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MCHIP Zimbabwe End of Project Report

October 2010 – April 2014



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MCHIP

The Maternal and Child Health Integrated Program (MCHIP) is the USAID Bureau for Global Health's flagship maternal, neonatal and child health (MNCH) program. MCHIP supports programming in maternal, newborn and child health, immunization, family planning, malaria, nutrition, and HIV/AIDS, and strongly encourages opportunities for integration. Cross-cutting technical areas include water, sanitation, hygiene, urban health and health systems strengthening.

MCHIP brings together a partnership of organizations with demonstrated success in reducing maternal, newborn and child mortality rates and malnutrition. Each partner will take the lead in developing programs around specific technical areas:

Jhpiego, as the Prime, will lead maternal health, family planning/reproductive health, and prevention of mother-to-child transmission of HIV (PMTCT);

JSI—child health, immunization, and pediatric AIDS;

Save the Children—newborn health, community interventions for MNCH, and community mobilization;

PATH—nutrition and health technology;

JHU/IIP—research and evaluation;

Broad Branch—health financing;

PSI—social marketing; and

ICF International—continues support for the Child Survival and Health Grants Program (CSHGP) and the Malaria Communities Program (MCP).

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Country Summary



Map of Zimbabwe

Select Health and Demographic Data for Zimbabwe	
GDP per capita (USD)*	778
Total population	13, 061, 239
Maternal mortality ratio (deaths/100,000 live births)	960
Skilled birth attendant coverage	66
Antenatal care, 4+ visits	65
Neonatal mortality rate (deaths/1,000 live births)	31
Infant mortality rate (deaths/1,000 live births)	57
Under-five mortality (deaths/1,000 live births)	84
Treatment for acute respiratory infection	48
Oral rehydration therapy for treatment of diarrhea	74
Diphtheria-pertussis-tetanus vaccine coverage (3 doses)	73
Modern contraceptive prevalence rate	57
Total fertility rate	4.1
Total health expenditure per capita (USD)	66.42

Sources: Zimbabwe Population Census, 2012, World Bank*, Zimbabwe Demographic and Health Survey, 2010-2011.

- Major Activities**
- Maternal Health: Standards-Based Management and Recognition (SBM-R) at health facility level and Performance Quality Improvement (PQI) at community level; Emergency obstetric and newborn care (EmONC)
 - Newborn Health: Kangaroo Mother Care (KMC); Helping Babies Breath (HBB)
 - Child Health: SBM-R at health facility level and PQI at community level; Diarrhea case management, ORT/zinc; Malaria community case management (CCM)
 - Immunization: NUVI (PCV-13 and Rotavirus vaccine introduction); Routine immunization: Reaching Every District (RED)
 - Nutrition: IYCF; Baby Friendly Hospital Initiative
 - Health Systems Strengthening: Policy, planning, coordination, and research; HMIS/M&E strengthening; Competency-based training approaches; Health promotion, communication, and advocacy



Program Dates	October 1, 2010–May 31, 2014					
Total Mission Funding to Date by Area	\$12,375,000 (MCH: \$11,500,000; Feed the Future: \$450,000; PMI: \$425,000)					
Total Core Funding to Date	\$340,000					
Geographic Coverage	No. (%) of provinces	1 (10%)	No. of districts	7	No. of facilities	277
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Acronyms and Abbreviations

AEFI	Adverse Events Following Immunization
ANC	Antenatal Care
BCC	Behavior Change Communications
BFHI	Baby Friendly Hospital Initiative
CCORE	Collaborative Centre for Operational Research and Evaluation
CSO	Civil Society Organization
DHIS	District Health Information Software
DQS	Data Quality Self-Assessment
EmONC	Emergency Obstetric and Newborn Care
ENC	Essential Newborn Care
EPI	Expanded Program on Immunization
EQOC	Equity and Quality of Care (study)
FP	Family Planning
FY	Fiscal Year
HBB	Helping Babies Breathe
HF	Health Facility
HMIS	Health Management Information System
HTF	Health Transition Fund
HW	Health Worker
IEC	Information, Education, Communication
IIP	Immunization in Practice
IMNCI	Integrated Management of Newborn and Childhood Illness
IPTp	Intermittent Preventive Treatment (for malaria in pregnancy)
IYCF	Infant and Young Child Feeding
KC/KMC	Kangaroo Care/Kangaroo Mother Care
LBW	Low Birth Weight
LOP	Life of Project
MCCM	Malaria Community Case Management
MCM	Malaria Case Management
MCHIP	Maternal and Child Health Integrated Program
M&E	Monitoring and Evaluation
MLM	Middle Level Management
MNCH	Maternal, Newborn and Child Health
MNH	Maternal and Newborn Health
MOHCC	Zimbabwe's Ministry of Health and Child Care
MPH	Mutare Provincial Hospital
MPMA	Maternal and Perinatal Mortality Audit
MOU	Memorandum of Understanding
NIHFA	National Integrated Health Facility Assessment
OPHID	Organization for Public Health Interventions and Development
ORT	Oral Rehydration Therapy
PCN	Primary Care Nurse
PCV	Pneumococcal Vaccine
PIE	Post Introduction Evaluation (for vaccines)

PNC	Postnatal Care
PPFP	Postpartum Family Planning
PQI	Performance Quality Improvement
PTFU	Post-training Follow Up
QA/QI	Quality Assurance/Quality Improvement
RDT	Rapid Diagnostic Test Kits (for malaria)
RED	Reaching Every District
RH	Reproductive Health
SBA	Skilled Birth Attendant
SBM-R	Standards Based Management and Recognition
SOP	Standard Operating Procedures
Sp	Streptococcus Pneumoniae
SS	Supportive Supervision
TOT	Training of Trainers
TWG	Technical Working Group
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
VHW	Village Health Worker
WHO	World Health Organization
ZDHS	Zimbabwe Demographic and Health Survey

Acknowledgments

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MCHIP would like to acknowledge the close collaboration and contributions of the Ministry of Health and Child Care of Zimbabwe (MOHCC), and other key partners and stakeholders. We would also like to recognize the staff of the following offices and organizations who were central to the realization of this project: other USAID-supported projects and partners (EGPAF, OPHID, PSI, PSZ, USAID|DELIVER, World Education/Bantwana, and others); NGOs and CBOs (Save the Children, Cordaid, IRC, ARK, and others); other technical partners (UNICEF, UNFPA, WHO, the Health Transition Fund, World Bank, CDC, Food and Nutrition Council, ZNFPC, White Ribbon Alliance, LATH, and others); societies and associations (pediatrics, obstetrics/gynecology, and midwifery).

