mothers2mothers 2014 Annual Evaluation

A multi-country evaluation of mothers2mothers' health facility-to-community Peer Mentor Mother Model in Kenya, Lesotho, Malawi, South Africa, Swaziland and Uganda.

Key Findings

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Acronyms and Abbreviations

AIDS	Acquired Immunodeficiency Syndrome
AN	Antenatal
ARVs	Antiretroviral Drugs
CMMs	Community Mentor Mothers
DSD	Direct Service Delivery
HIV	Human Immunodeficiency Virus
IPs	Implementing Partners
KMMP	Kenya Mentor Mother Program
m2m	mothers2mothers
MTCT	Mother-to-child transmission of HIV
MM	Mentor Mother
NGO	Non-Governmental Organisation
NVP	Nevirapine
PMTCT	Prevention of mother-to-child transmission of HIV
PN	Postnatal
SC	Site Coordinators
SD	Standard deviation from the mean
TA	Technical Assistance delivered to Implementing Partners

Acknowledgements

We wish to thank and acknowledge the many partners and staff that contributed to the development of this report. Specifically, we would like to thank mothers2mothers (m2m) staff in our country programmes. Without their daily diligence in supporting HIV-positive mothers and their babies, as well as collecting essential client information, this report would not be possible. We would also like to thank the health facility staff who work alongside m2m staff to ensure that prevention of mother-to-child transmission (PMTCT) care continues to be provided for all HIV-positive mothers and their babies. We would also like to thank m2m's clients for sharing their experiences and progress along the PMTCT cascade. Their contributions are deeply appreciated by m2m.

We are grateful to our donors, without whom this evaluation would not be possible. We will be forever thankful to the commitment of all our donors in supporting m2m to build its capacity to use data for programme planning and improvement.

Executive Summary

Overview

mothers2mothers (m2m) is an Africa-based, global non-governmental organisation that aims to unlock the potential of mothers and their families through scalable, high-impact interventions. Operationally, m2m trains HIV-positive women to work as Mentor Mothers alongside health facility personnel to prevent mother-to-child transmission of HIV (PMTCT). More recently, m2m has also expanded its programme model out of the health facility to include support provided to households and communities by means of Community Mentor Mothers (CMMs).

This short report communicates the key findings of the m2m 2014 Annual Evaluation. The report covers the scale of m2m service delivery in 2014, an assessment of m2m's impact on mother-to-child transmission (MTCT) in comparison to global trends and targets, the progress made by m2m towards the organisation's programmatic goals, and evidence for m2m programme efficacy based on inferential analysis of PMTCT uptake and outcome attainment within a cohort of m2m clients.

Data used in this report are based in part on the routine outputs reported in m2m's monitoring and evaluation reporting systems. However, questions around programme impact and effectiveness are addressed by means of a retrospective cohort study design, where records from almost 13,000 clients from 87 facilities were retrieved and analysed to assess progress of m2m clients towards key programmatic goals.

Findings

Service Delivery

In 2014, a total of 611 facilities in 6 countries were supported by m2m through both Direct Service Delivery (DSD) and Technical Assistance (TA). In addition, m2m employed a total of 1,232 field staff; including 942 facility-based Mentor Mothers and Site Coordinators as well as 290 Community Mentor Mothers. A total of 148,626 new HIV-positive clients were enrolled by means of DSD and TA in 2014, and Mentor Mothers reached more than 106,000 HIV-exposed infants.

In total, when service delivery outputs are compared with UNAIDS 2014 Global Plan Report estimates as to the number of HIV-positive women delivering babies within the reporting period, more than 25% of HIV-positive women delivering in countries supported by m2m have been seen by a Mentor Mother.

Impact

On average, MTCT transmission rates among m2m clients were 2.7% at first test, and 3.7% at the final 18-24 month test. This is well below the Global Plan target of 5%, and consistently below the national MTCT rate averages reported in the 2014 UNAIDS Global Plan report. In Lesotho, Malawi, South Africa, and Swaziland m2m has already reached the Global Plan goal of less than 5% MTCT by 2015. In Kenya and Uganda, m2m is within 0.5% of this <5% target.

These general trends have been corroborated by an external evaluation of m2m Mentor Mother Model, implemented as part of the USAID-funded JSI Research & Training Institute Inc's STAR-EC Project in Uganda. This independent evaluation found that relative to control health facilities, mother-to-child HIV transmission rates in m2m-supported facilities were 1.6 percentage points lower 6 weeks after birth, and 1.9 percentage points lower 18 months after birth. The intervention was also found to be cost-beneficial, with every US$1 spent on the Mentor Mother Model resulting in US$11.40 in lifetime savings of averted treatment costs.

A second, external evaluation of the Kenya Mentor Mother Program (KMMP) is also underway, and while the results of this evaluation have not yet been finalised, early indications are that KMMP has been able to demonstrate similar levels of impact and cost-benefit.

Uptake of services

Across all sites, m2m clients show uptake of between 88% and 96% of all PMTCT services through antenatal care and delivery. However, in line with global norms, we see drop-offs through the postnatal period, with 34% of clients receiving a second infant test result. On average, m2m clients who had two or more Mentor Mother visits consistently outperformed national norms for key PMTCT service uptake indicators. Depending on the PMTCT indicator, uptake among m2m clients with two or more Mentor Mother visits was between 27% and 38% higher than national averages reported by UNAIDS in 2014.

