Encouraging PMTCT outcomes over an 18 month period, Q1 October 2009 to end Q2 March 2011 at Khetho Impilo (K) supported PHC and district hospital sites

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Background

Improving PMTCT outcomes for South Africa has been challenging. It is data presented on 18 months tracking of PMTCT outcomes of 58 pregnant women in 10 districts in 7 HIV burden sub-districts in 3 provinces, (KZN, MPLS & EC) by an ANC program that supports health services as well as community adherence, the seeing being HIV infected adults and children. The sites reported on increased from 14 to 58 between 2009 and the end of March 2011. District and Provincial hospital antenatal bookings decreased dramatically from the primary level of care, resulting in the numbers remaining stable and this period of time. Rates of HIV vertical transmission have steadily declined in LMC since the introduction of PMTCT strategies over the last 10 years, with 2.8% in the best case scenarios that do not include PMTCT in wealthy countries as a consequence of the implementation of learnings from the PACTG 076 trial, transmission rates are <2%. BASICS help to improve ANC booking, site management staff, structures, technologies, and training of healthcare providers to include: all pregnant women with an ANC due date, early ANC booking, and pregnancy counseling, that attrition due to pregnancy is reduced. The program is supported by a well laid out quality improvement strategy with the data to test, measure, act and retest. This is a program that is scaled out to the next 20 districts in the country.

Method

Data from all sites supported by KI was aggregated from the DHS in quarters, from October 2009 till March 2011. Data are cross-sectional counts supplied by clinics on a monthly indicator. Indicators proportion were deduced from the counts. As the data is not individual level cohort data, exact denominators are not always available, and the best available denominator estimations was therefore used. Data is collected at every visit (if applicable) according to the data elements in the PMTCT Register. This is then aggregated by the PMTCT Nurse at the site and then retested with the facility manager and the PMTCT Analyst. The analysis of the data is done to ensure that the data is an accurate representation of the outcomes. Data gaps are identified and corrected. This data is then sent to the Provincial Health Department and to the Department of Health Information Officer. KI monitors and audits the quality, and comments and questions at this level are directed back to site level and the PMTCT and QM for further cleansing before being sent to national KI & MIE office.

Summary of Findings

There appears to be improvements in data quality where QMs are working with DHS data as illustrated in reports from supported sites but without the current age and gestational age at booking.

There has been a progressive increase in the number of women booking at KI-supported sites (from 504 to 9789) due the increase in the support of sites.

Of women at booking there has been a substantial increase in the proportion booking being on ART. from 3.6% to 4.5%. Of the known HIV positive women there was an increase in proportion booking on ART from 30.9% to 37.8%. This trend will continue as we move to early diagnosis and earlier access to therapy.

Taking this into consideration and adding numbers tested at 1st booking, close on 100% of women who have booked has been tested, starting at 85% in Q1 2009. This is a very positive outcome of progress with almost 100% of pregnant women knowing their status at booking.

There is a decrease in the proportion of HIV positive women who do not know their status at time of booking from 73.1% to 64.5%

The proportion retested for HIV at 32 weeks (15.7% to 27.9%) indicates improvement in other South African districts where women are being more closely followed up and protocols adhere to.

The testing HIV positive rate decreased from 37.2% to 29.1%. However, the estimated overall proportion of women being HIV positive at delivery remained around 40%.

There is an increasing proportion of newly diagnosed HIV positive women starting ART from 16.8% to 20.3%, as a result of the change in policy of initiating ART at higher CD4 counts. There has been a substantial decrease (72.5%) in early PCR testing positive rates from 9.7% (95 CI: 8.1–11.5) to 2.4% (95 CI: 1.9–3.1%; P < 0.0005). The estimated number of missing PCR results was between 0.14% for each quarter. Although the numbers are small there is a substantial decrease (64.5%) in 18-month ELISA positivity rate from 10.7% (95 CI: 7.2– 15.1% to 3.8% (95 CI: 2.4–5.6%; P < 0.0005). The numbers tested will increase significantly with better follow up of mother infant pairs by allocated patient advocates. The relative proportion of children receiving 18 month ELISA vs. 6 week PCR is low but improved in the last quarter (from 19.1% to 24.4%). KI sites are promoting, with distinct support as well as care consent all 18 month old children be tested regardless of HIV exposure history as many children are cared for by relatives who do not know their HIV exposure history.

Discussion

South Africa's PMTCT outcomes are improving. The national ART program is showing widespread access through more women being on ART at booking, and increasing numbers of pregnant women starting ART. This would add to the high ANC prevalence of HIV due to the increased survival of women on ART who fall pregnant. Unfortunately the DHS is unable to capture the treatment regimens of women who are pregnant thus the outcomes of those falling pregnant on EPV cannot be fully monitored. With the new tiered system being implemented in the next year, sites will be captured to give a better profile of treatment.

The HCT campaign is having an impact as more HIV positive women know their status at booking. The majority however still do not know their status but the PICT appears to ensure close to 100% know their status after booking, and that those testing negative at this time are restested with a sizeable number restesting positive assisting with better ARV cover.

The national PMTCT program appears to be showing increasing effectiveness with substantially decreasing PCR and 18 months rapid HIV antibody test positivity rates in line with the better outcomes of recent research outcomes in LMIC.

Challenges and Solutions

Data collection, useful (a) indicators for operational research and lack of sentinel sites for more in-depth tracking of mother–infant pairs present challenges now and for future programmatic evaluation. Getting results of CD4 as well as HIV DNA PCR data still a challenge. Ongoing support for the PMTCT QM/IC/BAC/FP services are important as are health systems are dynamic and prone to the vagaries of staff turnover, in remote areas and where the workload is to the burnout of staff. Here the role of the PMTCT or the MHCN QM could be cemented as a critical feature of the service delivery landscape.

Data management presents an ongoing challenge and significant effort needs to go into developing the appropriate tools, hardware and staff to support this critical function of service delivery in their role of measuring outcomes/outcomes and impact of this programme.

Improve uptake of 18 month ELISA test. With the engagement of patient advocates who are able to follow up these mother infant pairs to 18 months, and ensure that this area will occur, it is more logical to test all negative children at 18months regardless of exposure history. These interventions would improve outcomes resulting in decreased infant mortality and maternal mortality and morbidity as we move towards reaching the MDG 4.5 and 6 for 2015 and Zero HIV infections and Zero HIV deaths as per the new UNAIDS vision.

References