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Executive Summary

The USAID-funded Maternal and Child Health Integrated Program (MCHIP) was launched in Zimbabwe in 2010 as a strategic response to the alarmingly increasing levels of maternal, neonatal, and child deaths in the country. MCHIP/Zimbabwe's vision was to significantly contribute to accelerated and sustainable improvement in maternal, newborn and child health in Zimbabwe, through scaling up of evidence-based, high-impact, integrated public health interventions. The goal of the project was to support Zimbabwe's Ministry of Health and Child Care (MOHCC) in its ultimate goal of attaining the Millennium Development Goals (MDGs), particularly the ones related to maternal and child health and nutrition.

From 2010 to 2014, MCHIP/Zimbabwe's activities were informed by the following objectives (which were refined during the course of the project):

- *Objective 1:* Support for national policies, strategies and guidelines;
- *Objective 2:* Improve maternal, newborn, and child health (MNCH) at health facilities in learning sites and support national level scale-up plans;
- *Objective 3:* Improve MNCH/family planning (FP) at community level by village health workers (VHWs) and other agents;
- *Objective 4:* Increase routine immunization coverage in Manicaland and support nationwide introduction of pneumococcal conjugate vaccine (PCV) 13 and rotavirus vaccines;

In keeping with these objectives, MCHIP/Zimbabwe's key technical areas included:

- *Maternal health/post-partum family planning (PPFP)/prevention of mother to child transmission (PMTCT) of HIV:* in order to reduce morbidity and mortality associated with pregnancy, labor and delivery, and the post-partum period.
- *Newborn health:* to reduce illness and death associated with newborn asphyxia, prematurity and low birth weight, and infection.
- *Child health:* to reduce morbidity and mortality associated with the most common causes of childhood illness.
- *Immunization:* to reduce illness and death in children associated with vaccine-preventable diseases through support for activities to improve routine immunization coverage as well as national introduction of new vaccines.
- *Malaria:* to reduce illness and death in pregnant women and children caused by malaria.
- *Nutrition:* to help reduce stunting and underweight in children.
- *Cross-cutting/health systems strengthening:* including quality of care improvement; capacity-building and training; monitoring and evaluation (M&E), health management information systems (HMIS), research; and health promotion, communication, and advocacy initiatives.

MCHIP's MNCH interventions were guided by the MNCH priorities laid out in the National Health Strategy. MCHIP's activities were designed using the continuum of care approach, and spanned the antenatal care period up to a child's fifth year of age, the prevent-protect-treat continuum, and the policy, health facility, and community levels.

MCHIP began work in Manicaland, a seven-district province with the highest under-five mortality rate reported in the country¹. Over the life of the project, MCHIP extensively supported 22 health facilities in two Manicaland districts (Mutare and Chimanimani) to deliver high-quality MNCH services, and scaled up immunization interventions province-wide (across all seven Manicaland districts). MCHIP also supported various community-based activities throughout Manicaland, with a specific focus on strengthening the quality of community-based health services in Mutare and Chimanimani districts.

MCHIP/Zimbabwe worked hand in hand with the MOHCC and other partners, supporting activities at the national level as well as at select provincial and district levels. MCHIP/Zimbabwe's strategic approach was guided by key principles including: (1) scaling up proven, evidenced-based interventions; (2) maximizing resources through strategic integrated programming; (3) building on existing efforts of programs and partners; and (4) focusing on program learning.

Critical to the success of many of MCHIP's activities was the forging of key strategic partnerships within the Zimbabwean public health community. From 2010-2014, the MCHIP team built strong relationships and formed close collaborations with numerous departments/units within the MOHCC, as well as with other key partners and stakeholders including other USAID-supported projects and partners, NGOs and CBOs, other technical partners, and key professional societies and associations.

Through focused and consistent cooperation, coordination, and collaboration with these stakeholders, as well as strategic leveraging of resources for maximum efficiency, MCHIP realized several important program successes over the life of project. Life of project (LOP) performance is shown below for select project indicators.

Table 1: Summary of life of project performance, by key project indicator

Indicator	Baseline (Jan.-Dec. 2009)	LOP Performance (Oct. 2010-Mar. 2014)	Notes
Facility-based maternal mortality ratio (MMR)	296/100,000 live births (data from 79 HFs in 2 learning districts) (Jan –Dec 2009 data; source: MOHCC, 2009)	246/100,000 live births	LOP figure is from the two districts, Mutare and Chimanimani, and represents the average over the period Oct 2010- March 2014. There were challenges in completeness of data at baseline.
Facility-based early neonatal mortality rate (ENMR)	63/1,000 total births (data from 79 HFs in 2 learning districts) (Jan –Dec 2009 data; source: MOHCC, 2009)	37/1,000 total births	LOP figure is from the two districts, Mutare and Chimanimani, and represents the average over the period Oct 2010- March 2014. There were challenges in completeness of data at baseline.
% of MCHIP SBM-R supported facilities achieving set target for MNH clinical standards	0% of HFs reached at least 80% of MNH standards	76% of HFs (13/17) reached at least 80% of MNH standards	LOP data is from the two districts, Mutare and Chimanimani covering the period Oct 2010- Mar 2014 and represents performance measured in Aug 2013 assessment.
% of MCHIP SBM-R supported facilities achieving set target for CH clinical standards	0% of HFs reached at least 60% of CH standards	71% of HFs (15/21) reached at least 60% of CH standards	LOP data is from the two districts, Mutare and Chimanimani covering the period Oct 2010- Mar 2014 and represents performance measured in Aug 2013 assessment.

