IMPROVING PARENT AND CHILD OUTCOMES (IMPACT) MALAWI

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Malawi has a growing population of 17.4 million people (2015) and was recently designated the world's poorest country by the World Bank.¹ The prevalence of HIV, whilst decreasing, is still over 10% of the adult population (15-49). In addition, although significant progress is being made, Malawi is one of the highest risk countries for maternal and infant mortality – an expectant mother is 60 times more likely to die during pregnancy or childbirth in Malawi as compared to the UK. Similarly, infant mortality is at least 10 times higher.

The primary objective of the IMPACT project was to reduce vertical transmission of HIV and, secondly, to contribute to a reduction in maternal and infant mortality.

Summary of Key Findings – all results statistically significant at least p<0.05 unless stated

- 38% increase in achieving WHO standard of **4+ ANC visits**.
 - The level/quality of ANC care received by MB Clients was also higher (61% v 44%).
 - Clients experienced higher quality delivery arrangements.
 - Provision of **birth plans** increased from 5% to 67%.
- Family Planning there was a 34% increase in accessing family planning counselling amongst Clients and a 22% increase in the use of modern contraceptive methods.
- The number of **male partners** accompanying pregnant women to antenatal care was 28% higher amongst Clients and HIV testing rates were also higher.
- Comprehensive HIV knowledge and maternal health knowledge were both significantly higher amongst Clients.

- MBs also provided practical support including food/ nutrition support during pregnancy and during 6 months after birth (extremely important during the first 1,000 days of a child's life). Clients were 40% more likely to have at least 3 meals a day (62% compared with 44%), and had less difficulty meeting the food needs of the household.
- The project also contributed to the **general community benefits** for those living with HIV. At the end of the programme there was a higher knowledge of vertical transmission, higher rates of child HIV testing by PCR and higher use of ART.
- Although not statistically significant, due to the small sample size, **the vertical transmission rate of HIV** had halved (this was also confirmed by separate Clinic data).

¹ http://data.worldbank.org/indicator/NY.GDP.PCAP.CD?order=wbapi_data_value_2013+wbapi_data_value+wbapi_data_value-last&sort=asc http://www.nyasatimes.com/2015/02/17/malawi-now-ranked-poorest-in-the-world-president-talks-of-desperate-need-for-aid/

Project Overview:

The IMPACT (improving parent and child outcomes) project has been implemented in Malawi by the Evangelical Alliance of Malawi (EAM) and the Livingstonia Synod AIDS Project (LISAP) and managed by Tearfund Ireland, with support from the Tearfund HIV Team and Tearfund Malawi. The main funding for the project was provided by Irish Aid for 3 years and followed the successful implementation by Tearfund of a previous 3.5 year HIV programme in Malawi and Ethiopia, also funded principally by Irish Aid.

The programme has mobilised churches and communities to engage in a comprehensive approach to reducing parent to child transmission of HIV (PPTCT) and improving maternal and infant health. Central to the programme design is the training of a network of community-based volunteers, Mother Buddies (MB). These were trained in 9 key areas of HIV, maternal and infant health (see figure 1). Mother Buddies targeted vulnerable, pregnant women in rural communities who tend to be at greatest risk of maternal and infant mortality, especially women living with HIV (as this increases the risk of maternal death 6 fold). Through a prescribed schedule of 8 visits during pregnancy and 6 months after delivery, Mother Buddies helped these women make appropriate antenatal care visits, and provided them with holistic care. Each MB and Coordinator is equipped with an innovative mobile phone system termed MiHope (mobile interactions bringing hope).

The MiHope system provides:

- guidance on the discussion areas for each of the 8 visits,
- project, training and spiritual information,
- communication through mobile instant messaging (HipChat), and
- longitudinal record keeping.

1. Primary Prevention Young people based

Programmes of education aiming to reduce unintended pregnancy and transmission of HIV.