Programme efficacy

Among m2m clients, inferential analysis using multivariate regression consistently found that outcome attainment was higher in women with two or more Mentor Mother visits relative to women who had received only one Mentor Mother visit. Key behavioural outcomes such as disclosure, uptake of family planning, and incidence of exclusive breastfeeding were all significantly higher in groups with more Mentor Mother visits, and uptake of maternal and infant PMTCT services was also consistently higher. Perhaps most significantly, women with more than two Mentor Mother visits were almost six and a half times more likely to have an infant who was HIV negative at the final test.

Conclusion

The 2014 Annual Evaluation indicates that MTCT has been virtually eliminated among m2m clients. Moreover, in 2014 more than 100,000 HIV-exposed infants benefited from the m2m Mentor Mother Model. Furthermore, based on the 2014 UNAIDS Global Plan national HIV prevalence estimates, at least one in four HIV-positive women delivering in countries supported by m2m have been seen by a Mentor Mother.

It also presents compelling evidence for programme efficacy. On average, m2m clients who had two or more Mentor Mother visits consistently outperformed national averages reported for key PMTCT service uptake indicators. Among m2m clients, women with more than 2 Mentor Mother visits were almost 6.5 times more likely to have an infant who was HIV negative at a final 18 to 24 month infant HIV test, relative to m2m clients with only 1 Mentor Mother visit.

Two recent independent evaluations have corroborated the findings that HIV-positive pregnant mothers supported by Mentor Mothers have significantly lower MTCT rates, as well as better overall PMTCT uptake and psychosocial wellbeing. Both external evaluations have also found the m2m model to be cost-beneficial.

Introduction

mothers2mothers (m2m) is an Africa-based, global non-governmental organisation that aims to unlock the potential of mothers and their families through scalable, high-impact interventions. The core driver behind all of m2m's operations is the belief that healthy generations start with mothers. Operationally, m2m trains HIV-positive women to work as Mentor Mothers alongside health facility personnel to prevent mother-to-child transmission of HIV (PMTCT), and sustain the long-term health and pyschosocial wellbeing of women and their children. More recently, m2m has also expanded their programme model to include Community Mentor Mothers (CMMs), who deliver services to a broader client base outside of the health facility setting at the level of the household and community.

As part of its evaluation framework, m2m conducts an annual assessment of programme outputs and outcomes. This is done through an analysis of m2m longitudinal data for clients who have completed the PMTCT cascade, as well as a review of m2m's routine performance monitoring data throughout the year. This short report communicates the key findings of the 2014 Annual Evaluation. Questions answered concern the scale of m2m service delivery, the progress made by m2m towards its programmatic goals, evidence (based on inferential analysis) of m2m's programme efficacy, and an assessment of m2m's impact on mother-to-child-transmission (MTCT) in comparison to global trends and targets.

Evaluation Methodology

Design

Evaluation questions concerning the scale of m2m's service delivery were answered using a descriptive framework, drawing on data collected through m2m's routine monitoring and evaluation platform and database (called InSITE). This platform is comprised of data recorded by Mentor Mothers and their health facility supervisors, aggregated at site level, and reported on a monthly and quarterly basis.

Evaluation questions concerning progress towards m2m's programmatic goals were answered using a retrospective cohort study design. Over the course of their interactions with HIV-positive women, facility-based Mentor Mothers collect data on antenatal and postnatal indicators in log books and other health centre registers. Key indicators are recorded as the client progresses through the PMTCT cascade, such as the age of the client, their disclosure status, their compliance with recommended antenatal and postnatal visit routines, treatment initiation and prophylaxis, and delivery status. A descriptive analysis of a sub-sample of client cohort data thus allows m2m to address progress of different types of m2m clients through the PMTCT cascade. Where appropriate, we compared our clients' outcomes to national targets and trends as reported in the 2014 Global Plan Report, as well as data from UNICEF's online HIV/AIDS database (data.unicef.org, 2014).

For questions concerning evidence for m2m's programme efficacy, we used an inferential analysis based on a quasi-experimental design. Specifically, we divided the clients for whom we had extracted cohort data into two groups: clients who had just one Mentor Mother visit after an outcome of interest had occurred, and clients who had two or more Mentor Mother visits before an outcome of interest had occurred. Whenever the timing of the behaviour or outcomes of interest was not captured, we excluded the indicator from analysis.

Thus, clients with one m2m visit could plausibly be said to have had no influence from Mentor Mothers on the outcome of interest in their pregnancy, whereas clients with two or more m2m visits could be understood to have been influenced by Mentor Mothers during their pregnancy. The outcomes of these two groups were then compared using multivariate regression to assess whether there is a difference between the outcomes of m2m clients with multiple visits and m2m clients with only one visit, after adjusting for potential confounding factors.

Finally, for the question around m2m impact in comparison to global trends and targets, we used descriptive statistics to compare average national MTCT rates for m2m clients to national averages from UNAIDS statistics (as acquired from the 2014 Global Plan Report).

Cohort sampling

For the m2m client longitudinal review, the evaluation team sought to extract a representative sample of client records from m2m facilities. In order to achieve this the research team selected a stratified random subsample of health facilities. Once selected, all records of clients enrolled in m2m care between June 2012 and November 2012 were retrieved and examined for that facility. Thus, depending on when in the second half of 2012 the client enrolled, the clients for whom we extracted records would have been in m2m care for a minimum of 26 and maximum of 31 months. In total, m2m pulled and analysed just under 13,000 of these records of clients from 87 facilities in 6 countries.

