15 YEARS

mothers2mothers

mothers2mothers 2015 Annual Evaluation

A multi-country evaluation of mothers2mothers' operations in Kenya, Lesotho, Malawi, South Africa, Swaziland, and Uganda.

Key Findings

August 2016

Department of Programmes and Technical Support

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Acronyms and Abbreviations

AIDS	Acquired Immunodeficiency Syndrome
AN	Antenatal
ARVs	Antiretroviral Drugs
CMMs	Community Mentor Mothers
DSD	Direct Service Delivery
FMMs	Family Mentor Mothers
MTCT	Mother-to-Child Transmission of HIV
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
SAMMP	South Africa Mentor Mother Programme
SC	Site Coordinators
SD	Standard deviation from the mean
TA	Technical Assistance delivered to Implementing Partners

Acknowledgements

Executive Summary

Overview

mothers2mothers (m2m) is an Africa-based, global non-governmental organisation that unlocks the potential of mothers and their families through scalable, high-impact interventions. This year marks the fifteen year anniversary of m2m's signature Mentor Mothers programme, where HIV-positive mothers work alongside health facility personnel to prevent mother-to-child transmission of HIV (PMTCT). Since operations began in 2001, m2m has supported almost 1.5 million HIV-positive women. This year also marks the expansion of m2m's facility-to-community platform, which was first initiated in Malawi in 2013. For the first time in 2016, we now report the scale of our service delivery in terms of our service to families.

This short report communicates the key findings of the m2m 2015 Annual Evaluation. The report covers the scale of m2m service delivery from January 2015 to December 2015 in terms of outputs and numbers of beneficiaries reached, as well as the quality of care provided to clients over the period February 2013 to December 2015. Key features of this evaluation entail 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's programme efficacy based on impact evaluations. These include an evaluation of the community-to-facility platform, an exploration of the efficacy of the m2m model on PMTCT uptake and outcome attainment using internal data, and a synthesis of the findings of two external impact and economic costing evaluations.

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 13,317 clients from 87 facilities were retrieved and analysed to assess progress of m2m clients towards key programmatic goals. Finally, for the first time in 2015, additional data were extracted from m2m's new routine ART adherence monitoring tools to explore country-level adherence trends.

Findings

Service Delivery

The continued expansion of m2m's facility-to-community platform resulted in a 35% increase in beneficiaries reported in 2015 relative to 2014. In 2015, 860, 503 HIV-positive and HIV-negative women, infants, children, adolescents, and men accessed services through either Direct Service Delivery (DSD) or Technical Assistance (TA) given to implementing partners. In total, 79,774 families in 1,451 villages in 6 countries were reached through the facility-to-community platform.

In 2015, 876 health facilities in 6 countries were supported by m2m through both DSD and TA. In addition, m2m employed a total of 1,390 field staff; comprising 865 facility-based Mentor Mothers and Site Coordinators, 470 Community Mentor Mothers, and 55 Family Mentor Mothers delivering integrated Early Childhood Development / PMTCT services. A total of 140,056 new HIV-positive clients were enrolled by means of DSD and TA to IPs in 2015, and Mentor Mothers reached 103,592 HIV-exposed infants.

When our service delivery outputs are compared with UNAIDS 2015 Global Plan Report estimates as to the number of HIV-positive women delivering within the reporting period, more than 25% of HIV-positive women delivering in countries supported by m2m have been seen by a Mentor Mother.

Uptake of PMTCT Services

m2m clients show uptake of between 95% and 99% of all PMTCT services through antenatal care and delivery. On average, m2m clients who had two or more Mentor Mother visits consistently outperformed national norms for key PMTCT service uptake indicators. However, in line with global performance, we see drop-offs through the postnatal period, with 62% of clients receiving a second infant test result. This figure is, however, a great improvement on 2014 data, where 46% of clients enrolled at any time, and 50% of clients enrolled antenatally and retained postnatally, received a second test result. The improvement is attributed within m2m to the roll-out of quality improvement initiatives and a new client management tool, the client appointment diary.

Adherence to ART Treatment

We examined the early outcomes of our newly implemented adherence monitoring module, which will provide a baseline against which to assess future progress. We and found that 92.5% of our clients in Lesotho, 83.6% in Malawi, and 82.7% in Uganda were >95% adherent based on a 7-day recall of missed doses, and across m2m, 87.9% of clients on average were >95% adherent. Based on a 5-point behavioural and self-efficacy adherence scale, we found that 94.3% of our clients in Lesotho, 98.3% in Malawi, 90.4% in Uganda, and overall 94.4% were consistently highly adherent, or improving in adherence.

Impact on PMTCT

On average, MTCT transmission rates among m2m clients were 1.8% at first test, and 2.1% 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 in m2m-supported countries reported in the 2015 UNAIDS Global Plan report. In Kenya, Lesotho, Malawi, South Africa, and Swaziland, m2m has already reached the Global Plan goal of less than 5% MTCT by 2015. In Uganda, m2m is within 0.8% of this <5% target.

Within m2m clients, inferential analysis using multivariate regression showed that outcome attainment tended to be 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 were 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 four times more likely to have an infant who was HIV-negative at the final test.

Overall, m2m's routine internal data analysis trends have been corroborated by two external evaluations of m2m's Mentor Mother Model (HECTA, 2015; Zikusooka, et al., 2014). The first, implemented as part of the USAID-funded JSI Research & Training Institute Inc's STAR-EC Project in Uganda, found that relative to control health facilities MTCT in m2m-supported facilities was 1.6 percentage points lower 6 weeks after birth (p=0.039), and 1.9 percentage points lower 18-months after birth (p=0.039). The intervention was also found to be cost-beneficial. Relative to health facilities with no form of psychosocial support offered to women during PMTCT, for every US$1 spent on the Mentor Mother Model, there was found to be a US$11.40 saving in averted lifetime ART treatment costs.

A second external evaluation of the Kenya Mentor Mother Program (KMMP) has found MTCT to be 3.4 percentage points lower at 9 months (p=0.006), and 5.4 percentage points lower at 18 months (p=0.005) (HECTA, 2015). Like in Uganda, the intervention was also found to be cost-beneficial. Relative to health facilities offering some form of psychosocial support during PMTCT (but not the m2m model of support) with every US$1 spent on the KMMP there was a US$7.0 in lifetime saving in averted ART treatment costs.

Impact of Community-to-Facility Platform

An interrupted time series analysis used segmented regression to explore the impact of the community-to-facility platform on population-level health trends. The analysis showed that in Swaziland the total number of new one-on-one interactions with women at the health facilities linked to the community-to-facility platform increased by 19 interactions a month relative to control health facilities with no community-to-facility platform (p = 0.02). In Uganda, the number of return antenatal interactions has slowly been increasing on a monthly basis in community-to-facility sites since the introduction of the programme in 2014. Relative to controls, community-to-facility sites are gaining on average 1.6 more return antenatal interactions a month (p = 0.03).

In Swaziland, relative to a control facility, the community-to-facility platform dramatically lowered gestational age of first booking for HIV-positive women at the point of the introduction of the community-to-facility platform in 2 out of 3 of the health facilities we evaluated. In the third, changes were not statistically significant. Specifically, gestational age at first booking decreased relative to the control facility by an average of 8.4 weeks and 9.9 weeks after the introduction of the programme (z_x= -8.42, p=0.001; z_x= -9,91, p=0.004). In Malawi, decreases in gestational age were more gradual, with a statistically significant decrease relative to the control health facility of -0.54, -0.39 and -0.38 weeks per month in the three health facilities evaluated. A year after the introduction of the programme, this would imply that the intervention health facilities in Malawi would have 6.6, 4.7, and 4.5 weeks lower gestational age, respectively, than the control health facility, at the same point in time.

Conclusion

m2m's 2015 Annual Evaluation indicates that MTCT has been virtually eliminated among m2m clients. Moreover, in 2015 more than 103,592 HIV-exposed infants benefited from m2m's Mentor Mother Model. Furthermore, based on the 2015 UNAIDS Global Plan national HIV prevalence estimates, at least one in four women delivering in countries supported by m2m have been reached by the Mentor Mother Model.