2. Prevention of Unintended Pregnancies

(Family Planning) Promotion of counseling and use of contraceptives provided at government clinics, including injectable contraceptives and condoms. If government supplies run out – the programme will advocate for supply.

3. HIV testing and Antenatal Care

Household testing by community volunteers for all members with special focus on pre-marital and pre-conception testing together with promotion of adequate antenatal care by government. If mothers cannot afford money to access government clinics – the programme will contribute to provide transport support to ANCs.

4. Increasing Male Involvement

Intensive programmes of support for male involvement and testing of male partners – using proven effective social mobilization methods (e.g. Guardians of Our Children's Health – GOOCH) and 'Father Buddies', utilising best practice ideas e.g. special father friendly clinics in Nigeria).

9. Infant and Young Child Care

Intensive promotion of testing using PCR for infants of HIV +ve mothers and access to ARV treatment (supporting transport of samples and mother/child to clinic where necessary), ensuring access to clean water (WASH), immunisations, use of ITNs, early recognition of and access to treatment of infection (esp. malaria, pneumonia and diarrhoea) – using "experienced Mother Buddies" working with health professionals.

8. Essential Newborn Care

Intensive promotion to ensure that mothers are supported re: Breast feeding, Infant feeding, keeping warm and early recognition of Infection (esp. birth asphyxia, neonatal sepsis and preterm complications) by "experienced mother buddies" in association with health care professionals.



5. ARV Prophylaxis in Pregnancy

Intensive promotion of CD4 testing/viral load and uptake of locally approved maternal ARV prophylaxis regime. If mother cannot afford money to access government clinics – programme will provide transport support to government clinics where these can be supplied and advocate for closer access.

7. Skilled Birth Care

Intensive promotion of ensuring that delivery is attended to by professionally trained and skilled birth attendant in a clinic, wherever possible with referral if complications including bleeding and obstructed labour occur – by support of communications (mobile phone) and transport.

6. Health of both parents

Intensive support using tried and tested "buddy system" and – where necessary – transport support to ensure regular access to supplies and taking HAART for those with low CD4 counts, DOT for TB, Cotrimoxazole for all HIV +ve parents. Access to WASH and malaria bednets. Identification of symptoms of potential complications during pregnancy.

Figure 1:9 areas of Mother Buddy focus

The End of Programme Survey Report:

There are many (>100) qualitative stories of change demonstrating benefits for individual Clients and families as a result of the IMPACT programme. These have been gained from random interviews from Clients (>50) and 'snippet' stories from Mother Buddies, posted on HipChat.

However, what is of particular interest is the quantitative assessment of this programme. A KAP survey was conducted both at baseline and endline and it is the results from these surveys that are the main focus of this report.

Quantitative Methodologies

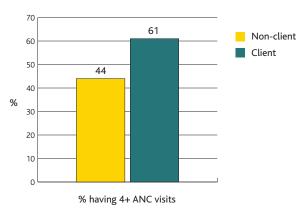
The KAP² survey analysis mainly focuses on comparing a range of indicators between two groups of women – those who have been supported by Mother Buddies (Clients), and a control group of similar women. The indicators focus on key determinants of maternal and newborn health, and factors ensuring that all children born to HIV+ve mothers are born HIV free. In addition, the endline KAP was also compared to the baseline KAP to consider general community changes and those areas where the churches/project can be shown to have made a contribution to these changes. In terms of assessing HIV transmission, data were also collected from the key clinics in the intervention areas and through MiHope.

Key behavioural changes

The analysis provides a good deal of evidence of ways in which the IMPACT programme, working through Mother Buddies and the local church, has made progress towards improving health outcomes for vulnerable women:

- Antenatal Care and Delivery: One of the primary objectives in reducing risk was to ensure that vulnerable women access good antenatal care, and in particular achieve the WHO standard of at least 4 ANC visits. Clients attended more antenatal visits, and a higher proportion attended 4 or more visits during their last pregnancy (61% compared with 44%). The quality of antenatal care received by Clients was better than that received by women in the control group:
 - i. Clients received ANC earlier in their pregnancy
 - ii. Clients were more likely to get antenatal care from Doctors
 - iii. Clients were more likely to access ANC at government hospitals, and less so at health centres
 - iv. Partners of Clients are more likely to have been tested for HIV as part of ANC
 - v. Women in the endline survey were accessing antenatal care earlier in their pregnancy than at baseline (a mean of 3.9 months, down from 4.4).