The stratified random sampling approach balanced health facilities by region. Thus, regions or districts in which m2m has a high presence were proportionately more likely to be represented in the random facility sample. However, limitations on the number of facilities that could feasibly be sampled meant that the sample could not also be stratified on facility type. Because clients in high-volume health facilities may well have different patterns of care and patient outcomes, comparisons between m2m's 2013 and 2014 Annual Evaluation data should be made with caution.

Data analysis

Data stored in the m2m log books were captured electronically using Epi Info and exported to STATA version 12 for analysis. Data analysis was done using both descriptive and inferential statistics. Descriptive statistics were used to present service delivery, demographic, antenatal, and postnatal background data. All data were checked for normality of distribution. Non-normal data were analysed using Kruskal-Wallis tests, and normally distributed data were analysed using t-tests or (for proportions), z-tests. A five percent level of statistical significance (alpha=0.05) was taken. For categorical data, pearson chi-square tests were used to establish the association between outcome levels and various categorical characteristics.

Logistic regression was used in order to assess the difference between the outcomes of m2m clients with multiple visits and m2m clients with one visit after balancing for potential confounding covariates such as facility type, geographic location of the facility, disclosure status, and variables related to the nature of the relationship between the client and her male partner.

Findings

The sections that follow communicate the key findings of the m2m 2014 Annual Evaluation. Data reported on concern the scale of m2m service delivery, an assessment of m2m's impact on MTCT in comparison to global trends and targets, the progress made by m2m towards the organisation's programmatic goals, and evidence for m2m programme efficacy based on inferential analysis of PMTCT uptake and outcome attainment within a cohort of m2m clients.

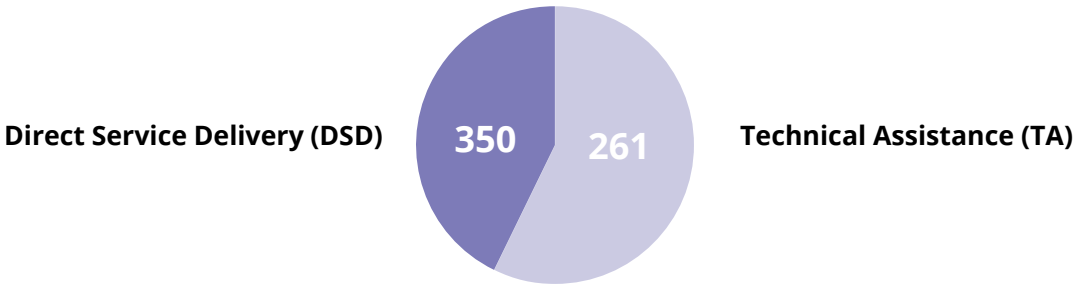
The Scale of Service Delivery (January to December 2014)

The scale of m2m's service delivery can be summarised through m2m's routine monitoring and evaluation systems. Specifically, we report on the scale of service delivery with respect to the number of health facilities supported, Mentor Mothers employed, and clients enrolled. Wherever relevant, we distinguish between services delivered directly by m2m, versus services rendered indirectly by means of Technical Assistance (TA) provided to Implementing Partners.

Facilities

A total of 611 facilities in 6 countries were supported by m2m through both Direct Service Delivery (DSD) and Technical Assistance (TA) in 2014. Of these, 261 facilities were TA, and DSD was offered to 350 facilities. Relative to 2013, the scale of service delivery by means of DSD was very similar. In 2013, the m2m Mentor Mother programme was successfully implemented by means of DSD in 348 sites in 6 countries.

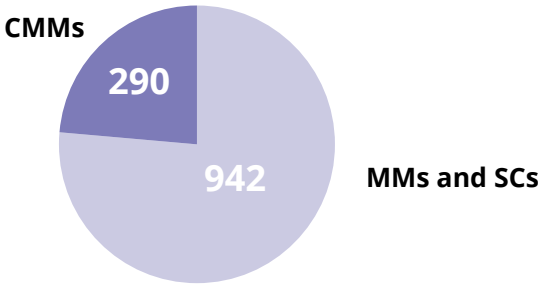
Number of health facilities supported by m2m by means of TA and DSD in 2014



Mentor Mothers

In 2014, m2m employed a total of 1,232 Field Staff in DSD Facilities; including 942 facility-based Mentor Mothers (MMs) and Site Coordinators (SCs) as well as 290 Community Mentor Mothers (CMMs). Note however, that at time of this assessment, the CMM programme was only rolled out in four of the six m2m countries: Uganda, Malawi, Lesotho and Swaziland.

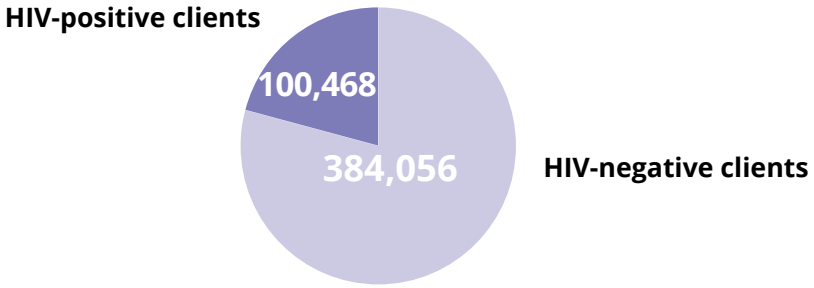
Number of Mentor Mothers, Site Coordinators, and Community Mentor Mothers providing DSD in 2014