¹ Zimbabwe Demographic and Health Surveys Key Findings 2010/11

Indicator	Baseline (Jan.-Dec. 2009)	LOP Performance (Oct. 2010- Mar. 2014)	Notes
Number of pregnant women receiving first ANC visit	17,215 (data from 79 HFs in 2 learning districts) (Jan –Dec 2009 data; source: MOHCC,2009)	68,021	LOP data is from the two districts, Mutare and Chimanimani, and is the cumulative total over the period Oct 2010- Mar 2014. There were challenges in completeness of data at baseline.
Number of pregnant women receiving at least four ANC visits	9,139 (calculated given 71% utilisation rate for ANC 4+ reported in ZDHS 2005/06, multiplied by ZIMSTAT 2011 expected pregnancies for Mutare and Chimanimani)	65,518	LOP data is from the two districts, Mutare and Chimanimani, and is the cumulative total over the period Oct 2010- Mar 2014. There were challenges in completeness of data at baseline.
% of pregnant women receiving malaria IPT2 during ANC	14% (Source: national estimate, MIMS 2009)	52%	LOP figure is from the two districts, Mutare and Chimanimani, and represents the average over the period Oct 2010- March 2014.
Number of deliveries with a skilled birth attendant (SBA	10,460 (data from 79 HFs in the 2 learning districts) (Jan –Dec 2009 data; source: MOHCC,2009)	47,484	LOP data is from the two districts, Mutare and Chimanimani, and is the cumulative total over the period Oct 2010- Mar 2014. There were challenges in completeness of data at baseline.
% of LBW newborns admitted in KMC	0%	24%	LOP figure is from the two districts, Mutare and Chimanimani, and represents the average over the period Oct 2010- March 2014.
% of children less than 12 months of age who received Penta 3	52.1% (Source: Manicaland provincial estimate, ZDHS 2010/11)	94%	LOP figure is from the two districts, Mutare and Chimanimani, and represents the average over the period Oct 2010- March 2014.
% of children less than 12 months of age who received measles vaccination-	64.5% (Source: Manicaland provincial estimate, ZDHS 2010/11)	92%	LOP figure is from the two districts, Mutare and Chimanimani, and represents the average over the period Oct 2010- March 2014.

Major Project Accomplishments

With the support of MOHCC stakeholders and other implementation partners, MCHIP/Zimbabwe facilitated major MNCH-related accomplishments during the life of project. These included:

- **MCHIP/Zimbabwe served as a major catalyst for improved national policies in support of MNCH.** For example, MCHIP supported the updating, review, development, and/or finalization of several key MNCH policies and guidelines; mobilized/leveraged critically-needed resources for priority MNCH activities at national and sub-national levels; and strengthened the leadership and stewardship role of the MOHCC at national, provincial, district, and community levels.
- **MCHIP/Zimbabwe raised national awareness of the importance of delivering high-quality health care services and improved the quality of MNCH care at district and community levels through implementation**

of quality improvement models. On average, among the 22 MCHIP-supported health facilities in Mutare and Chimanimani districts, a majority met or exceeded quality of care standards for key MNCH interventions by the end of the project. In Mutare and Chimanimani communities, the quality of services provided by Village Health Workers (VHWs) was also improved through implementation of an innovative community-based performance quality improvement approach.

- **MCHIP/Zimbabwe introduced an innovative, skills-based training approach to improve effectiveness of MNCH clinical training.** MCHIP introduced a comprehensive MNCH training approach at provincial/district level, which emphasized acquisition of skills and competencies (not just knowledge) and which included development of training materials, preparing trainers and orienting MNCH supervisors to plan for and conduct post-training follow up and provide supportive supervision. Between 2010 and 2014, MCHIP trained nearly 3,500 health care workers at all levels, in a wide variety of key MNCH topics.
- **MCHIP/Zimbabwe supported scaling-up of under-utilized and newer MNCH interventions in Manicaland.** MCHIP supported national, provincial, and district-level MOHCC stakeholders to introduce and/or revitalize several evidence-based, high-impact MNCH interventions including: Kangaroo Mother Care (KMC) for managing low birth-weight (LBW) babies; Helping Babies Breathe (HBB) for newborn resuscitation; and Integrated Management of Newborn and Childhood Illnesses (IMNCI) for managing sick infants and children.
- **MCHIP/Zimbabwe supported revitalization of routine immunization in Manicaland and the introduction of new and under-utilized vaccines nationally.** MCHIP supported the Manicaland EPI unit to roll out the Reaching Every District (RED) approach in all seven districts and supported successful national-level planning, introduction, and roll out activities for the new Pneumococcal Conjugate Vaccine (PCV) in 2012 and Rotavirus vaccine in 2014.
- **MCHIP/Zimbabwe strengthened integrated community-based MNCH.** At community level, MCHIP piloted a performance quality improvement (PQI) approach which, for the first time in the history of community-level MNCH care, measured the quality of care provided by VHWs during ANC, PNC, and community case management for sick children and adults using a structured approach. Results from Chimanimani, where VHWs were included in the PQI program, showed a statistically significant improvement in the quality of MNCH care provided at community level when compared to VHWs who did not receive the PQI package.
- **MCHIP/Zimbabwe supported “program learning” activities, with results documented and dissemination plans underway by the project’s end.** Designed as a “learning project”, MCHIP identified a handful of priority operations research-type topics early on in the project and developed standard program learning protocols for each. By early 2014, each of these studies had been completed and results were disseminated (or are being planned for dissemination) as appropriate.

Impact of MCHIP-Supported Activities on Maternal, Neonatal and Child Morbidity and Mortality in Manicaland

Direct attribution of health outcomes seen in Manicaland from 2010 to 2014 to MCHIP/Zimbabwe’s interventions may not be possible, but some positive trends in maternal, newborn, and child health outcomes have been observed including:

- Decreasing facility-based early neonatal and intrapartum deaths per 1000 births by month for the period October 2010 to March 2014 for the 17 SBM-R supported facilities.

- Decreasing number of facility-based deaths among children under 5 years of age due to pneumonia and malaria: pneumonia-case fatality rates decreased from 7.4% in 2012 to 5% in 2013 and to 3% during the period Jan-Mar 2014. Case fatality rates from malaria decreased from 6.9% in 2012 to 1.6% in 2013, a 77% reduction. These gains coincided with the interventions supported by the project in scaling up IMNCI trainings, expanding QI activities for child health, introduction of PCV 13, and the improvement in community case management for malaria by VHWs.
- There was a 25% reduction in the total number of severe pneumonia cases in Mutare and Chimanimani between 2011 and 2013, potentially related to PCV 13 introduction in 2012 and other MCHIP-supported interventions at facility and community levels.
- The proportion of diarrhea cases in children under 5 with severe dehydration decreased from 11.8% in 2011 to 7.6% in 2012 and then to 6.5% in 2013. The increase in number of cases with no dehydration might be due to early treatment in the community as well as expanded access to ORS and zinc at MCHIP-supported facilities.