Clients had received antenatal care earlier in their pregnancy – at a mean of 3.7 months, compared with 4.0 months among the control group (p = 0.019) 72% of Clients who attended antenatal care for a child born within the last two years attended 4 or more visits. This is considerably higher than the rate among the control group, which was 52% (p = 0.001). There is some evidence that Clients were receiving better quality of antenatal care. They received more comprehensive testing, although the high levels of testing overall mean that differences were modest. They were also more likely to see a Doctor, although nurses/midwives remained by far the most common person administering antenatal care, and they were more likely to attend a hospital rather than a health centre.



Increase in 4+ ANC visits

Figure 2: Increase in ANC visits

2. Delivery Care: Recent births were almost entirely delivered in health facilities by health professionals, but women supported by Mother Buddies appeared to have secured higher quality delivery arrangements. Although Clients were still most likely to be delivered in a health centre by a nurse/midwife, a higher proportion were delivered in hospitals where they were more likely to be delivered by doctors. There has been a dramatic increase in the preparation of birth plans over the duration of the programme, from 5% to 67%.

- **3. Family Planning:** A higher proportion of women supported by Mother Buddies had received counselling on family planning (82% compared with 61%), and indeed a higher proportion were using modern methods of contraception (61% compared with 50%). Overall, use of modern methods had increased from 50% at baseline to 60% at endline. Although health centres were the primary source of information on family planning, Mother Buddies clearly played a role among women they supported. Mother Buddies also appear to have been active in promoting access to counselling on unintended pregnancies (to all women).
 - 90 82 80 Non-client Client 70 61 60 % access 50 40 30 20 10 0 Access FP counselling

Increase in Family planning counselling

Figure 3: Increase in family planning counsel



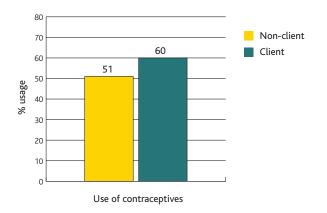
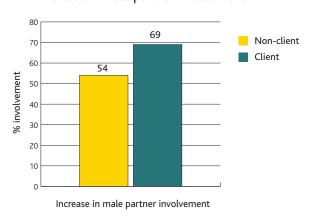


Figure 4: Increase in use of contraception

4. Male partner involvement: a higher proportion of mothers with Mother Buddies were accompanied to antenatal care by their partners (69% compared with 54% among the control group; MW U-test, p = 0.016). This suggests that, rather than accompanying women themselves, Mother Buddies have focused on encouraging men to engage with antenatal care. Attitudes towards male involvement in antenatal care were more positive among Clients (almost universally positive) and indeed there was almost universal intention among Clients to take their husband/partner to antenatal care, marginally higher than among the control group.



Increase in male partner involvement

Figure 5: Increase in partner involvement

5. Improved food/nutrition: Good nutrition during the first 1,000 days of a child's life is key to reducing health risks. Clients were more likely to have at least 3 meals a day (62% compared with 44%), and had less difficulty meeting the food needs of the household. This is consistent with practical support provided by Mother Buddies during both their last pregnancy, and the 6 months following their last pregnancy, when they helped with caring for the family, food, transport, and hygiene (especially after the birth). Overall levels of support were similar between the two groups, but Mother Buddies often provided assistance to Clients themselves and so appear to have filled a gap in providing emotional/psychological support. 6. HIV vertical transmission: By the endline, almost all HIV positive mothers had been reached with advice around mother-to-child transmission, almost all HIV+ve women were accessing treatment (50% increase on baseline figures), and early infant diagnosis had increased by 45% from baseline figures. All of these indicators showed significant increases over the duration of the programme, which is encouraging. Data suggests that the proportion of children born HIV+ve to HIV positive mothers, has halved. Although not statistically significant, this is consistent with findings from other evaluation data. Clinic date of HIV vertical transmission from the clinics serving the 5 community areas, ranged from 4-0%. Data from MiHope from the 3200 Clients registered, of which 20% were HIV +ve at the beginning, ranged by community from 1.7-5% with an average of 3%. This is especially encouraging as it supports the key objective of IMPACT, which was to halve the vertical transmission rate of HIV.