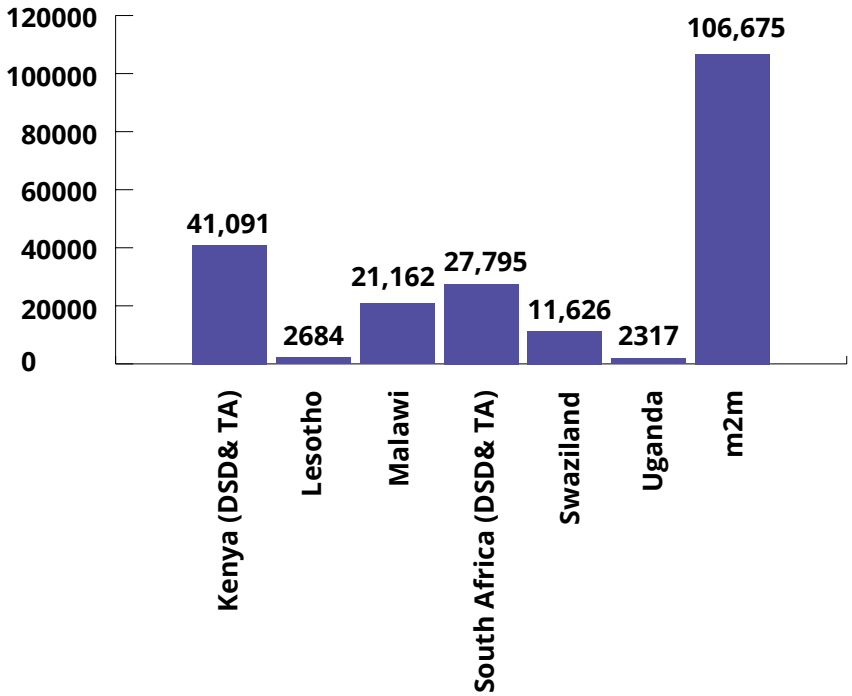
Clients

A total of 148,626 new HIV-positive clients were enrolled by means of DSD and TA in 2014, and Mentor Mothers reached 106,000 HIV-exposed infants. Of these, 39% (n=41,091) were in Kenya, and 26% (n=27,795) were in South Africa. When we include HIV-negative clients, m2m enrolled 484,542 new HIV-positive and HIV-negative clients in 6 countries through DSD. In addition, 29,458 families in 1,351 villages and 4 countries were reached by the Community Mentor Mother programme.

Number of new HIV-positive and HIV-negative clients supported through DSD in 2014



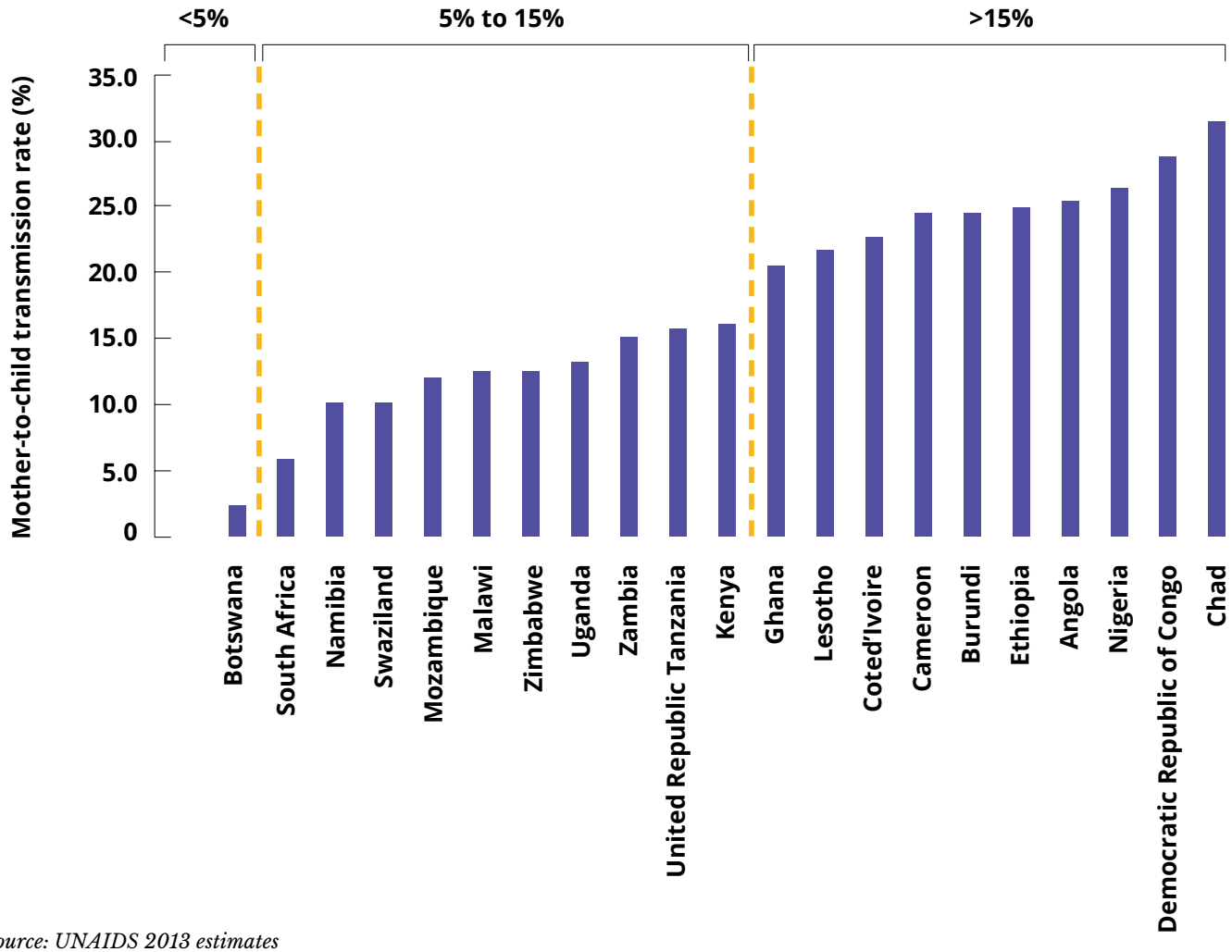
Number of HIV exposed infants born to m2m-supported mothers through DSD and TA