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 four 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. An impact evaluation of the community-to-facility platform showed evidence in some countries and health facilities of impact on client volume, and lowered gestational age a first booking. The community-to-facility platform has also been instrumented in expanding the reach of m2m in 2015, with 35% more clients been reported relative to the same period in 2014.
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 unlocks 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 a healthy generation starts 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 psychosocial 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's longitudinal data for clients who have had time to complete the PMTCT cascade, as well as a review of m2m's routine performance monitoring data throughout the year for the entire range of m2m facility-only, and facility-to-community services. This short report communicates the key findings of the 2015 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 Design

PMTCT/Cohort Analysis

Evaluation questions concerning progress towards m2m's programmatic goals within the area of PMTCT 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 (including uptake of Early Infant Diagnosis services), 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 clients enrolled in m2m care at different points through the PMTCT cascade. Where appropriate, we compared our clients' outcomes to national targets and trends as reported in the 2015 Global Plan Report, as well as data from UNICEF's online HIV/AIDS database (data.unicef.org, 2015).

For the retrospective cohort review, the evaluation team sought to extract a representative sample of client records from m2m-supported health facilities. A stratified random sampling approach was used, where the research team selected a random subsample of health facilities stratified on country district/region. Once selected, all records of clients enrolled in m2m care between February 2013 and July 2013 were retrieved and examined for that facility (i.e. a 29-34 month cohort). In total, m2m pulled and analysed 13,317 of these records of clients from 87 facilities in 6 countries.

Although m2m experienced a number of health facility closures in 2015, replacement facilities were selected by the evaluation team that were matched as closely as possible on facility type and district. As a result, the characteristics of sampled health facilities in 2014 and 2015 were identical (see Table 1).

Table 1: Distribution of health facilities in the sampling design, comparison 2014 vs. 2015.

	2014		2015	
	Number of sites	% (CI)	Number of sites	% (CI)
Health Centre	37	42.5% (40.0-53.5)	37	42.5% (40.0-53.5)
Clinic	24	27.6% (18.5-38.2)	24	27.6% (18.5-38.2)
Hospital	26	29.9% (20.5-40.6)	26	29.9% (20.5-40.6)

Adherence Support

In 2015, m2m began to roll-out the routine monitoring of adherence to ART among facility-only and facility-to-community clients. Two forms of adherence monitoring are employed by the Mentor Mother at each client consultation: a seven-day recall of doses missed, and a 5-point question index of adherence behaviour and self-efficacy. The roll-out of adherence monitoring using these measures within m2m is indicated in Appendix A.

In those countries and health facilities where roll-out was mature enough by the end of 2015, client adherence cards were extracted and the two measures of adherence summarised at a country-level. Three months of data (October – December) from health facilities in three countries (Malawi, Lesotho and Uganda) was extracted and summarised in this way. In 2016, m2m anticipate a more thorough analysis that is representative of more clients in all m2m-supported countries.

Exposure Analysis

For questions concerning evidence of m2m's programme efficacy within the PMTCT cascade, we used an inferential analyses based on a quasi-experimental design. 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.

Community-to-Facility Programmatic Platform

The second inferential analysis used segmented regression to explore the impact of the introduction of the community-to-facility platform on trends in population-level indicators. The approach, also called interrupted time series analysis, looks for changes (or "interruptions") in a time series of data at the point that a policy or intervention is introduced. Time series data is any data where a single variable (or indicator) is subject to repeat measurements over time, such as routine monthly health facility data. The analysis has been proposed as one of the most robust quasi-experimental designs available to evaluators, and it is believed to be particularly suited to the exploration of the impact of interventions delivered at the community or population-level (Biglan, Ary, &

Wagenaar, 2000; Fretheim, et al., 2015; Penfold & Zhang, 2013). Population-level indicators explored were the number of new and return postnatal and antenatal interactions recorded at a health facility on a monthly basis, average gestational age of HIV-positive women at first antenatal booking, as well as the number of interactions with clients accompanied by male partners, per month. The analysis was run at a country-level for Malawi, Lesotho, Swaziland, and Uganda. Data were derived by splitting routine monthly health facility data into two groups: an intervention group of health facilities running the facility-to-community platform, and a control group of health facilities with no community-to-facility platform. The average of all intervention and controls were taken for each indicator, except for gestational age at first booking where 3 individual intervention health facilities were contrasted to a single control facility (this is because gestational age at first booking is not reported routinely, and had to be specially extracted for the analysis). Formally, the analysis tested for a statistically significant change in monthly health facility data in intervention relative to control health facilities *, at the point of (and after) the introduction of the programme.

The Scale of Service Delivery

Evaluation questions concerning the scale of mothers2mothers' service delivery were answered using a descriptive framework, drawing on data collected through m2m's routine monitoring and evaluation platform and database for the period January 2015 to December 2015. 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.

Data Analysis

PMTCT and Cohort Analysis

Data stored in the m2m log books were captured electronically using Microsoft Access, and exported to STATA version 14 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.

Adherence Support

Adherence data were processed as follows. For the seven day recall of doses missed, an average of the adherence percentage recorded at each visit was calculated and grouped in <80% adherence, 80-95% adherence and >95% adherence. For the 5-point question index of adherence self-efficacy, a summary of adherence was created based on the rating clients were given on each visit **.

*   Or relative to the pre-intervention time series where controls were not available, for example in Lesotho.
**   These summaries were then grouped into five groups as follows: Consistently high adherence (e.g. high at first visit, high at second visit and high at third visit), improvement in adherence (e.g. low at first visit, moderate at second visit and high at third visit), and consistently moderate adherence (e.g. moderate at first visit, moderate at second visit and moderate at third visit), consistently low adherence (e.g. low at first visit, low at second visit and low at third visit), decline in adherence (e.g. high at first visit, moderate at second visit and low at third visit) and inconsistent adherence (.e.g. low at first visit, high at second visit and low again at third visit).

Exposure Analysis

Logistic regression was used in order to assess the difference between the outcomes of clients with multiple visits and 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.

Facility-to-Community Programmatic Platform

Ordinary least-squares (OLS) regression models were used for the interrupted time series analysis, with the use of a Newey-West estimator to acquire standard errors that are able to adjust for the autocorrelation and heteroscedasticity that is often seen in time series data *** (Newey & West, 1987). All analyses were done in STATA version 14 using the "itsa" add-on (Linden, 2015). The analysis tested for a break in continuity of the time-trend for the monthly health facility data in intervention facilities at the point of the introduction of the community-to-facility program (an interruption in the regression line intercept on the y-axis), and where available, relative to control health facilities. It also tested for a change in the rate of change between data-points over time (a change in slope of the regression line) after the programme introduction, relative to both the pre-intervention slope, and where available, relative to the slope of the controls.

The Scale of our Service Delivery

In order to address questions around m2m's impact in comparison to global trends and targets, we used descriptive statistics to compare average national MTCT rates for m2m clients versus national level averages from UNAIDS statistics (as acquired from the 2015 Global Plan Report).

The Scale of Service Delivery (January to December 2015)

The scale of m2m's service delivery can be summarised through its routine monitoring and evaluation systems. Specifically, we report on the scale of service delivery with respect to the number of services delivered via Direct Service Delivery (DSD) and Technical Assistance (TA) to families: both HIV-positive and HIV-negative women, their male partners, children, and adolescents. We further report on the number of health facilities supported, Mentor Mothers employed, and HIV-positive clients enrolled at the facility-level. Wherever relevant, we distinguish between services delivered by means of DSD and TA.

***   Adjustments for autocorrelation relate to the fact that repeat measures on an indicator from the same health facility over time might be correlated with each other, and adjustments for heteroskedasticity are often required because the extent to which facility data varies from month-to-month may not be consistent over time. Both of these characteristics, common in time-series data, would ordinarily violate the assumptions needed for OLS regression unless appropriate adjustments were made.

Families Receiving Services

In 2015, the expansion of m2m's facility-to-community platform embodied a fundamental shift in how we define our target clients – from the traditional index-client of the HIV-positive mother and infant, to a broader client base of both HIV-positive and HIV-negative mothers and their families. This influenced in turn how m2m reach and report on beneficiaries, and how we define output or reach indicators.

Table 2 shows the number of clients reached by our facility-to-community family-centred approach in 2015. This includes DSD and TA. Based on these figures, there is a 35% increase in beneficiaries reported, 2014 vs 2015, where in 2014 only 639, 357 clients were recorded. In total, 79,774 families in 1,451 villages and 6 countries were reached by the facility-to-community platform. It should further be noted that the transition from old to new client management tools in community-based service delivery during the course of 2015 resulted in under-reporting of clients reached through the community-to-facility platform. Therefore the 2015 numbers reported may be an undercount.