Recommendations and Way Forward

Zimbabwe, while showing some encouraging data gains in combatting mortality and morbidity, still has a long way to go to reverse the unacceptably high mortality levels among women and children under five. In early-2014, MCHIP/Zimbabwe will transition to a new three-year, USAID-funded Associate Award, and, as during the October 2010-May 2014 period, will continue supporting the Zimbabwe MOHCC's MNCH efforts. During this next phase of the project, MCHIP/Zimbabwe will incorporate the following recommendations into its programmatic design². The MCHIP team is confident that doing so will increase the odds of success in the future, with the ultimate project goal remaining improving health for the country's women, children, and families.

At national level, recommendations for MCHIP's way forward include:

- Continue to advocate for/support provision of high-level coordination for MNCH activities within the MOHCC, in order to strengthen national-level strategic planning, coordination, and program implementation.
- Continue to support the MOHCC's efforts in developing key, evidence-based national policies, standards, guidelines, and training packages.
- Continue to advocate for a "beyond the numbers" approach to providing high-quality health care nationwide and assist the MOHCC to identify a single national approach to QI.
- Advocate for inclusion and standardization of high-impact MNCH packages and competency-based training (CBT) approaches into pre-service education curricula.
- Improve MNCH service integration by working with partners and providing technical support to MOHCC counterparts to ensure that current national ANC and PNC platforms are used to strengthen Malaria in Pregnancy (MIP), maternal nutrition and anemia, IYCF, PMTCT, and PFP/PPIUD interventions.
- Continue to provide support to the MOHCC in the area of health information systems and M&E.
- Continue technical assistance and support for national MNCH advocacy, communication, and social mobilization activities.

At provincial/district level, recommendations for MCHIP's way forward include:

- Improve, expand, and maintain facility-based MNH SBM-R activities in Manicaland in ways including:

² Many of these recommendations originate from a USAID external evaluation which was conducted by USAID/Zimbabwe in late 2013.

- Expand coverage of SBM-R activities to new districts to equip health workers to deliver evidence-based, integrated services that are humanistic, respectful, and client-centered.
- Increase focus on provincial hospital and high-volume referral sites (i.e., non-learning site district hospitals in Manicaland). Prioritize all Manicaland district hospitals and Mutare Provincial hospital (MPH) for additional targeted interventions.
- Seek ways to simplify SBM-R tools/reduce the number of SBM-R performance standards/verification criteria without compromising the resulting quality of care. Adapt SBM-R tools such that they have a greater focus on the main causes of MNH mortality and morbidity (e.g., greater focus on critical pathways).
- Revise the SBM-R scoring system to make it less punitive and more encouraging.
- Change the SBM-R approach such that participating HWs are recognized in an appropriate manner earlier in the process, in order to increase motivation and retention.
- Continue to revise/improve the SBM-R approach as piloted in Zimbabwe for child health, for example by making tools more responsive to changes in the quality of care delivered to children. Pilot new QI tools to address quality of services provided to sick children at provincial/district hospital level. In addition, work with Mutare Provincial Hospital specifically to improve in-patient care for sick children.
- Involve more partners and engage more policymakers in the quality improvement process, to facilitate national-level adoption, scale-up, and roll-out.
- Test new ways to link quality of care improvements to MNC mortality/outcome data.
- Prioritize support for districts with high MNCH mortality and morbidity, and within these, prioritize support for high-impact MNCH interventions and activities such as ENC, KMC, HBB, EmONC, malaria case management, and RED.
- Continue to utilize a competency-based training (CBT) approach to capacity-building at sub-national level, with a sustained emphasis on post-training follow up, on-the-job training, and supportive supervision.
- Continue to support strategic planning, coordination, data review/M&E, and evidence-based decision-making at provincial/district/facility levels. Continue focus on providing technical assistance to the MOHCC and seeking opportunities to leverage partner resources in order to amplify MCHIP's technical reach within the province/districts.

At community level, recommendations for MCHIP's way forward include:

- Scale up community-based child survival interventions (e.g., early care seeking for pneumonia, reducing indoor air pollution, cIYCF, malaria community case management, use of long-lasting insecticide-treated bed nets, etc.), in conjunction with strengthening health facility service provision. A key recommendation is to continue, refine, and expand the community PQI (cPQI) approach to one or more additional Manicaland districts and further assess results in 6-12 months.
- Prioritize civil society capacity-building by partnering with local Civil Society Organizations (CSOs) and strengthening their capacity to mobilize communities for improved knowledge, access to, and utilization of MNCH services. Working with CSOs will foster further community engagement and facilitate sustainability and local ownership of community interventions.

Introduction

Zimbabwe has unacceptably high levels of preventable maternal, newborn, and child morbidity and mortality, with HIV, tuberculosis, and malaria being the leading causes of death. The economic crisis that gradually worsened in Zimbabwe from 2005 to 2008, coupled with the exodus of thousands of trained health workers, shook the country's previously robust public health system. This in turn led to a precipitous decline in life expectancy at birth and an increase in preventable maternal, newborn, and child deaths. Over the past two decades, the maternal mortality ratio has increased more than three-fold, from 283 deaths per 100,000 live births in 1994 to 960 deaths per 100,000 live births in 2010/2011³. Approximately 10-12 women die each day in Zimbabwe from pregnancy-related complications, most of which are preventable.

With support from government and development partners over the past few years, the country's health infrastructure and human and material resources have improved greatly. Still, maternal, newborn, and child mortality rates continue to rise. Findings from national-level studies such as the 2011 National Integrated Health Facility Assessment/Equity and Quality of Care (NIHFA/EQOC) study indicate that the primary causes of maternal death are postpartum hemorrhage (PPH, 23%) and sepsis (20%), with a high number of deaths associated with pre-eclampsia/eclampsia and malaria. In addition, an estimated 45% of the women who died of pregnancy-related complications are HIV-positive, which further complicates the health care response.