Impact in Comparison to Global Trends and Targets

The latest UNAIDS estimates indicate that almost all Global Plan priority countries have failed to achieve the Global Plan target of a less than 5% MTCT rate after breastfeeding (see figure below). The section which follows compares the final mother-to-child transmission rates revealed from the review and analysis of almost 13,000 longitudinal client records across 87 m2m facilities in 6 supported countries, to these latest country-level UNAIDS Global Plan estimates. We also report briefly on the recent results of two external evaluations of the m2m programme in Uganda and Kenya, which provide further more independently corroborated evidence for programme impact.

Final mother-to-child HIV transmission rates after breastfeeding in 21 Global Plan priority countries



Source: UNAIDS 2013 estimates

Impact versus global trends

In 2013, UNAIDS reports that only 1 of 21 Global Plan priority countries has achieved the target of a less than 5% final mother-to-child HIV transmission rate after breastfeeding. In contrast to these Global Plan country-level trends, MTCT transmission rates among m2m clients are consistently lower than national averages. In Lesotho, Malawi, South Africa, and Swaziland, m2m has already reached the Global Plan goal of less than 5% MTCT by 2015. In Kenya and Uganda, m2m are within 0.5% of the <5% target. Progress towards a 3.2% transmission rate in m2m's Lesotho sites is particularly noteworthy, given that Lesotho is one of the four slowest declining countries in terms of HIV transmission rates since 2009 (<25% decline, along with Angola, Chad, and Nigeria.)
A summary of final MTCT HIV transmission rates in m2m sites, relative to national averages, is presented below.

A comparison of MTCT rates among m2m clients, relative to national averages

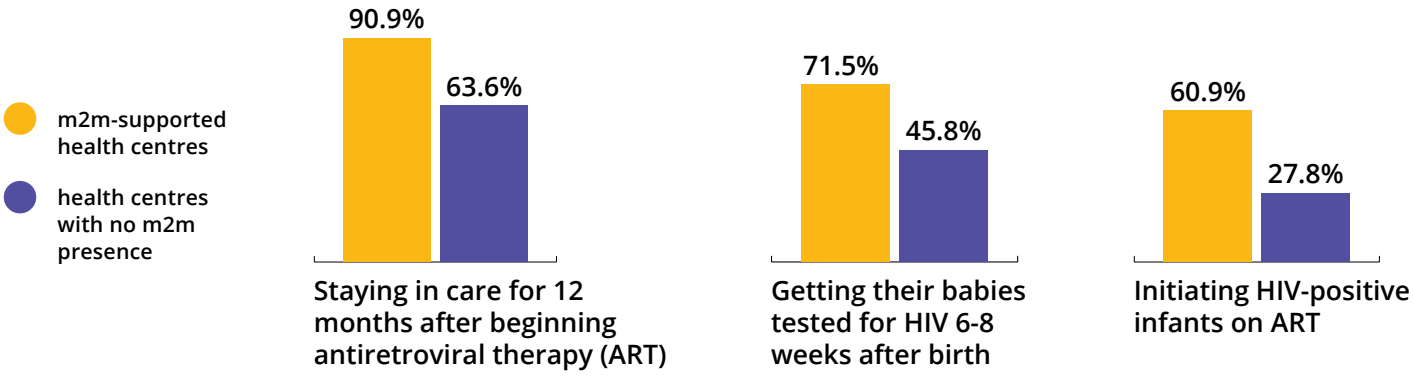
Country	HIV-Positive, m2m		HIV-positive, Nationally
Kenya	5.51%	(3.72-7.82)	16.2%
Lesotho	3.15%	(1.84-4.99)	21.7%
Malawi	4.56%	(3.61-5.68)	12.7%
South Africa	2.81%	(2.07-3.71)	6.1%
Swaziland	2.49%	(1.56-3.74)	10.3%
Uganda	5.49%	(3.33-8.44)	13.3%
m2m	3.73%	(3.25-4.25)	

* *2014 Progress on the Global Plan*

External evaluations

Two external, independent evaluations were commissioned in 2013 to report on m2m impact and cost-benefit in specific countries. In Uganda, a report released in 2014 by the independent researchers found that m2m's Mentor Mother Model, implemented as part of the USAID-funded JSI Research & Training Institute Inc's STAR-EC Project, significantly reduced the number of babies who tested positive for HIV compared to babies at health facilities with no m2m presence. Specifically, mother-to-child HIV transmission rates were found to be 1.6 percentage points lower in m2m facilities at 6 weeks after birth, and 1.9 percentage points lower at 18 months after birth. All of these differences were statistically significant after propensity score weighted statistical adjustments for interventions and control clients. Women attending m2m-supported health facilities in Uganda were also more likely to take healthy actions, such as staying in care for 12 months after ART initiation, getting their babies tested at 6-8 weeks after birth, and initiating HIV-positive infants on ART. Finally, the external evaluation also revealed that the intervention was cost-beneficial, with every US$1 spent on the Mentor Mother Model resulting in US$11.40 in lifetime savings of averted treatment costs.