Table 2: Total number of beneficiaries reached through DSD and TA in 2015

Type of beneficiaries	2015
Infants, aged 0-2	172 297
Children aged >2-9	160 171
Adolescent Girls and Young Women	176 325
Women, aged 25+	318 189
Men	33 521
Total number of beneficiaries reported	**860 503**

Health Facilities

A total of 876 health facilities in 6 countries were supported by m2m through both DSD and TA in 2015. In contrast, in 2014 the m2m Mentor Mother programme was successfully implemented by means of DSD in 350 sites in 6 countries.

Number of health facilities supported by m2m by means of Technical assistance to Implementing partners and DSD in 2015

Technical Assistance (TA) 555 — 321 Direct Service Delivery (DSD)
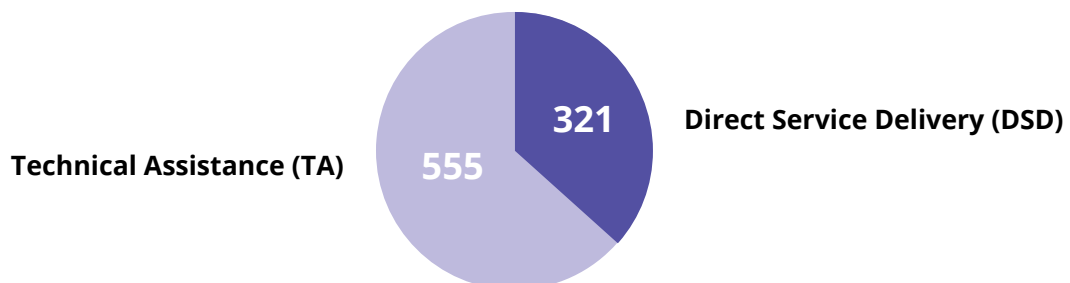
Mentor Mothers

In 2015, m2m employed a total of 1,390 field staff; comprising 865 facility-based Mentor Mothers and Site Coordinators, 470 Community Mentor Mothers, and 55 Family Mentor Mothers delivering integrated Early Childhood Development / PMTCT services.

Number of Mentor Mothers (MMs), Family Mentor Mothers (FMMs), Site Coordinators (SCs), and Community Mentor Mothers (CMMs) providing DSD in 2015

Number of MMs and SCs employed at Health Facilities (DSD)

Number of facility-to-community platform MMs and SCs employed (DSD)

Number of FMMs employed for integrated PMTCT/EDC services (DSD)
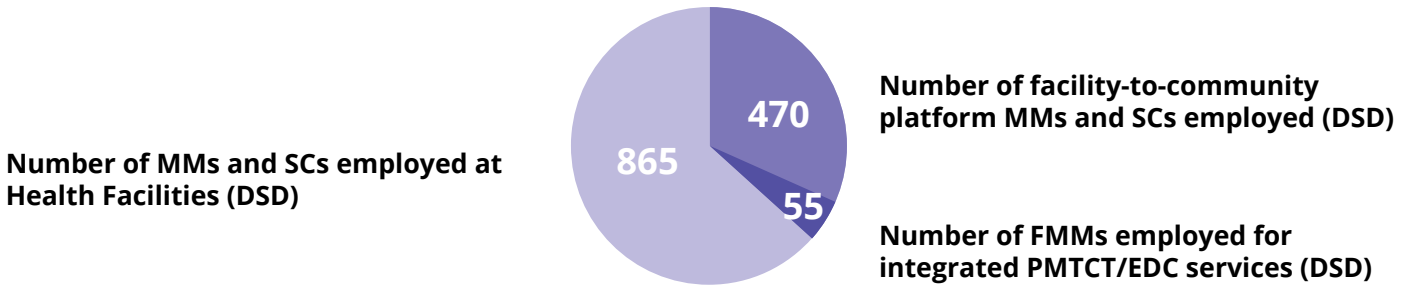
HIV-Positive Mother-Baby Pairs

A total of 140,056 new HIV-positive clients were enrolled by means of DSD and TA to IPs in 2015, and Mentor Mothers reached 103,592 HIV-exposed infants. Of these, 37% (n=38,824) were in Kenya, and 32% (n=33,044) were in South Africa – the two countries where m2m provides TA to IPs and government.

Number of new HIV-positive women supported through DSD and TA in 2015, relative to 2014

- **2014**
- **2015**
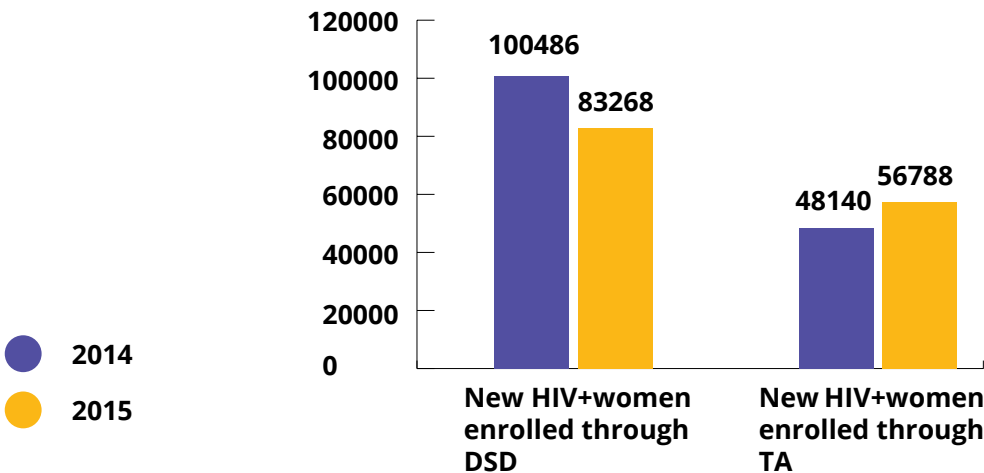
Number of HIV-exposed infants born to m2m-supported mothers through DSD and TA to IPs in 2015
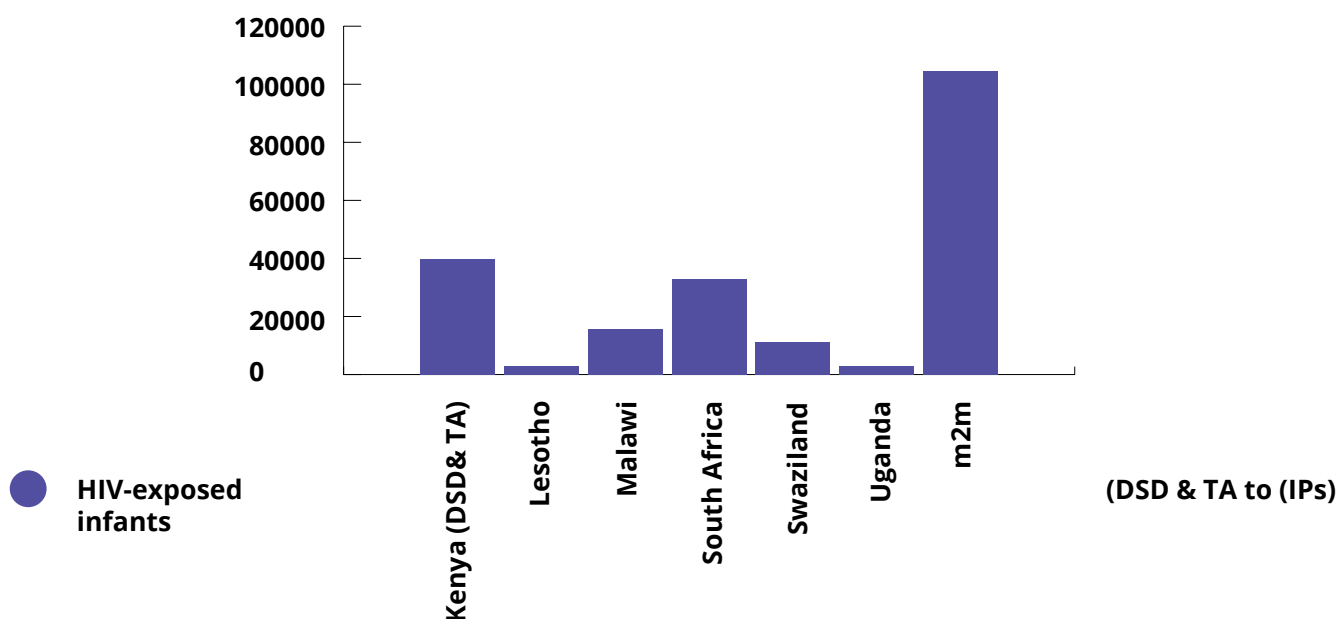
Detailed Beneficiary Breakdown

In summary, Table 3 presents a more detailed breakdown as to the range of beneficiaries reached by mothers2mothers in 2015.