Under-five mortality rates have also risen in recent decades (between 1994 and 2010/11), from 77 to 84 deaths per 1,000 live births. Similarly, the infant mortality rate has risen from 53 to 57 deaths per 1,000 live births¹ during this period. From 2005 to 2010, the newborn mortality rate rose from 24 to 31 deaths per 1,000 births, with the majority of newborn deaths occurring in the first 72 hours following birth. Newborn deaths account for 30% of all under-five mortality in Zimbabwe. Zimbabwe has the fourth highest rate of preterm births in the world, with 16.6 out of 100 births occurring before 37 weeks gestation⁴. Complications of prematurity continue to be the leading cause of death (37%), followed by asphyxia (27%), and infection (19%). Pneumonia, diarrhea, and malaria are the top three leading causes of death in children under the age of five. Effective interventions for reducing these mortalities are known, and in most cases, are affordable. These include ensuring high coverage of institutional deliveries, skilled attendance at delivery, and integrated management of childhood illnesses.

Addressing malnutrition in Zimbabwe has been a perennial challenge. The 2010/11 DHS showed high prevalence of chronic malnutrition and stunting in children under five (32%), as well as a high prevalence of anemia in women and children, affecting 56% of children in the 6-23 months of age group. Malnutrition has been a known underlying cause for both maternal and child mortality (35% of child deaths are associated with malnutrition), and also contributes to reduced outcomes in education, lifetime productivity, and income, as well as increased costs of health care.

In response to these poor and worsening health indicators, in 2000, Zimbabwe joined 189 nations in committing to the achievement of the Millennium Development Goals (MDGs). These goals articulate a commitment to (among other goals) reducing the under-five mortality rate by two-thirds (MDG 4), and maternal mortality ratio by three quarters (MDG 5) by 2015, relative to 2000 levels.

³ Zimbabwe Demographic and Health Surveys, 1994, 2005/06, and 2010/11

⁴ WHO, *Born Too Soon: The Global Action Report on Preterm Birth*, 2012

The MCHIP Program: Responding to National Priorities

The USAID-funded Maternal and Child Health Integrated Program (MCHIP) was launched in Zimbabwe in 2010 as a strategic response to the alarmingly increasing levels of maternal, neonatal, and child deaths in the country. MCHIP/Zimbabwe's vision was to significantly contribute to accelerated and sustainable improvement in maternal, newborn, and child health in Zimbabwe, through scaling up of evidence-based, high-impact, integrated public health interventions. The goal of the project was to support Zimbabwe's MOHCC in its ultimate goal of attaining the MDGs, particularly the ones related to maternal and child health and nutrition.

From 2010 to 2014, MCHIP/Zimbabwe's activities were informed by the following objectives (which were refined during the course of the project):

- *Objective 1:* Support for national policies, strategies and guidelines;
- *Objective 2:* Improve MNCH at health facilities in learning sites and support national level scale-up plans;
- *Objective 3:* Improve MNCH/FP at community level by village health workers (VHWs) and other agents;
- *Objective 4:* Increase routine immunization coverage in Manicaland and support nationwide introduction of PCV 13 and rotavirus vaccines;

In keeping with these objectives, MCHIP/Zimbabwe's key technical areas included:

- *Maternal health/post-partum family planning/prevention of mother to child transmission of HIV:* in order to reduce morbidity and mortality associated with pregnancy, labor and delivery, and the post-partum period, as well as to reduce the transmission of HIV from mothers to their children, through implementation of a quality improvement approach in hospitals and health centers;
- *Newborn health:* to reduce illness and death associated with newborn asphyxia, prematurity and low birth weight, and infection, through support for implementation of evidence-based interventions like Essential Newborn care, Helping Babies Breathe and Kangaroo Mother Care;
- *Child health:* to reduce morbidity and mortality associated with the most common causes of childhood illness such as pneumonia and diarrhea, through support for implementation of the Integrated Management of Newborn and Childhood Illnesses approach among other activities;
- *Immunization:* to reduce illness and death in children associated with vaccine-preventable diseases such as measles and polio, through support for activities to improve routine immunization coverage in Manicaland as well as national introduction of new vaccines like pneumococcal and rotavirus vaccines;
- *Malaria:* to reduce illness and death in pregnant women and children caused by malaria, through support to the MOHCC's national malaria program;
- *Nutrition:* to help reduce stunting and underweight in children, through support for the MOHCC's infant and young child feeding initiatives as well as national nutrition policies and implementation guidelines;
- *Cross-cutting/health systems strengthening:*
 - *Quality of care improvement:* to help increase stakeholder awareness of quality of care issues and to support MOHCC development of national quality of care policies and standards;
 - *Capacity-building and training improvement:* to expand the country's cadre of trained health professionals as well as to support advancements in skills-based training methodologies;
 - *Monitoring and evaluation, health management information systems, and research:* to facilitate the availability of high quality, complete, and timely health data for use in planning, monitoring, and evaluation of health services;
 - *Health promotion, communication, and advocacy:* to raise the awareness of stakeholders, policymakers, communities, and families around key public health issues and increase people's motivation to adopt positive health behaviors.

MCHIP’s MNCH interventions were guided by the MNCH priorities laid out in the National Health Strategy. MCHIP’s activities were designed using the continuum of care approach, and spanned the antenatal care period up to a child’s fifth year of age, the prevent-protect-treat continuum, and the policy, health facility, and community levels.

Prioritizing populations with the greatest need for intensive support, MCHIP focused its work in Manicaland, a seven-district province with the highest under-five mortality rate reported in the country (at 97 deaths per 1000 live births)⁵ and among the poorest health indicators (low immunization coverage in children, poor community care-seeking behaviors, high malaria prevalence, etc.). Over the life of the project, MCHIP extensively supported 22 health facilities in two Manicaland districts (Mutare and Chimanimani; see Table 2) to deliver high-quality MNCH services, and scaled up routine immunization interventions province-wide (across all seven Manicaland districts). MCHIP also supported various community-based activities throughout Manicaland, with a specific focus on strengthening the quality of community-based health services in Mutare and Chimanimani districts. Collectively, these 22 facilities represented roughly 80% of all deliveries performed in facilities for Manicaland.

