JSI Research & Training Institute, Inc./STAR-EC Project. The STAR-EC Project is funded by the U.S. Agency for International Development (USAID)\* under Cooperative Agreement No. 617-A-00-09-00007-00.

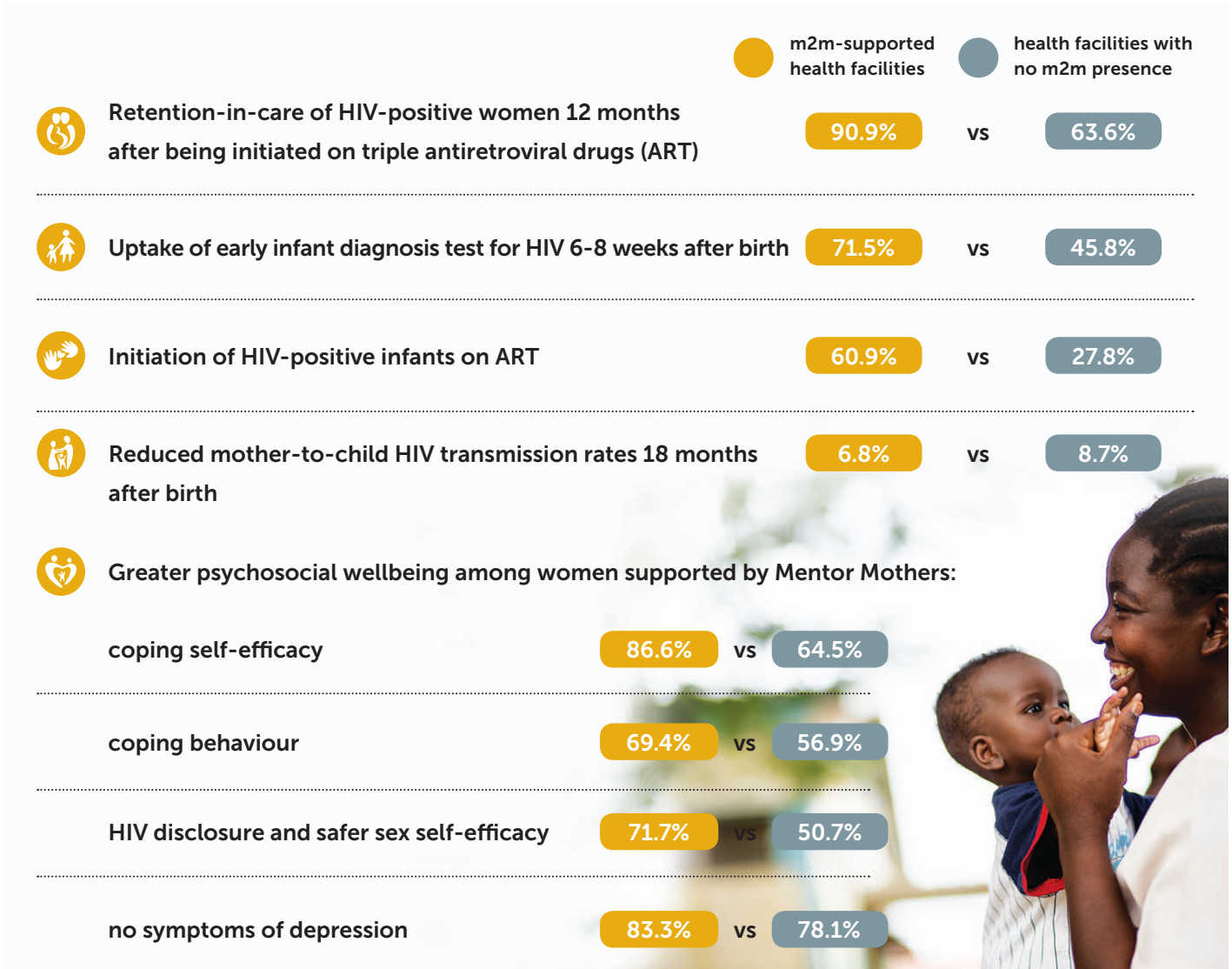
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## Key Highlights

mothers2mothers' (m2m) Mentor Mother Model improves maternal and infant health outcomes and psychosocial wellbeing when compared to health facilities without m2m and achieves significant savings by preventing paediatric HIV infections, thereby reducing HIV treatment costs. **All findings presented in this summary are statistically significant, and include:**