Table 3: Detailed breakdown of beneficiaries reached by means of DSD and TA in 2015.

Type of beneficiary	Number of beneficiaries
Direct service delivery – Facility	
HIV-positive pregnant women and HIV-positive mothers, aged 25+	56 039
HIV-negative pregnant women and HIV-negative mothers, aged 25+	223 572
HIV-positive pregnant young women and young mothers, aged 20-24	21 650
HIV-negative pregnant young women and young mothers, aged 20-24	86 372
HIV-positive adolescent girls, aged 10-19 (pregnant and mothers)	5 579
HIV-negative adolescent girls, aged 10-19 (pregnant and mothers)	22 257
HIV-exposed infants, aged 0-2	59 370
HIV-unexposed infants, aged 0-2	68 705
Men, aged 18+ reached through facility based service delivery	8 329
Direct service delivery - Facility-to-Community	
Young Women, regardless of HIV status, aged 20-24	8 440
Adolescent girls, regardless of HIV status, aged 10-19	13 817
Children, aged 2-9	160 171
Men, aged 18+	25 192
Indirect service delivery – Facility	
HIV-positive pregnant women and HIV-positive mothers	56 788
HIV-exposed infants, aged 0-2	44 222
Total - all beneficiaries	**860 503**

On the whole, m2m estimates that one in four HIV-positive women delivering in m2m-supported countries have been reached by the Mentor Mother Model. This estimate is based on m2m's 2015 service delivery records, which show that, excluding Swaziland, a total of 126,669 new HIV-positive clients were enrolled by means of DSD and TA to IPs in 2015. When these service delivery figures are compared to the UNAIDS 2015 Global Plan Report estimating that 506,000 HIV-positive women delivered babies in m2m-supported countries in 2014, up to 25% of HIV-positive women delivering in m2m-supported countries have benefited from the Mentor Mother Model (Table 4). In Kenya, this figure is as high as 63%. In contrast, the lowest country-level coverage would be in Uganda, where only approximately 2% of HIV-positive women delivering were seen by a Mentor Mother.

Table 4: Scale of service delivery in countries supported by m2m

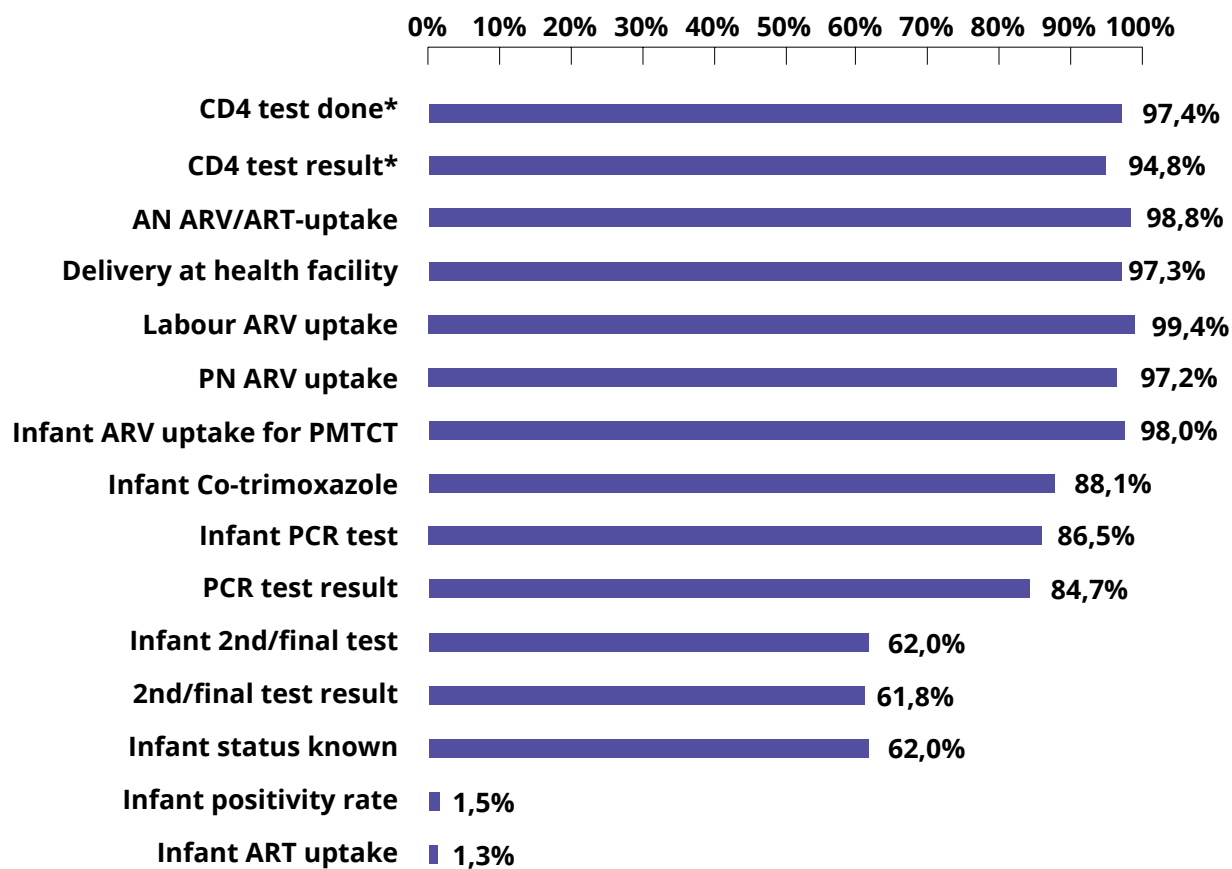| Country	HIV-positive women delivering annually (UNAIDS Global Plan, 2015)	Total HIV-positive women enrolled through m2ms (DSD or TA to IPS)	% of HIV-positive women delivering nationally annually supported by mothers2mothers (DSD or TA to IPs)
Kenya	75 000	47 346	63%
Lesotho	11 000	3 384	31%
Malawi	60 000	22 221	37%
South Africa	240 000	50 916	21%
Swaziland**	** Excluded from analysis		
Uganda	120 000	2 802	2%
m2m	**506 000**	**126 669**	**25%**

Uptake of PMTCT Services

The section that follows draws on descriptive and inferential analysis of the 13,317 longitudinal client records reviewed and analysed as part of the 2015 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.

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.

m2m clients show uptake of between 95% and 99% of all PMTCT services through antenatal care and delivery. On average, m2m clients who had two or more Mentor Mother visits consistently outperformed national norms for key PMTCT service uptake indicators. However, in line with global performance, we see drop-offs through the postnatal period, with 62% of clients receiving a second infant test result. This figure is, however, a great improvement on 2014 data, where 46% of clients enrolled in m2m care at any time, and 50% of clients enrolled antenatally and retained postnatally, received a second test result. The improvement is attributed within m2m to the roll-out of quality improvement initiatives and new client management tool, the client appointment diary.

A cascade diagram summarising PMTCT service uptake of the 2015 Annual Evaluation cohort is presented below.

Uptake of services among m2m clients enrolled antenatally and retained in m2m care through the postnatal period.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%	
CD4 test done*	97,4%
CD4 test result*	94,8%
AN ARV/ART-uptake	98,8%
Delivery at health facility	97,3%
Labour ARV uptake	99,4%
PN ARV uptake	97,2%
Infant ARV uptake for PMTCT	98,0%
Infant Co-trimoxazole	88,1%
Infant PCR test	86,5%
PCR test result	84,7%
Infant 2nd/final test	62,0%
2nd/final test result	61,8%
Infant status known	62,0%
Infant positivity rate	1,5%
Infant ART uptake	1,3%

*   Malawi excluded from CD4 analysis

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 benchmarks 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 89% and 99% in all m2m-supported countries. This can be compared to national PMTCT uptake estimates for this indicator from the 2015 Progress Report on the Global Plan (UNAIDS), which are as low as 64% in Malawi and 67% 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.

Detailed, country-level disaggregated analysis for these key indicators are presented in Appendix B.