Health-seeking behaviours in m2m-supported health facilities versus health centres with no m2m presence in Uganda



A second external evaluation of Kenya's Mentor Mother Program (KMMP) is also underway, and at the time of writing this report was at the advanced stages of data analysis and write-up. While the results of this evaluation have not yet been finalised, early indications based on draft reports are that in Kenya, KMMP facilities have been able to demonstrate similar levels of impact on MTCT rates and client behavioural outcomes as seen in Uganda. Moreover, as with Uganda, the preliminary economic costing analysis of the overall model's impact in relation to costs has also shown early indications that the KMMP model is very cost-beneficial.

Global reach of m2m

On the whole, m2m estimates that one in four HIV-positive women delivering babies in m2m-supported countries have been seen by a Mentor Mother. This estimate is based on m2m's 2014 service delivery records, which show that, excluding Swaziland, a total of 134,783 new HIV-positive clients were enrolled by means of DSD and TA in 2014. When these service delivery figures are compared to the UNAIDS 2014 Global Plan Report estimating that 533,000 HIV-positive women delivered babies in m2m supported countries in 2013, up to 25% of HIV-positive women delivering in m2m-supported countries have been seen by a Mentor Mother. In Kenya, this figure is as high as 69%, and in Malawi it is 52%. In contrast, the lowest country-level coverage would be in Uganda, where only approximately 2% of HIV-positive women would have been seen by a Mentor Mother.

Scale of service delivery in countries supported by m2m

Country	HIV-positive women delivering annually (UNAIDS Global Plan, 2014)	Total HIV-positive women enrolled through m2m (DSD or TA)	% of HIV-positive women delivering nationally annually supported by m2m (DSD or TA)
Kenya	79,000	54,508	69%
Lesotho	16,000	3,397	21%
Malawi	58,000	30,232	52%
South Africa	260,000	43,752	17%
Swaziland**	* * Excluded from analysis		
Uganda	120,000	2,896	2%
m2m	**533,000**	**134 785**	**25%**

Progress towards Programmatic Goals

The section that follows draws on descriptive and inferential analysis of the nearly 13,000 longitudinal client records reviewed and analysed as part of the 2014 Annual Evaluation cohort analysis. In this section, we report on critical indicators such as uptake of services by m2m clients along the PMTCT cascade, and performance of the m2m cohort relative to Global Plan trends and targets.

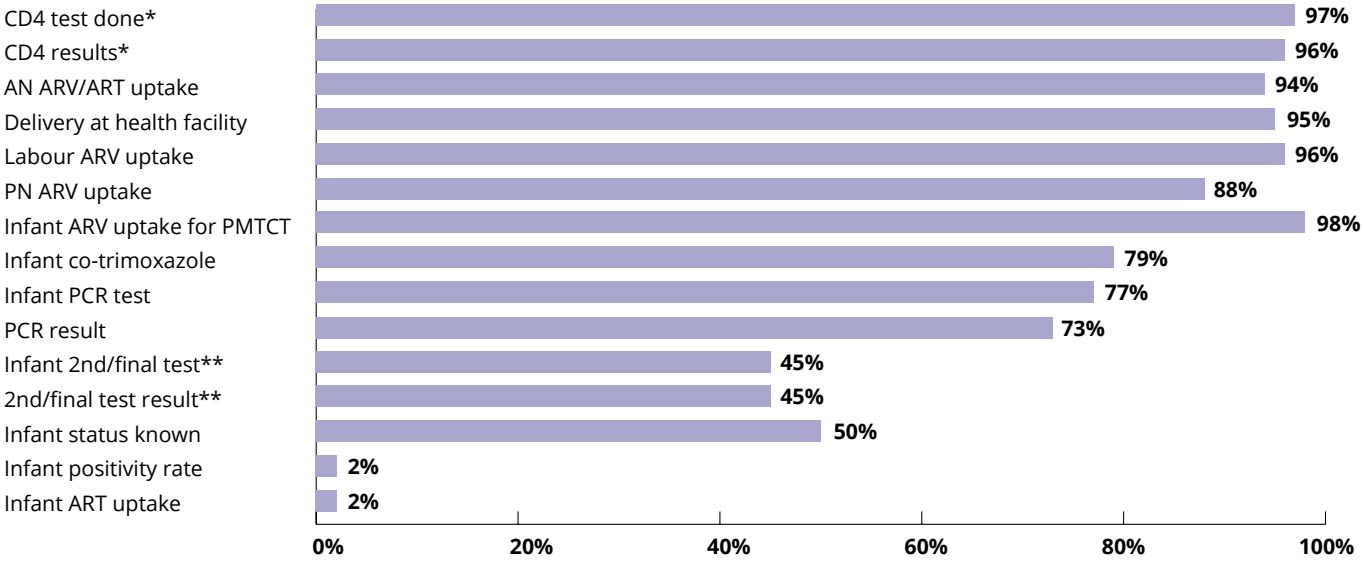
Uptake of services along the PMTCT cascade

The latest UNAIDS estimates suggest that more than half of HIV transmission to infants in 2013 occurred during breastfeeding. This is in part because many countries have placed greater emphasis on antiretroviral medicines during pregnancy and delivery (linked with antenatal care), but less emphasis on systematic follow-up for retention in care during lengthy breastfeeding. Bearing this in mind, it is critical for m2m to support retention-in-care of HIV-positive women through both antenatal and postnatal care.