Table 2: 22 health facilities in Mutare and Chimanimani districts which received intensive quality of care improvement support from MCHIP from 2010-2014

Mutare District	Chimanimani District
Mutare Provincial Hospital	Mutambara Mission Hospital
Sakubva District Hospital	Chimanimani Rural Hospital
Marange Rural Hospital	Rusitu Rural Hospital
St. Andrews Mission Hospital	Biriwiri Rural Hospital
Odzi Clinic	Nyanyadzi Rural Hospital
Gutaurare Rural Health Centre	Mutsvangwa Rural Hospital
Zimunya Clinic	Chakohwa Rural Hospital
Dangamvura Polyclinic	Nyahode Rural Health Centre
Sakubva Polyclinic	Chayamiti Rural Health Clinic
Bazeley Bridge Rural Health Centre	
Mount Zuma Rural Health Centre	
Chiwere Rural Health Centre	
Burma Valley Rural Health Centre	

In the following sections, we describe in more detail some of the key initiatives and interventions that MCHIP/Zimbabwe supported during its life of project (October 2010 – April 2014) as well as highlights of the project’s major achievements and progress against project targets (Annexes 1a and 1b). This report concludes with lessons learned over the course of the project and recommendations for future project implementation.

Additional information contained in the Annexes include a selection of project success stories (Annex 2); a list of presentations given by MCHIP/Zimbabwe staff at international conferences and publications (Annex 3); a list of materials and tools developed or adapted by the project (Annex 4); and a matrix detailing MCHIP’s “Program Learning” studies and dissemination of program learning results (Annex 5).

⁵ Zimbabwe Demographic and Health Surveys Key Findings 2010/11

Major Accomplishments

MCHIP/Zimbabwe worked hand in hand with the MOHCC and other partners, supporting activities at the national level as well as at select provincial and district levels. MCHIP/Zimbabwe’s strategic approach was guided by the following key principles:

- Scaling up proven, evidenced-based interventions;
- Maximizing resources through strategic integrated programming;
- Building on existing efforts of programs and partners;
- Focusing on program learning.

Critical to the success of many of MCHIP’s activities was the forging of key strategic partnerships within the Zimbabwean public health community. From 2010-2014, the MCHIP team built strong relationships and formed close collaborations with numerous departments/units within the MOHCC, as well as with other key partners and stakeholders, including:

- Other USAID-supported projects and partners (EGPAF, OPHID, PSI, PSZ, USAID|DELIVER, World Education/Bantwana, and others);
- NGOs and CBOs (Save the Children, Cordaid, IRC, ARK, and others);
- Other technical partners (UNICEF, UNFPA, WHO, the Health Transition Fund, World Bank, CDC, Food and Nutrition Council, ZNFPC, White Ribbon Alliance, LATH, and others);
- Professional societies and associations (pediatrics, obstetrics/gynecology, and midwifery) and others.

Through focused and consistent cooperation, coordination, and collaboration with these stakeholders, as well as strategic leveraging of resources for maximum efficiency, MCHIP realized several important program successes over the life of project. Life of project performance is shown in Table 3 for select project indicators.

Table 3. Summary of life of project performance, by key project indicator

Indicator	Baseline (Jan.-Dec. 2009)	LOP Performance (Oct. 2010-Mar. 2014)	Notes
Facility-based maternal mortality ratio (MMR)	296/100,000 live births (data from 79 HFs in 2 learning districts) (Jan –Dec 2009 data; source: MOHCC, 2009)	246/100,000 live births	LOP figure is from the two districts, Mutare and Chimanimani, and represents the average over the period Oct 2010- March 2014. There were challenges in completeness of data at baseline.
Facility-based early neonatal mortality rate (ENMR)	63/1,000 total births (data from 79 HFs in 2 learning districts) (Jan –Dec 2009 data; source: MOHCC, 2009)	37/1,000 total births	LOP figure is from the two districts, Mutare and Chimanimani, and represents the average over the period Oct 2010- March 2014. There were challenges in completeness of data at baseline.
% of MCHIP SBM-R supported facilities achieving set target for MNH clinical standards	0% of HFs reached at least 80% of MNH standards	76% of HFs (13/17) reached at least 80% of MNH standards	LOP data is from the two districts, Mutare and Chimanimani covering the period Oct 2010- Mar 2014 and represents performance measured in Aug 2013 assessment.

Indicator	Baseline (Jan.-Dec. 2009)	LOP Performance (Oct. 2010- Mar. 2014)	Notes
% of MCHIP SBM-R supported facilities achieving set target for CH clinical standards	0% of HFs reached at least 60% of CH standards	71% of HFs (15/21) reached at least 60% of CH standards	LOP data is from the two districts, Mutare and Chimanimani covering the period Oct 2010- Mar 2014 and represents performance measured in Aug 2013 assessment.
Number of pregnant women receiving first ANC visit	17,215 (data from 79 HFs in 2 learning districts) (Jan –Dec 2009 data; source: MOHCC,2009)	68,021	LOP data is from the two districts, Mutare and Chimanimani, and is the cumulative total over the period Oct 2010- Mar 2014. There were challenges in completeness of data at baseline.
Number of pregnant women receiving at least four ANC visits	9,139 (calculated given 71% utilisation rate for ANC 4+ reported in ZDHS 2005/06, multiplied by ZIMSTAT 2011 expected pregnancies for Mutare and Chimanimani)	65,518	LOP data is from the two districts, Mutare and Chimanimani, and is the cumulative total over the period Oct 2010- Mar 2014. There were challenges in completeness of data at baseline.
% of pregnant women receiving malaria IPT2 during ANC	14% (Source: national estimate, MIMS 2009)	52%	LOP figure is from the two districts, Mutare and Chimanimani, and represents the average over the period Oct 2010- March 2014.
Number of deliveries with a skilled birth attendant (SBA	10,460 (data from 79 HFs in the 2 learning districts) (Jan –Dec 2009 data; source: MOHCC,2009)	47,484	LOP data is from the two districts, Mutare and Chimanimani, and is the cumulative total over the period Oct 2010- Mar 2014. There were challenges in completeness of data at baseline.
% of LBW newborns admitted in KMC	0%	24%	LOP figure is from the two districts, Mutare and Chimanimani, and represents the average over the period Oct 2010- March 2014.
% of children less than 12 months of age who received Penta 3	52.1% (Source: Manicaland provincial estimate, ZDHS 2010/11)	94%	LOP figure is from the two districts, Mutare and Chimanimani, and represents the average over the period Oct 2010- March 2014.
% of children less than 12 months of age who received measles vaccination	64.5% (Source: Manicaland provincial estimate, ZDHS 2010/11)	92%	LOP figure is from the two districts, Mutare and Chimanimani, and represents the average over the period Oct 2010- March 2014.