Adherence to ART Treatment

Adherence data below reflect data from a period just after start-up of implementation of m2m's new adherence support module, and will constitute a baseline against which m2m will continue to monitor performance. We found that 92.5% of our clients in Lesotho, 83.6% in Malawi and 82.7% in Uganda were >95% adherent based on the 7-day recall of missed doses and organisationally 87.9% of clients were >95% adherent (see Table 5). Based on a 5-point behavioural and self-efficacy adherence scale, we found that 94.3% of our clients in Lesotho, 98.3% in Malawi, 90.4% in Uganda and overall 94.4% were consistently highly adherent or improving in adherence (see Table 6).

Table 5: Average adherence, based on a 7-day recall by country (October – December 2015), using m2m adherence card.

	<80% adherence	80-95% Adherence	>95% adherence
Lesotho	2.2.%	5.3%	92.5%
Malawi	4.8%	11.6%	83.6%
Uganda	7.5%	9.7%	82.7%
m2m	**4.1%**	**8.0%**	**87.9%**

Table 6: Average adherence consistency by country (October – December 2015), using m2m's behavioural and self-efficacy measure (5-questions).

	Consistently High	Improvement in Adherence	Consistently Moderate	Consistently Low	Decline in Adherence	Inconsistent
Lesotho	87.8%	6.5%	0.3%	0.2%	3.0%	2.2%
Malawi	81.1%	17.2%	0	0.7%	0.7%	0.3%
Uganda	79.3%	11.1%	0.4	0.4%	5.2%	3.5%
m2m	84.6%	9.8%	0.3%	0.3%	3.2%	2.2%

Evidence for Impact on PMTCT

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 13,317 longitudinal client records across 87 m2m health 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 mothers2mothers programme in Uganda and Kenya, which provide further more independently corroborated and rigorous evidence for programme impact.

Six week and final mother-to-child HIV transmission rates after breastfeeding in 21 Global Plan priority countries
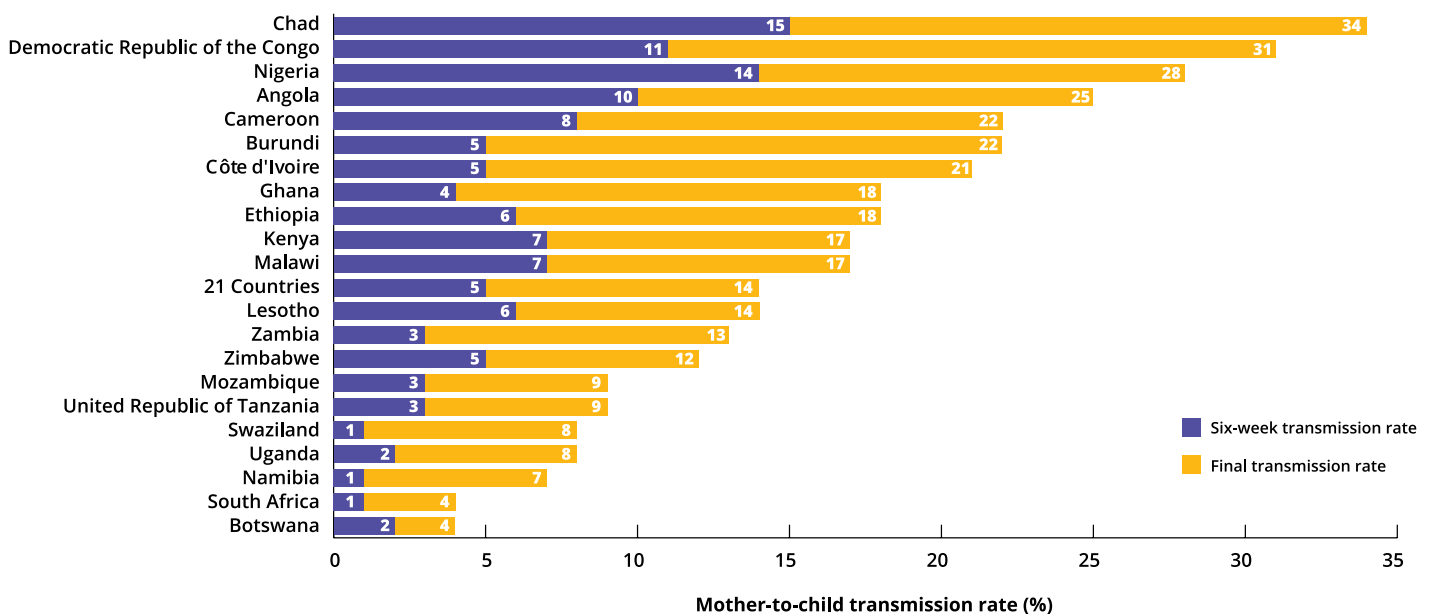
Source: UNIADS Progress on the Global Plan Report, 2015

In 2015, UNAIDS reports that only 2 of 21 Global Plan priority countries have 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 mothers2mothers clients are consistently lower than national averages. In Lesotho, Malawi, South Africa, and Swaziland, mothers2mothers has already reached the Global Plan goal of less than 5% MTCT by 2015. In Uganda, mothers2mothers are within 0.8% of the <5% target.

A summary of final MTCT HIV transmission rates in m2m sites, relative to national averages, is presented below.

Table 7: A comparison of final, 18-24 month MTCT rates among mothers2mothers clients, relative to national averages.

Country	mothers2mothers % HIV-Positive	95% CIs	Nationally* % HIV-Positive
Kenya	2.0%	1.0-3.5	17%
Lesotho	3.7%	2.3-5.6	14%
Malawi	2.5%	1.9-3.3	17%
South Africa	1.1%	0.7-1.6	4%
Swaziland	1.5%	0.7-2.6	8%
Uganda	5.8%	3.5-8.9	8%
m2m	**2.1%**	**1.8-2.5**	

* 2015 UNIADS Progress on the Global Plan Report

Moreover, m2m's transmission rates during the breastfeeding period continue to defy national trends, with transmission during this crucial, vulnerable time adding only 0.3% on average to the final transmission rate (Table 8). It is during this crucial postnatal period that Mentor Mother support is especially critical.

On average, MTCT transmission rates among m2m clients are 1.8% at first test, and 2.1% at the second, 18 to 24 month test. This is well below the Global Plan target of 5%, and consistently below national averages.

Table 8: Transmission rates during the breastfeed period: A comparison of first versus final test transmission rates among m2m clients.

Country	HIV transmission 1st test % HIV Positive	95 % CI	HIV transmission 2nd test % HIV Positive	95 % CI
Kenya	1.2%	0.5-2.4	2.0	1.0-3.5
Lesotho	3.2%	1.9-5.1	3.7	2.3-5.6
Malawi	2.3%	1.7-3.1	2.5	1.9-3.3
South Africa	0.8%	0.5-1.3	1.1	0.7-1.6
Swaziland	1.0%	0.3-1.9	1.5	0.7-2.6
Uganda	5.8%	3.5-8.8	5.8	3.5-8.9
m2m	**1.8%**	**1.5-2.2**	**2.1**	**1.8-2.5**

Evidence for Programme Efficacy in PMTCT

The section that follows draws on inferential analysis conducted on the nearly 13,317 longitudinal client records extracted for m2m's 2015 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 in women with two or more Mentor Mother visits. On the whole the analysis revealed that women with more than two Mentor Mother visits were four times more likely to have an infant who was HIV negative at the final test. More specifically, key behavioural outcomes such as disclosure and 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 three times more likely to take up antenatal prophylaxis, and were more than four

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 more than six times more likely to take up infant cotrimoxazole, and were also more than seven times more likely to take up PCR tests. Final odds of having an HIV-negative baby at the 18-24 month test were also more than four times higher in women with 2 or more visits.

Detailed outputs from this inferential analysis are provided in Table 9. 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 2.93 for antenatal prophylaxis uptake shows that women seen by Mentor Mothers at least two times before they were offered antenatal prophylaxis were 2.93 times more likely to exhibit this behaviour than women who had seen a Mentor Mother only once before being offered this service.

Table 9: Raw frequency and regression outputs for clients with one versus two or more Mentor Mother visits.