7. Knowledge/attitude changes:

i. HIV knowledge & Maternal health knowledge:

Mother Buddies appear to have been active in promoting access to counselling on unintended pregnancies (to all women), pregnancy (to parents), and parenting and child health (to parents). Nearly two thirds of Clients received counselling from Mother Buddies. Clients appreciated the value of counselling more than women from the control group, irrespective of the type of professional providing the counselling, which suggests that Mother Buddies have been effective in helping mothers consolidate information and advice. A higher proportion of Clients had received advice on HIV transmission to their child during and after birth (98% compared with 89%). There was evidence that counselling had indeed translated into improved knowledge:

- Comprehensive HIV knowledge was higher among Clients (58% compared with 45%);
- Maternal health knowledge was stronger among Clients (80% had a comprehensive knowledge, compared with 59% of the control group)
- ii. Community knowledge and attitudes (through the church):

The IMPACT programme has been implemented in areas where Tearfund partners have had an on going presence for several years and have successfully raised awareness and knowledge in a number of areas common to the IMPACT programme. The IMPACT programme appears to have taken place in a continually improving environment, in which indicators among the population as a whole have improved over the duration of the IMPACT programme. Because people linked to churches started the IMPACT programme with relatively high levels of engagement and awareness, any changes over the duration of the programme were bound to be relatively modest, especially compared with changes taking place in communities as a whole whereas the lower starting point for the 'unengaged' gave more room for improvement.

Comparing baseline and endline samples highlights a number of areas in which services have improved over the programme duration, including:

- provision of counselling services
- practical support during and after pregnancy
- levels of support to households (medical, social ,material, schooling)
- the preparation of birth plans, which were almost absent at the baseline, has been widely adopted by health professionals
- male attendance at antenatal care
- male testing as part of antenatal care



A community volunteer Mother Buddy

Discussion and Conclusion:

This quantitative assessment has shown clear and significant improvements in indicators of HIV, maternal and infant health outcomes. The direct comparison between Clients of Mother Buddies and similar pregnant women demonstrates the advantages of the Mother Buddy approach. The time period of pregnancy is a crucial time where so many health outcomes are decided; the mother lives or dies, the infant lives or dies or is compromised into adulthood (pre-term, low birth weight). In addition, for those who may be living with HIV, it is an opportunity to ensure that every child is born free of HIV. The focus on pregnancy and the additional 6 months followup assists with ensuring that the first 1000 days of a child's life start well. The best time to counsel on family planning is also in this follow-up period and the data shows significant achievements in this area. Analysis of the MiHope data (from monthly reports) suggests that on average MBs work for 2.5 days per week. Last, but not least, the improvement in the involvement of male partners represents a significant cultural shift and augurs well for the future of fatherhood.

Whilst a cost-effectiveness analysis has not been produced, the level of benefit appears to justify the costs of implementing IMPACT. To work at 2.5 days a week (a significant proportion of their time), a degree of stipend/incentive is obviously needed for the Mother Buddies to be effective – this is a significant proportion of their time. A Sustainability Plan has been produced and committed to by Tearfund and partners to ensure that these benefits provided by the Mother Buddies and the IMPACT programme are continued.



Example Clients who received help from their MBs

Tearfund is a Christian relief and development agency building a global network of local churches to help eradicate poverty.

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