MCHIP/Zimbabwe: A Catalyst for Improved Policies in Support of MNCH

Given the massive magnitude of need in Zimbabwe, MCHIP’s strategic approach at the national level was forging and strengthening key partnerships and collaborations and providing high-quality technical assistance to influence the national public health dialogue. Zimbabwe’s economic and social crises over the previous decade had negatively affected not just service delivery at the health facility level, but also weakened planning, coordination, and monitoring mechanisms at the national (and sub-national) level. Within the MOHCC, some posts within key departments/units were unfilled, available staff had few resources at their disposal, and additional technical expertise was needed in order to move certain initiatives forward. In terms of the external

landscape, many donors and implementing partners were present, but coordination, guidance, and oversight was sometimes lacking. Given this, MCHIP sought to take on a “catalytic role” by providing much-needed technical and financial support to the MOHCC and its partners in planning; coordination; policy, strategy, and national guideline development; capacity-building; assessment, monitoring, and evaluation research; and resource mobilization and advocacy.

Specific MCHIP contributions included provision of critically-needed technical and financial support for:

- Convening of national-level MNCH technical working groups and coordination committees responsible for advancing the national MNCH agenda;
- Development, finalization, and/or adoption of key MNCH policies/guidelines like the country’s first Quality Assurance/Quality Improvement (QA/QI) policy and strategy (see Annex 4 for full list of items);
- Development/finalization of national MNCH training curricula and guidelines as well as support for national-level training of trainers;
- Planning, coordination, training, roll out, and reporting on new vaccine introductions;
- Conducting of national-level program reviews, assessments, and evaluations and support for strengthening of the national HMIS system;
- Human resources support for the MOHCC Child Health Unit and EPI Unit through filling of much needed Technical Officer positions;
- National-level advocacy, awareness-raising, health promotion, and health communications campaigns.



Strategies, guidelines, training curricula, reports, and health promotion materials produced with support from MCHIP/Zimbabwe.

MCHIP/Zimbabwe: Improving Quality of MNCH Care through Implementation of the SBM-R Model

When MCHIP initially began work in Zimbabwe, substantial government and partner efforts were being committed toward *increasing availability and utilization* of MNCH services nationwide. In order to build on to these efforts (as well as avoid unnecessary duplication), MCHIP trained its focus on not just increasing access to services where needed and boosting client utilization, but also on *improving the quality* of MNCH services being delivered at all levels. For some stakeholders, this focus represented a paradigm shift in terms of maternal, newborn, and child mortality reduction strategies, as it added consideration for increasing *quality* to the traditional focus on increasing *quantity* of services and coverage. Over the life of the project, and through

Notable quotes from MCHIP stakeholders regarding prioritizing quality, not just quantity of services*:

- “Thanks to MCHIP, the Ministry is now looking at quality.”
- “Some problems are attitudinal; SBM-R helped improve attitudes.”
- “We have to plan now and we go back to our notes and do self-assessment and it makes us comfortable and happy!”
- “There is less burden from repeat visits.”
- “Before MCHIP it was a disaster.”

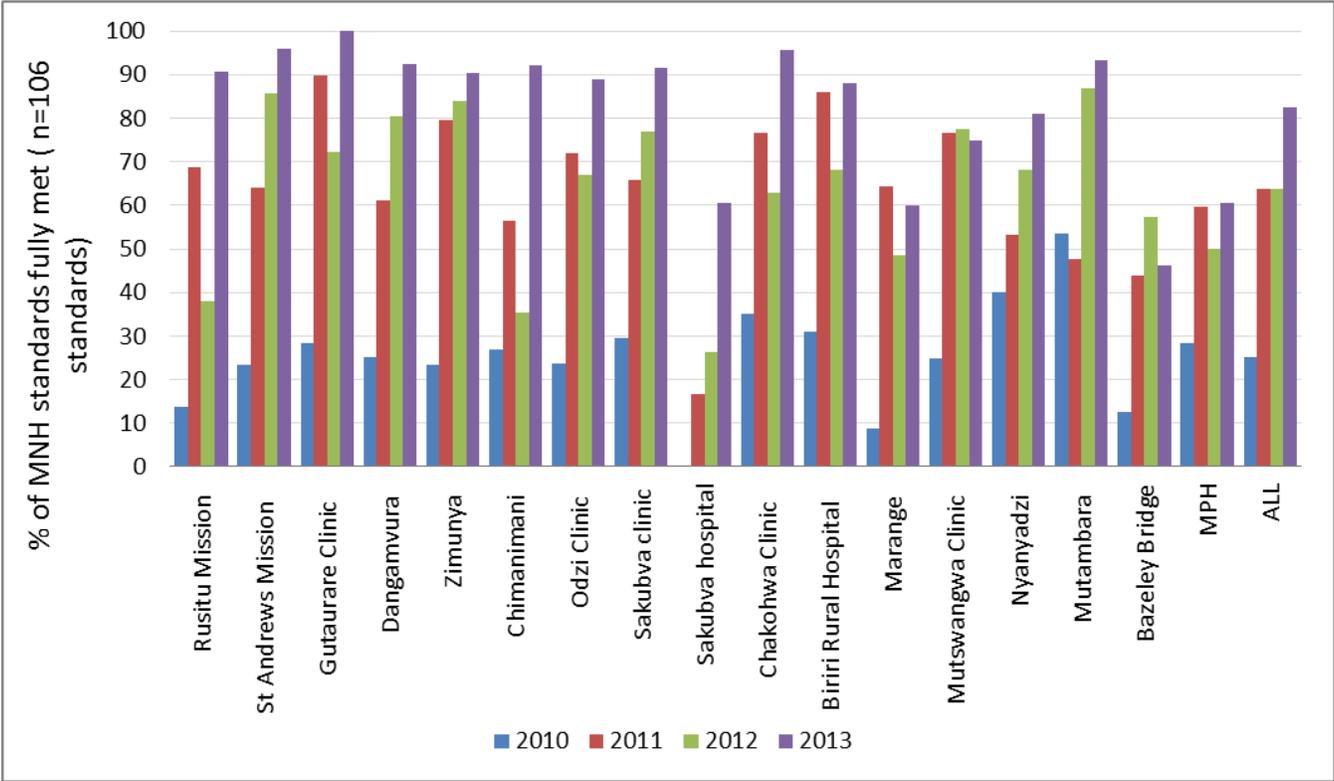
**Quotes were collected by USAID external consultants while conducting an end of project evaluation.*

substantial advocacy, sensitization, and technical assistance support, MCHIP facilitated an important shift towards “thinking beyond the numbers” among stakeholders at national and sub-national levels.