Indicator	OR	p-value	2+ mothers2mothers visits	1 mothers2mothers visit
Maternal Behavioural Outcomes				
Disclosure (All clients)	2.04	<0.001	97%	84%
Using Family Planning (PN-any clients)	0.91	0.400	84%	80%
Using Dual Family Planning (PN-any clients)	0.67	<0.001	30%	29%
Exclusive breast feeding first 6 months (PN-any clients)	1.39	<0.001	75%	68%
Exclusive feeding first 6 months (PN-any clients)	1.20	0.005	83%	76%
Uptake of Maternal PMTCT Services				
CD4 test (AN-any clients)	-	-	-	-
CD4 test result (AN-any clients)	-	-	-	-
AN Prophylaxis (AN-any clients)	2.93	<0.001	98%	92%
Delivered at a health facility (PN-any clients)	-	-	-	-
Prophylaxis during labour (PN-any clients)	-	-	-	-
PN Prophylaxis (PN-any Clients)	4.65	<0.001	95%	85%
Uptake of Infant PMTCT Services				
Infant prophylaxis (PN-any clients)	1.23	0.302	97%	95%
Infant CPT (PN-any clients)	6.57	0.001	86%	49%
PCR test (PN-any clients)	7.73	<0.001	85%	42%
PCR test results (PN-any clients)	7.53	<0.001	83%	40%
Infant 2nd test (PN-any clients)	-	-	-	-
Infant 2nd test result (PN-any client)	-	-	-	-
Impact - MTCT Rate				
Infant HIV status HIV-negative (PN-any clients)	4.39	<0.001	97%	91%

External Impact and Economic Costing Evaluations

Two external, independent impact and economic costing evaluations were commissioned in 2013 and 2014 in specific countries. Overall, the trends indicated in m2m routine internal data have been corroborated by these external evaluations. The first evaluation was an assessment of the Mentor Mother Model, implemented as part of JSI Research & Training Institute Inc's STAR-EC Project in Uganda. The study 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 (p=0.039), and 1.9 percentage points lower 18-months after birth (p=0.039). 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 infants tested at 6-8 weeks after birth, and initiating HIV-positive infants on ART. This study further found that HIV-positive mothers who accessed antenatal services at the m2m-supported health facilities achieved better overall psychosocial wellbeing compared to their counterparts who accessed antenatal services at the control health facilities. Exposure to m2m intervention was associated with a net increase of more than 10 percentage points in the percentage of HIV-positive women who demonstrated coping self-efficacy (p<0.001); displayed HIV disclosure and safer sex self-efficacy (p<0.001); demonstrated coping behaviour (p<0.001) and those who reported good relationships with their partners (p<0.001). Finally, the intervention was also found to be cost-beneficial. Relative to health facilities with no form of psychosocial support offered to women during PMTCT, for every US$1 spent on the Mentor Mother Model, there was found to be a US$11.40 saving in averted lifetime ART treatment costs.

A second external evaluation of the Kenya Mentor Mother Program (KMMP), released in early 2016, has found similar trends. Transmission rates in KMMP compared to non-KMMP facilities indicated mother-to-child HIV transmission rates were 3.4 percentage points lower at 9 months (p=0.006), and 5.4 percentage points lower at 18 months (p=0.005). The mothers attending PMTCT in KMMP facilities had better psychological adjustment to HIV (p = 0.01) and had greater self-efficacy (p = 0.044). The risk of poor psychosocial adjustment to HIV among mothers in KMMP sites was also 60% lower than that of mothers in non-KMMP sites (OR = 0.4, 95% CI 0.2-0.8). Similarly a lower risk (67% reduction) was reported in KMMP compared to non-KMMP facilities with regard to poor self-efficacy (AOR 0.33, 95% CI 0.11- 0.97). Like in Uganda, the KMMP intervention was also found to be cost-beneficial. Specifically, relative to health facilities offering some form of psychosocial support during PMTCT (but not the m2m model of support), with every US$1 spent on the KMMP there was a US$7.0 in lifetime saving in averted ART treatment costs.
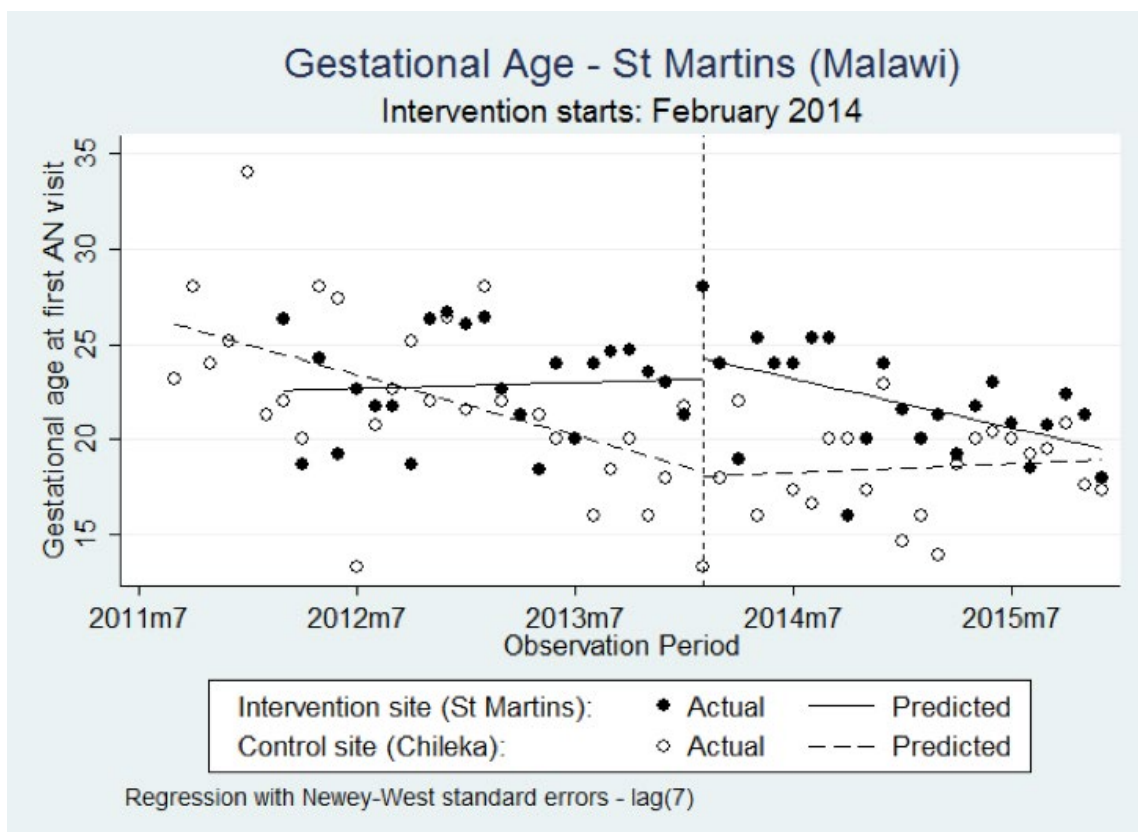
Impact of the Community-to-Facility Platform

Gestational Age at First Booking

There was evidence from Malawi and Swaziland that gestational age at first booking of HIV-positive clients had been significantly lowered by the community-to-facility programme. In Swaziland, relative to a control facility, the community-to-facility platform dramatically lowered gestational age of first booking for HIV-positive women the point of the introduction of the community-to-facility platform in 2 out of 3 intervention health facilities we evaluated. In the third intervention facility, changes were not statistically significant. For example, in Swaziland gestational age at first booking decreased relative to the control facility by an average of 8.4 weeks and 9.9 weeks after the introduction of the programme at (z_x= -8.42, p=0.001; z_x= -9,91, p=0.004). In Malawi, decreases in gestational age were more gradual, with a statistically significant decrease relative to the control health facility of -0.54, -0.39 and -0.38 weeks per month, respectively, in the three health facilities evaluated. A year after the introduction of the programme, this would imply that the three intervention health facilities in Malawi have on average 6.6, 4.7 and 4.5 week's lower gestational age than the control health facility, at the same point in time.

Gestational age at first booking in an intervention in a Malawi health facility (St Martin's) relative to a control health facility (Chileka).

There was a significant difference between intervention and control, with St Martins displaying a trend towards decreasing gestational age after the intervention (zxt = -0.548, p = 0.00), compared to Chileka.