The m2m Mentor Mother Model has a high return on investment:



If m2m's programme were to be implemented on a national level in Uganda:





mothers2mothers' Mentor Mother programme has operated in Uganda since 2010 under the Strengthening TB and HIV & AIDS Response in East Central Uganda (STAR-EC) programme. STAR-EC is a six-year initiative funded by the United States Agency for International Development (USAID) that covers nine districts in East Central Uganda and serves a population of approximately 3.1 million people (9% of Uganda's total population). m2m operates its programme in partnership with JSI Research & Training Institute Inc, which has been implementing HIV & AIDS and TB-related activities in East Central Uganda since March 2009.

In 2012, mother-to-child transmission of HIV was the second most common mode of HIV transmission in Uganda. It accounted for up to 18% of all new infections, and was virtually the only way that young children (under two years of age) acquired HIV. Uganda adopted Option B+ in September 2012, offering all HIV-positive pregnant women the opportunity to take triple antiretroviral drugs (ART) for the rest of their lives, with significant benefits for their own health, the health of their unborn babies, and the health of their partners. To fully recognise the promise of Option B+, substantially greater efforts are needed to link pregnant women and children to HIV treatment and care, and minimise the number of pregnant women, mothers, and their infants who drop out of care at some point during their treatment.

m2m trains, employs, and empowers mothers living with HIV to eliminate the transmission of HIV from mothers to babies and improve the health of women, their partners, and families. Working alongside doctors and nurses in understaffed health centres as members of the healthcare team, these "Mentor Mothers," as they are called, provide essential health education and psychosocial support to other HIV-positive pregnant women and new mothers. Psychosocial support addresses ongoing emotional, psychological, social, and cultural concerns, helping HIV-positive pregnant women, new mothers, and their families cope more effectively with each stage of the infection and enhancing their quality of life.

This external evaluation examines whether the core component of m2m's Mentor Mother Model—peer education and psychosocial support services—improves the uptake of PMTCT services, as well as the health and wellbeing of mothers and their infants. It also investigates the cost-benefit of scaling up the Mentor Mother Model nationally in Uganda. To determine this, the study examines the differences in mother and infant uptake of PMTCT services and health outcomes, as well as women's psychosocial wellbeing at m2m-supported health facilities compared to similar facilities with no m2m presence (the control sites).

The study was conducted across 62 health facilities divided into two groups: 31 intervention sites (with an m2m presence) and 31 control sites (without m2m presence). Approximately 1,150 mother-baby pair records of clients who received PMTCT services between January 2011 and March 2014 were reviewed in each group. Additionally, approximately 400 PMTCT clients in each group who received PMTCT services between June 2012 and March 2014 participated in a survey measuring their psychosocial wellbeing.

## Maternal and Infant Health Outcomes and Impact

The evaluation finds that the m2m Mentor Mother Model, as implemented for the USAID-funded STAR-EC programme in Uganda, has a positive impact on maternal and infant health outcomes and mother-to-child HIV transmission rates, compared to control sites that do not provide peer education and psychosocial support services. Significant improvements among m2m clients are observed in 13 of 14 PMTCT outcome indicators, and in two out of three infant health impact indicators.