Across all sites, m2m clients show uptake of between 88% and 97% of all PMTCT services through antenatal care and delivery. However, in line with global norms, we see drop-offs through the postnatal period, with 45% of clients receiving a second infant test result. This figure is, however, a considerable improvement on 2013 data, where 28% of clients received a second test result.

A cascade diagram summarising PMTCT service uptake of the 2014 Annual Evaluation cohort is presented below.

Uptake of services amongst Antenatal (AN) and Postnatal (PN) m2m clients



Final transmission rates

On average, MTCT transmission rates among m2m clients are 2.7% at first test, and 3.7% at the second, 18 to 24 month test. This is well below the Global Plan target of 5%, and consistently below national averages.

MTCT rates between first and final tests among m2m-supported clients

Country	HIV transmission 1st test		HIV transmission 2nd test	
	% HIV-Positive	CI	% HIV-Positive	CI
Kenya	4.78	3.11-6.97	5.51	3.72-7.82
Lesotho	2.36	1.14-4.30	3.15	1.84-4.99
Malawi	3.61	2.79-4.59	4.56	3.61-5.68
South Africa	0.87	0.46-1.49	2.81	2.07-3.71
Swaziland	2.02	1.14-3.32	2.49	1.56-3.74
Uganda	4.3	2.43-6.99	5.49	3.33-8.44
m2m	**2.68**	**2.26-3.15**	**3.73**	**3.25-4.25**

Uptake of services compared with global trends and targets

With very few exceptions, m2m clients that had two or more Mentor Mother visits consistently outperformed national norms for key PMTCT service uptake indicators in all m2m countries. For example, the percentage of women receiving perinatal antiretroviral medicines to prevent new infections among children for women supported with at least two Mentor Mother visits was between 93% and 99% in all m2m-supported countries. This can be compared to national PMTCT uptake estimates from the 2014 Progress Report on the Global Plan (UNAIDS), which are as low as 53% in Lesotho and 63% in Kenya. Other key PMTCT uptake indicators for which m2m very comfortably outperformed national averages are uptake of antiretroviral prophylaxis by HIV-positive pregnant women, uptake of cotrimoxazole prophylaxis by HIV-positive babies, and uptake of a virological test for HIV within two months of birth. For these three indicators, the average uptake across all countries for m2m clients with two or more visits were 37% and 27% and 38% higher than national averages, respectively. Special mention might be made here of the PMTCT service uptake results reported for Lesotho, which is globally one of the Global Plan priority countries with the slowest rate of improvement, but which shows between 43% and 60% higher service uptake among clients with at least two m2m visits relative to national facility averages.
Detailed, country-level disaggregated analysis for these key indicators are presented in the tables that follow.

Perinatal antiretroviral medicine uptake

Percentage of women receiving perinatal antiretroviral medicines to prevent new infections among children *	% Uptake Nationally	% Uptake among m2m clients with at least 2 m2m visits
Kenya	63% (55-72)	98% (95-99)
Lesotho	53% (49-59)	96% (94-98)
Malawi	79% (71-88)	96% (95-97)
South Africa	90% (83-95)	93% (91-94)
Swaziland	>95%	99% (98-100)
Uganda	75% (68-85)	96% (93-98)

** 2014 Progress Report on the Global Plan, UNAIDS*

Perinatal antiretroviral medicine uptake

Percentage of infants born to pregnant women living with HIV started on antiretroviral prophylaxis to prevent mother-to-child transmission, 2013*	% Uptake Nationally	% Uptake among m2m clients with at least 2 m2m visits
Kenya	55% (48-63)	95% (93-97)
Lesotho	36% (33-40)	96% (93-97)
Malawi	51% (46-57)	96% (95-96)
South Africa	92% (84-95)	98% (98-99)
Swaziland	84% (78-91)	99% (98-99)
Uganda	32% (29-36)	87% (83-90)

** data.unicef.org | online HIV/AIDS database 2014*

Postnatal cotrimoxazole prophylaxis uptake

Percentage of infants born to pregnant women living with HIV started on cotrimoxazole prophylaxis, 2013*	% Uptake Nationally	% Uptake among m2m clients with at least 2 m2m visits
Kenya	-	98% (98-100)
Lesotho	-	69% (65-73)
Malawi	42% (38-47)	89% (88-90)
South Africa	78% (72-86)	83% (81-84)
Swaziland	90% (84-99)	84% (81-86)
Uganda	26% (23-30)	91% (87-93)

** data.unicef.org | online HIV/AIDS database 2014*

Infant virological test uptake

Percentage of infants born to pregnant women living with HIV receiving a virological test for HIV within two months of birth*	% Uptake Nationally	% Uptake among m2m clients with at least 2 m2m visits
Kenya	42% (37-48)	98% (97-99)
Lesotho	36% (33-40)	80% (76-83)
Malawi	15% (13-17)	80% (79-82)
South Africa	78% (72-86)	86% (84-87)
Swaziland	89% (82-97)	84% (81-86)
Uganda	36% (33-41)	96% (94-98)

** data.unicef.org | online HIV/AIDS database 2014*

On the whole, m2m consistently outperforms national averages for all key PMTCT uptake indicators. In Swaziland where uptake is already high for a number of indicators, m2m either maintains or exceeds the high standard seen in the national figures. Differences between Swaziland national and m2m uptake rates for cotrimoxazole prophylaxis and virological tests are not statistically significant.