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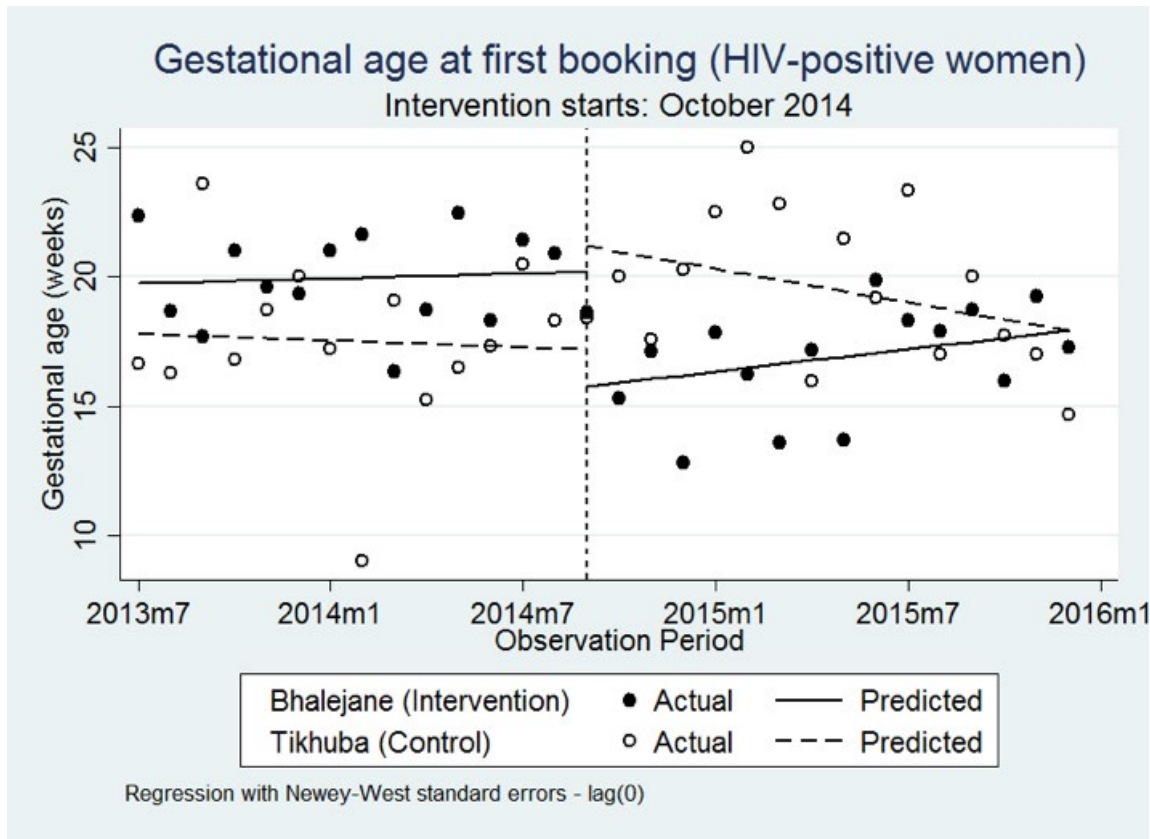

Driving New Clients to Health Facilities

There was evidence from Swaziland that on average and across all health facilities, the community-to-facility platform has been instrumental in driving new clients to the health facility. In both Uganda and Swaziland there is also good evidence that the programme has had a positive impact on the number of new postnatal and antenatal interactions seen at the health facilities.

For example, in Swaziland the total number of new one-on-one interactions with women increased by 19 interactions a month relative to the control group at the point of the intervention's introduction (zx = 19.23, p = 0.02). Similar trends were seen with new antenatal and new postnatal interactions, with a gain of 11.3 (p=0.031) additional new postnatal interactions and 4.5 antenatal interactions (p=0.020) a month.

Number of new postnatal interactions in intervention relative to control health facilities in Swaziland.

There was a statistically significant interruption (break) in the regression line at the point of the intervention's introduction, with a gain of 11 additional new postnatal interactions a month (_z_x = 11.3, p=0.031).
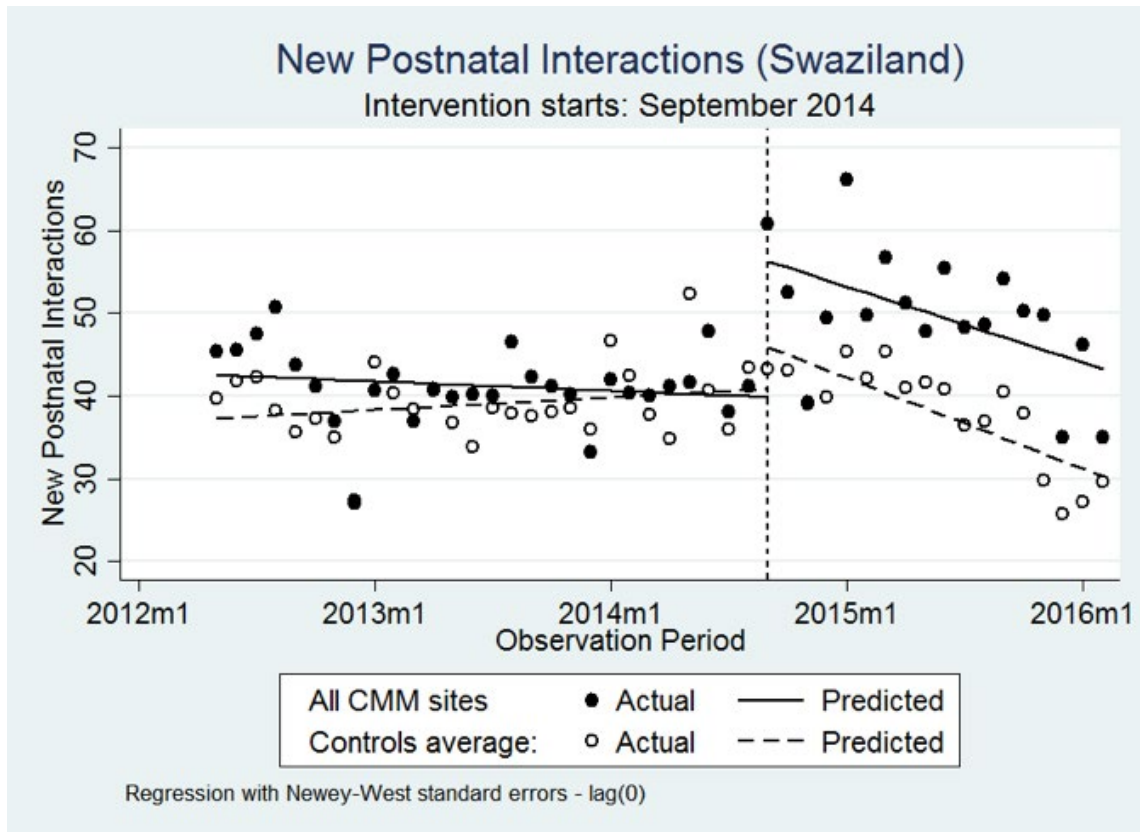
In Uganda, the number of return antenatal interactions has slowly been increasing on a monthly basis in community-to-facility health facilities since the introduction of the programme. Relative to controls, community-to-facility sites are gaining on average 1.6 more return antenatal interactions a month more than facility-only sites (zxt = 1.59, p = 0.03). At 14 months after the introduction of the programme, community-to-facility sites had gained 18% more return antenatal interactions than control sites (n=22 more return interactions a month, relative to controls, by April 2016).

Number of return antenatal interactions in intervention relative to control health facilities in Uganda.