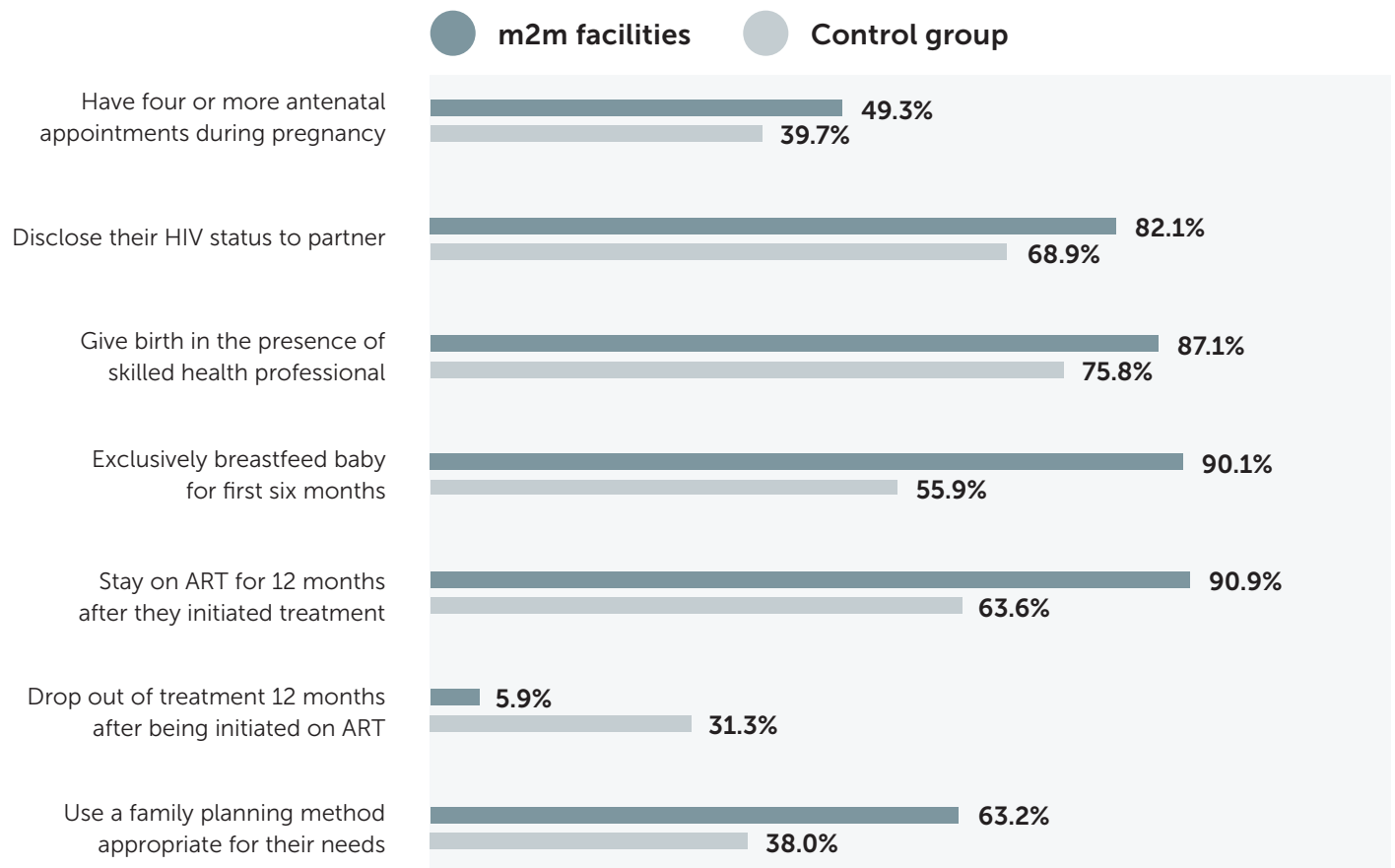
Women attending an m2m-supported health facility are more likely to take up PMTCT services, particularly those associated with linking them to or retaining them in care, including:

- HIV testing for infants at six weeks after birth, at six weeks after cessation of breast feeding, and at 18 months after birth
- Admission of HIV-positive babies into paediatric ART services
- Provision of antiretroviral (ARV) drugs to HIV-exposed babies at birth
- Retention of pregnant women on ART

The evaluation also finds that exposure to m2m services significantly reduces the number of HIV-positive mothers who drop out of treatment and results in improved behaviours that have been linked to a reduction of MTCT such as attending at least four antenatal visits, delivery under the care of a skilled health professional, use of modern family planning methods, and disclosure of HIV status to sexual partners.