Evidence for Programme Efficacy

The section that follows draws on inferential analysis conducted on the nearly 13,000 longitudinal client records extracted for m2m's 2014 Annual Evaluation cohort analysis. In this section, researchers compared service uptake patterns and PMTCT outcomes of clients with two or more m2m visits to clients with only one m2m visit.
The results of this programme efficacy analysis consistently revealed that outcome attainment was higher among women with two or more Mentor Mother visits. On the whole the analysis revealed that women with more than

two Mentor Mother visits were almost six and a half times more likely to have an infant who was HIV negative at the final test. More specifically, key behavioural outcomes such as disclosure, uptake of family planning, and incidence of exclusive breastfeeding were all significantly higher in groups with more Mentor Mother visits, even after adjusting statistically for potentially confounding variables that were intrinsically different among the two groups. Uptake of maternal PMTCT services was also consistently higher among clients with more Mentor Mother visits; for example clients with two or more Mentor Mother visits were almost four times more likely to take up antenatal prophylaxis, and were more than two times more likely to take up postnatal prophylaxis than clients with only one visit. Finally, infants born to clients with two or more Mentor Mother visits were also 60% more likely to take up infant prophylaxis, and were also more than two times more likely to take up PCR tests.

Detailed outputs from this inferential analysis are provided in the table below. Regression outputs in the table should be interpreted as follows: if the p value is below or equal to 0.05, there is only a 5% chance that these differences between the two groups were by chance alone. The difference between the groups is thus considered statistically significant. The odds ratio should be interpreted as the increased odds of the clients with more Mentor Mother support showing or achieving the outcome of interest. When the OR is 1, the odds are even, but anything less than or greater than one (that is also statistically significant) can be interpreted as either lower or higher relative risk. Thus, a significant odds ratio of 3.86 for antenatal prophylaxis uptake shows that women seen by Mentor Mothers at least two times before they were offered antenatal prophylaxis were 3.86 times more likely to exhibit this behaviour than women who had seen a Mentor Mother only once before being offered this service.

Raw frequency and regression outputs for clients with one versus two or more Mentor Mother visits

Indicator	OR	Coef.	p-value	2+ m2m visits	1 m2m visit
Maternal Behavioural Outcomes					
Disclosure (All clients)	3.08		<0.001	95%	78%
Using Family Planning (PN-any clients)	1.26		0.012	74%	65%
Using Dual Family Planning (PN-any clients)	1.26		0.108	12%	11%
Exclusive breast feeding first 6 months (PN-any clients)	1.67		<0.001	84%	75%
Exclusive feeding first 6 months (PN-any clients)	2.38		<0.001	92%	82%
Uptake of Maternal PMTCT Services					
CD4 test (AN-any clients)	-	-	-	-	-
CD4 test result (AN-any clients)	-	-	-	-	-
AN Prophylaxis (AN-any clients)	3.86		<0.001	96%	77%
Delivered at a health facility (PN-any clients)	-	-	-	-	-
Prophylaxis during labour (PN-any clients)	-	-	-	-	-
PN Prophylaxis (PN-any Clients)	2.27		<0.001	86%	74%
Retention-in-Care, composite indicator (AN-any clients)		6.32	<0.001		
Uptake of Infant PMTCT Services					
Infant prophylaxis (PN-any clients)	1.6		0.017	96%	93%
Infant CPT (PN-any clients)	1.63		0.001	78%	72%
PCR test (PN-any clients)	2.31		<0.001	75%	58%
PCR test results (PN-any clients)	2.42		<0.001	72%	52%
Infant 2nd test (PN-any clients)	-	-	-	-	-
Infant 2nd test result (PN-any client)	-	-	-	-	-
Impact - MTCT Rate					
Infant HIV status HIV-negative (PN-any clients)	6.4		<0.001	93%	70%

Conclusion

m2m 2014 Annual Evaluation indicates that MTCT has been virtually eliminated among m2m clients. Moreover, in 2014 more than 100,000 HIV-exposed infants benefited from the Mentor Mother Model, and based on the 2014 UNAIDS Global Plan national HIV prevalence estimates, one in four HIV-positive women delivering in countries supported by m2m have been seen by a Mentor Mother. There was also compelling evidence for programme efficacy. On average, m2m clients who had two or more Mentor Mother visits consistently outperformed national averages reported for key PMTCT service uptake indicators. Among m2m clients, women with more than two Mentor Mother visits were almost six and a half times more likely to have an infant who was HIV-negative at a final 18 to 24 month infant HIV test, relative to m2m clients with only one Mentor Mother visit. Finally, two recent independent evaluations from Uganda and Kenya have corroborated the findings of the internal evaluation that HIV-positive pregnant mothers supported by Mentor Mothers have significantly lower MTCT rates, as well as better overall PMTCT uptake and psychosocial wellbeing. Both external evaluations have also found the m2m model to be very cost-beneficial.