There was a statistically significant slope change in intervention sites (solid line) after the introduction of the programme, translating to a gain of 1.56 additional new antenatal interactions on average a month (_z_x_t = 1.59, p = 0.03).
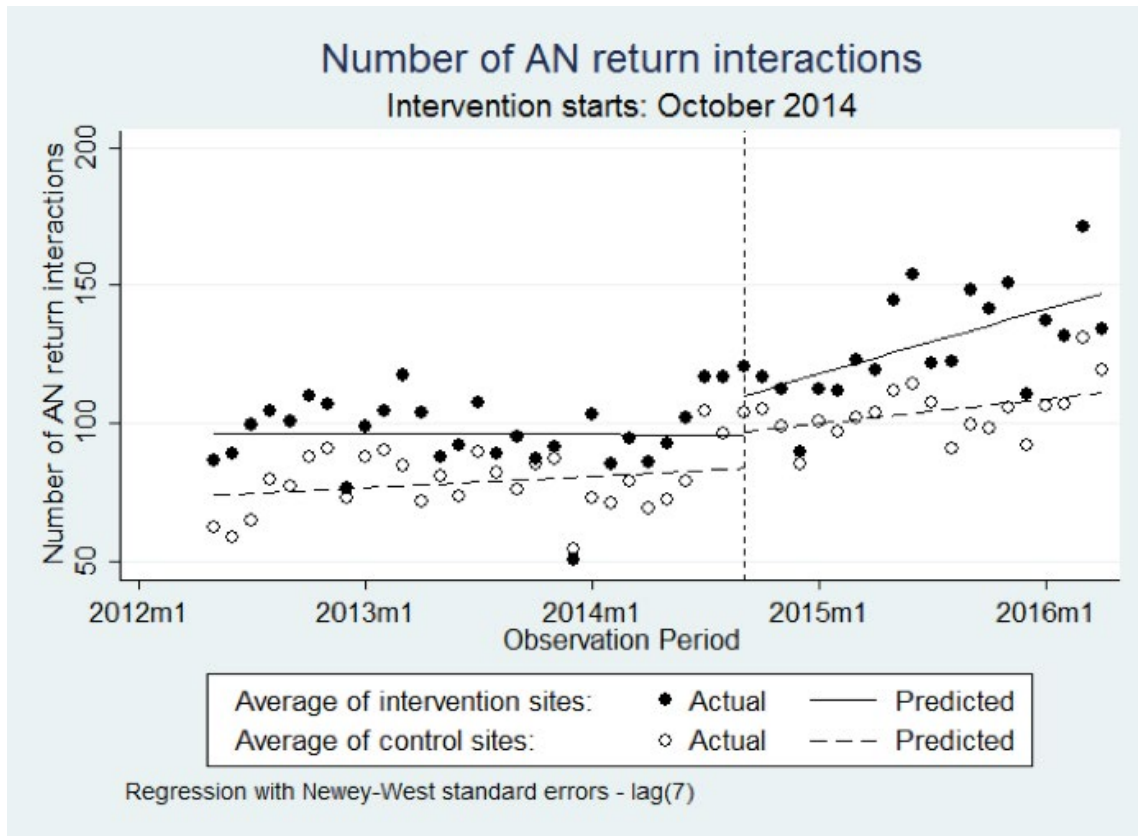
Conclusion

2015 was notable for the expansion of m2m's community-to-facility platform, and the organisation is now reaching 35% more clients compared to the preceding year (2014). In total, 860, 503 beneficiaries were reached via DSD and TA. For the first time, m2m now reaches and reports on their beneficiaries in terms of families, rather than facility-based HIV-positive mother-baby pairs. An impact evaluation of the community-to-facility platform indicated that in Swaziland, the programme had been successful in driving new antenatal and postnatal clients to health facilities, and that in Uganda the programme had successfully increased the frequency with which existing antenatal clients visited the health facility.

While community-to-facility service delivery expanded, m2m's facility-based service delivery also continued to sustain high standards of service delivery. The 2015 Annual Evaluation indicates that MTCT has been virtually eliminated among m2m clients. Moreover, in 2015 more than 100,000 HIV-exposed infants benefited from the Mentor Mother Model, and based on the 2015 UNAIDS Global Plan national HIV prevalence estimates, one in four women delivering in countries supported by m2m benefited from the Mentor Mother Model. There was also compelling evidence for programme efficacy. For the first time in 2015, m2m conducted an initial, early assessment of adherence to ART among clients, and found that 87.9% of clients were more than 95% adherent to treatment. These figures will provide a baseline against which to assess future progress. Finally, inferential analysis conducted on routine client management data also indicated that 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 four 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, 2015 to 2016 saw the finalisation of a new independent cost-benefit evaluation of the Kenya Mentor Mother Programme (KMMP). This evaluation corroborated the findings of the externals evaluation of the Ugandan Mentor Mother programme, which showed that HIV-positive pregnant mothers supported by Mentor Mothers have statistically 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, with cumulative lifetime savings on ARV treatment costs of $7 for every dollar spent on the KMMP relative to other non-m2m models of psycho-social support for HIV-positive pregnant women, and $11.40 in lifetime savings for every dollar spent on a Mentor Mother programme in Uganda, relative to a situation where there is no other form of psycho-social support offered to pregnant HIV-positive women (HECTA, 2015; Zikusooka, et al., 2014).

References

Biglan, A., Ary, D., & Wagenaar, A.C. 2000. The value of interrupted time-series experiments for community intervention research. Prevention Science, 1, 31-49.

Fretheim, A., Zhang, F., Ross-Degnan, D., Oxman, A.D., Cheyne, H., Foy, R., Goodacre, S., Herrin, J., Kerse, N., McKinlay, R.J., Wright, A., & Soumerai, S.B. 2015. A reanalysis of cluster randomized trials showed interrupted time-series studies were valuable in health system evaluation. Journal of Clinical Epidemiology, 68, 324-333.

HECTA, 2015. Impact and Economic Evaluation of the Kenya Mentor Mother Programme (KMMP), Publishing, Cape Town

Linden, A. 2015. Conducting interrupted time-series analysis for single- and multiple-group comparisons. Stata Journal, 15, 480-500.

Newey, W.K. & West, K.D. 1987. A Simple, Positive Semi-Definite, Heteroskedasticity and Autocorrelation Consistent Covariance Matrix. Econometrica, 55, 703-708.

Penfold, R.B. & Zhang, F. 2013. Use of interrupted time series analysis in evaluating health care quality improvements. Academic Pediatrics, 13, S38-S44.

Zikusooka, C.M., Kibuuka-Musoke, D., Bwanika, J.B., Akena, D., Kwesiga, B., Abewe, C., Watsemba, A., & Nakitende, A., 2014. External Evaluation of the m2m Mentor Mother Model as implemented under the STAR-EC Program in Uganda., Publishing, Cape Town.

Appendix A

Roll-out of adherence monitoring within m2m–supported health facilities, and distribution of health facilities in the sampling design for adherence data extraction.

Country	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16
Kenya					20 sites	20 sites	20 sites	20 sites	20 sites	20 sites	20 sites
Lesotho			9 sites	10 sites	10 sites	27 sites	35 sites	35 sites	35 sites	35 sites	35 sites
Malawi	1 site	1 site	7 sites	36 sites	36 sites	36 sites	42 sites	70 sites	82 sites	82 sites	82 sites
South Africa				41 sites	85 sites	85 sites	85 sites	85 sites	85 sites	85 sites	85 sites
Swaziland						10 sites	18 sites	20 sites	20 sites	20 sites	56 sites
Uganda		28 sites	28 sites	28 sites	28 sites	28 sites	39 sites	39 sites	39 sites	39 sites	39 sites

⬤ Census of adherence monitoring data taken for annual evaluation

⬤ Adherence data not included in annual evaluation

Appendix B

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 mothers2mothers visits
Kenya	67% (59-78)	>99%
Lesotho	72% (66-78)	100%
Malawi	64% (58-70)	87% (86-89)
South Africa	>95%	98% (97-99)
Swaziland	>95%	100%
Uganda	92% (80-85)	98% (95-99)

*   data.unicef.org | online HIV/AIDS database 2015
**   perinatal defined as Gestation>22 weeks, delivery and postnatal

Postnatal infant antiretroviral prophylaxis 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 mothers2mothers visits
Kenya	64% (55-73)	99% (98-99)
Lesotho	52% (48-57)	98% (97-99)
Malawi	53% (48-58)	96% (95-97)
South Africa	>95%	99% (98-100)
Swaziland	68% (64-72)	95% (93-97)
Uganda	34% (29-39)	88% (83-91)

*   data.unicef.org | online HIV/AIDS database 2015

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 mothers2mothers visits
Kenya	62% (54-71)	98% (96-99)
Lesotho	52% (48-57)	80% (76-83)
Malawi	45% (41-50)	95% (94-96)
South Africa	94% (80- >95)	95% (93-96)
Swaziland	83% (78-88)	89% (86-91)
Uganda	35% (30-40)	93% (90-96)

*   data.unicef.org | online HIV/AIDS database 2015

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 mothers2mothers visits
Kenya	72% (63-88)	98% (96-99)
Lesotho	55% (50-60)	83% (80-86)
Malawi	18% (17-20)	92% (91-94)
South Africa	94% (87->95)	95% (94-96)
Swaziland	81% (77-86)	90% (88-92)
Uganda	51% (44-59)	97% (96-99)

*   data.unicef.org | online HIV/AIDS database 2015