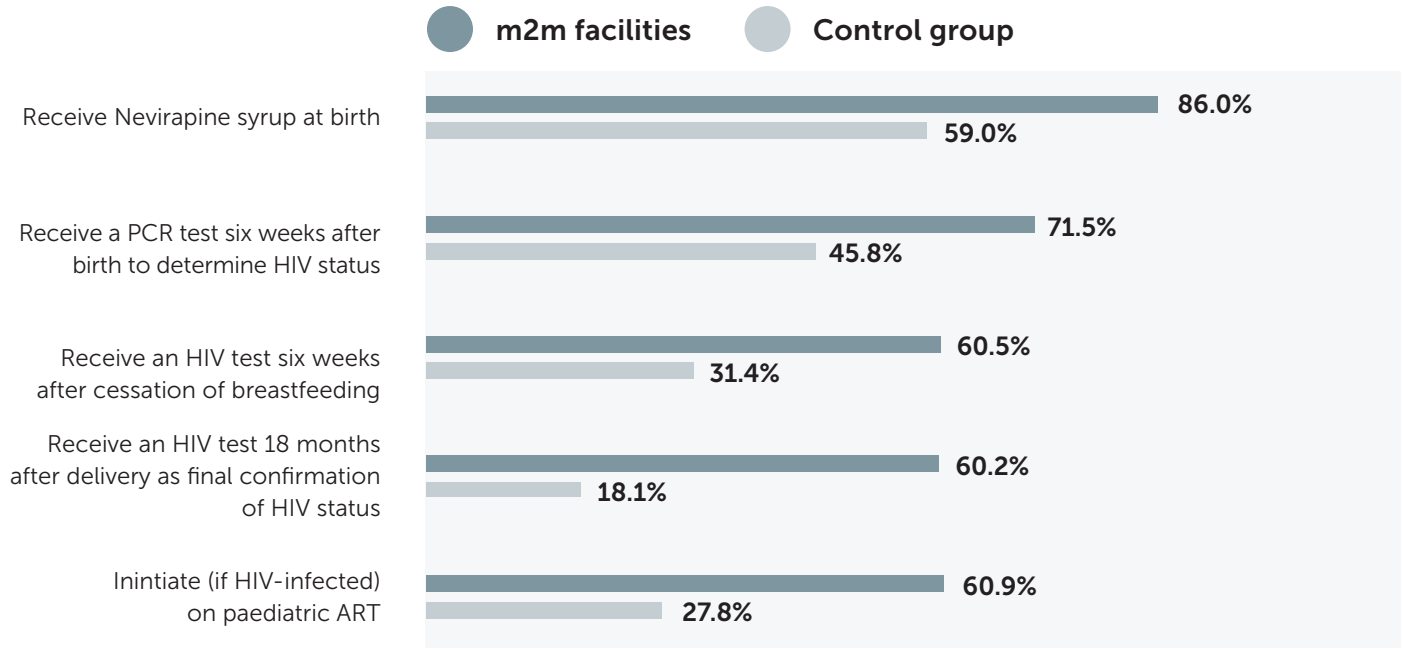
### Maternal PMTCT Outcomes:

The percentage of women in m2m-supported health facilities and control health facilities who...



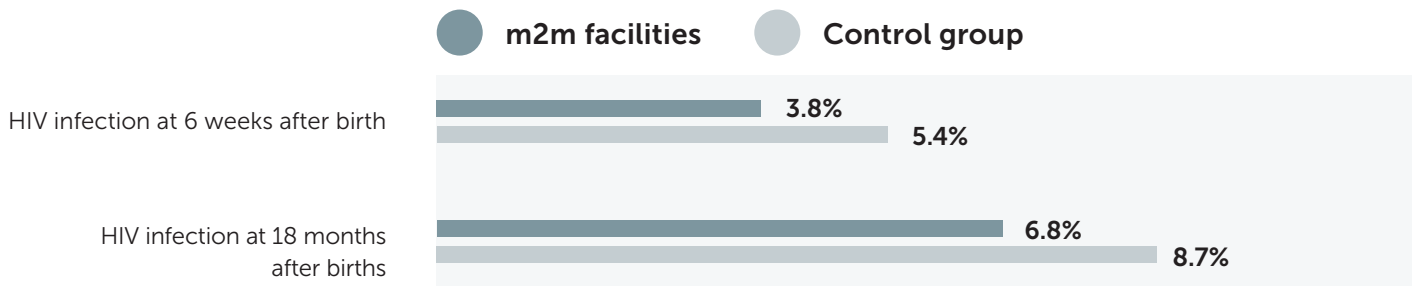
## Infant PMTCT Outcomes:

The percentage of infants with mothers attending m2m-supported health facilities and control health facilities who...



## Mother-to-Child Transmission Rates:

m2m's Mentor Mother Model is significantly associated with a reduction in mother-to-child-transmission rates of HIV at both six weeks and 18 months after birth. The percentage of infants whose mothers are in m2m-supported health facilities and control health facilities who test HIV-positive:

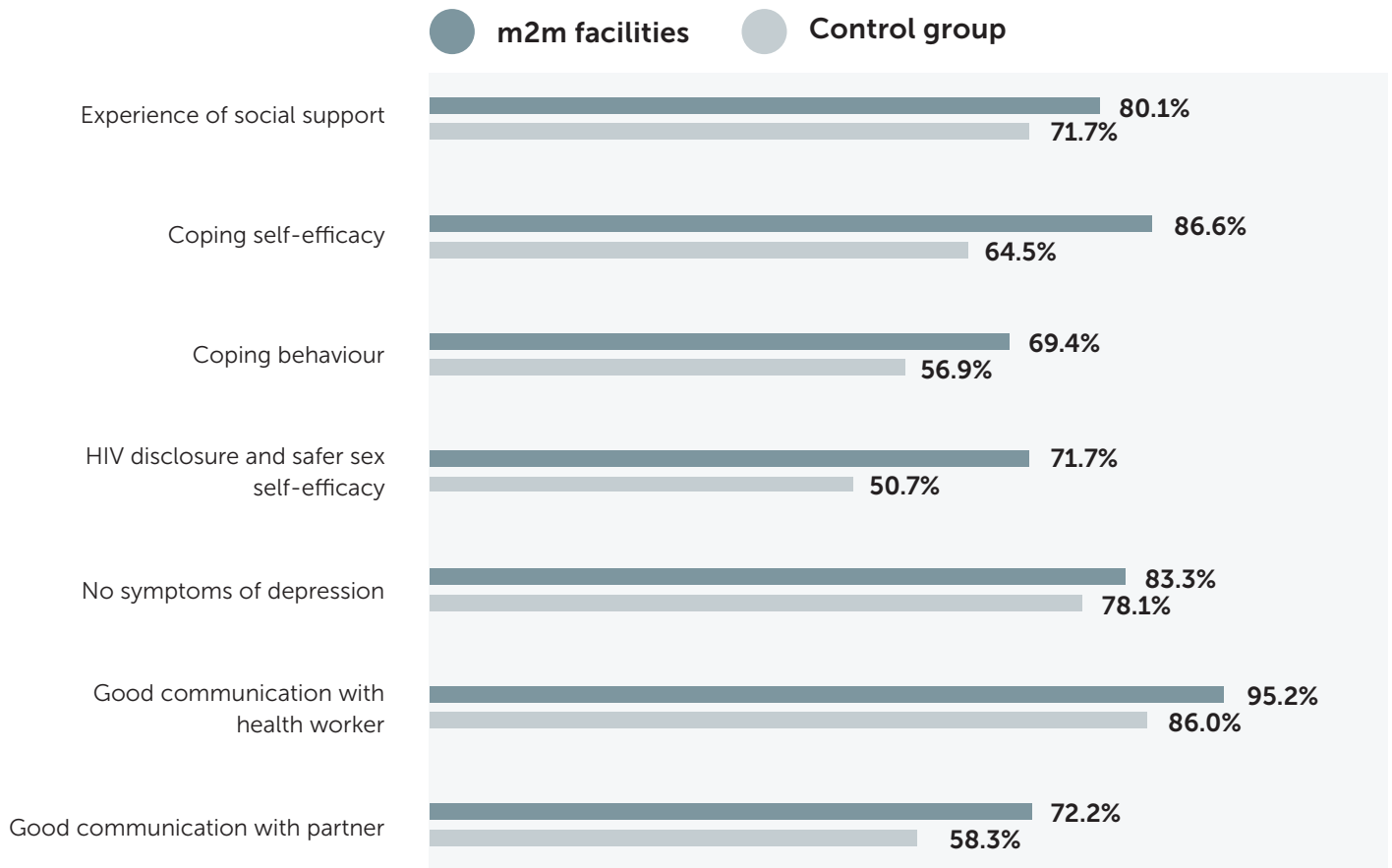


## Psychosocial Wellbeing Outcomes

Through the education and psychosocial support that Mentor Mothers provide their clients and that clients provide one another in m2m support groups, women develop key attitudes, beliefs, and skills necessary to overcome negative social norms often prevalent within many families and communities. Self-efficacy (the belief in one's ability to succeed in a particular situation) is at the centre of this process of empowerment. Through improved self-efficacy that develops from engaging with a Mentor Mother, women are better able to overcome social pressures that can prevent them from adopting healthier behaviours and accessing critical health services.

The evaluation finds that HIV-positive mothers who access antenatal services at m2m-supported health facilities have better overall psychosocial wellbeing compared to their counterparts who access antenatal services at control health facilities with no peer education and psychosocial support. Significant improvements among m2m clients are observed in 11 of 12 psychosocial wellbeing outcome indicators.

### The percentage of women who demonstrate greater psychosocial wellbeing on selected outcomes include:



## Cost-Benefit of Scaling Up m2m's Mentor Mother Programme Nationally

A cost-benefit analysis was conducted as part of the external evaluation, using the impact results discussed above. A cost-benefit analysis offers more robust results than a cost-effectiveness analysis, since it can compare financial investment to a monetised value of the outcome or impact of an intervention.

This analysis demonstrates that investing in the m2m Mentor Mother programme as an intervention for preventing the transmission of HIV from mother-to-child has a very high return on investment given the great benefits, compared to the cost required to implement it. The study finds that **for every \$1 spent** on the m2m programme, there is a **cost savings of \$11.40** associated with averted treatment costs.

The analysis estimates that the cost of scaling up of the m2m Mentor Mother programme in public and private not-for-profit health facilities in Uganda is approximately **\$4.5 million annually**. Assuming that the same magnitude of impact would be achieved across the country as measured in the sampled health facilities, scaling up of the m2m intervention to the whole country would **prevent approximately 1,724 infant infections in one year**. If not prevented, the infected individuals would be required to take ART from birth for the rest of their lives. The estimated cost savings associated with the prevention of 1,724 infant infections is approximately **\$51 million** over the lifetime of infants born HIV-negative which can be attributed to m2m prevention efforts.

## Conclusion

Based on this evidence, the external evaluators recommend that Uganda should consider scaling up the m2m Mentor Mother Model as part of the standard of care for delivering psychosocial support to all PMTCT clients in Uganda.

A number of evaluations have been conducted on the effectiveness of psychosocial support on health outcomes and particularly on PMTCT outcomes. However, the evaluation of the Mentor Mother Model as implemented under the STAR-EC Program in Uganda is unusual in its scope, in that it comprehensively addresses the impact of m2m's intervention on psychosocial wellbeing, PMTCT outcomes, and mother-to-child transmission rates. Furthermore, very few evaluations go as far as conducting the highest form of economic evaluation—a cost-benefit analysis. The consistency of positive results found across indicators measured in this evaluation is remarkable, and demonstrates that the standard of care provided by m2m's Mentor Mother Model achieves its objectives.