In terms of maternal and newborn health, coverage of ANC, skilled attendance at delivery, and PNC are actually reasonably high throughout the country. Despite this, maternal and neonatal mortality rates have worsened considerably over the past decade. This implies that while access to and utilization of these services may be high, quality of care provided may be low. In response to this situation, MCHIP supported the MOHCC in introducing the Standards-Based Management and Recognition (SBM-R) approach to quality of care improvement in 17 health facilities in Mutare and Chimanimani. QI interventions were targeted specifically at improving the quality of care being provided during ANC, labor and delivery, and in the immediate postpartum period.

After three years of MCHIP support, 12 of the 17 (71%) SBM-R-supported health facilities met or exceeded the 80% mark for meeting MNH QI standards, compared to zero facilities meeting 80% of standards at baseline. Figure 1 shows facility performance in meeting MNH standards over time.

Figure 1. SBM-R performance scores in MNH for 17 health facilities for the period 2010-2013



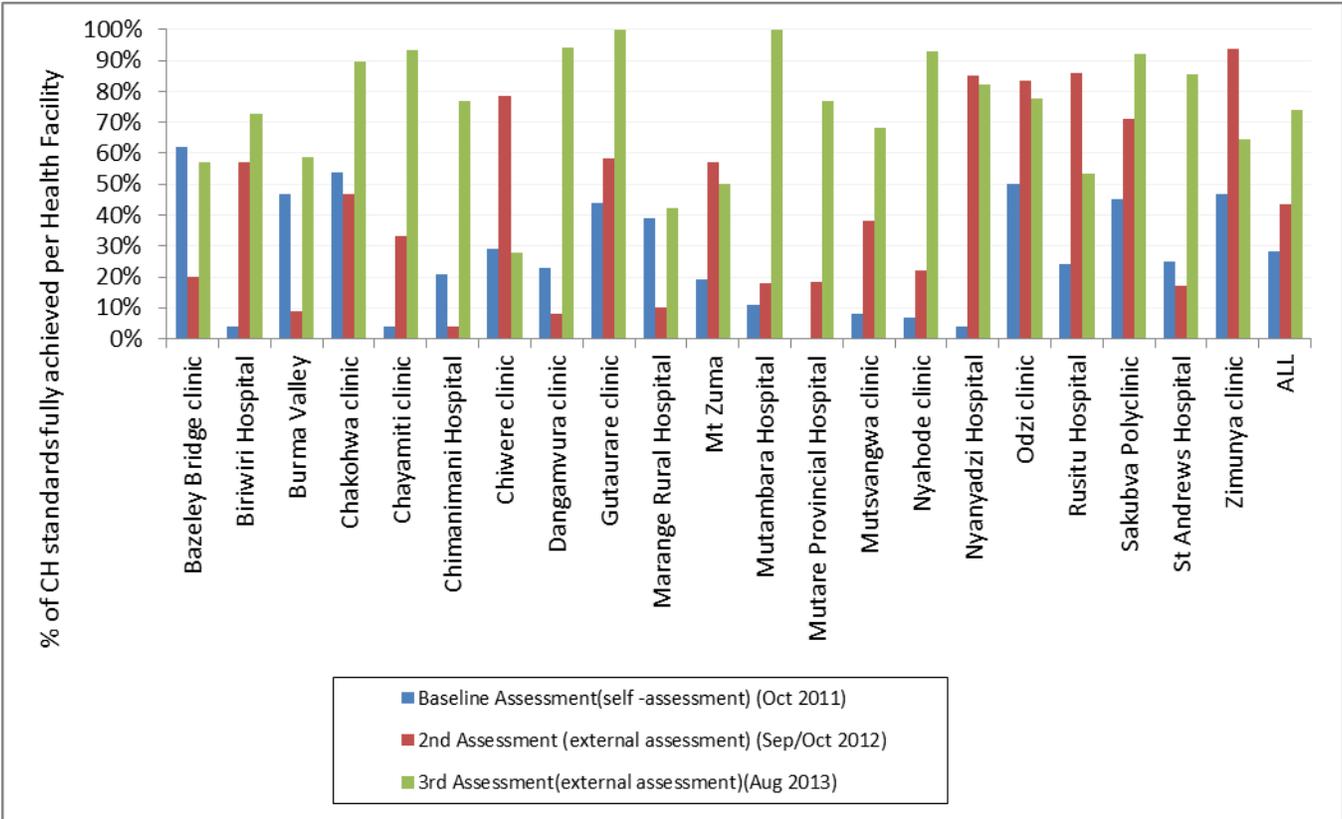
In 2011, MCHIP/Zimbabwe expanded the SBM-R approach to include quality improvement for child health (CH) services, which was the first time globally that SBM-R had been applied to child health. MCHIP built on the MNH QI foundation that had been established in the year prior and supported SBM-R in 21 Mutare and Chimanimani facilities (the 17 facilities above, plus four additional high-volume sites).

The quality improvement approach for child health focused on assisting health workers (HWs) to adhere to the IMNCI protocol in managing sick infants and children. Prior to MCHIP intervention, HWs – whether trained in

IMNCI or not – rarely managed sick children according to IMNCI protocols. Over a period of two years, nine out of the 21 (43%) health facilities receiving MCHIP support met the 80% score for improving quality of care for IMNCI, again compared to zero facilities meeting the standards at baseline. Improved quality of care at lower-level facilities has led to reductions in case referrals to higher-level facilities (e.g., Mutare Provincial Hospital has confirmed that only very severe cases are now being referred after pre-referral treatment has been administered at lower levels). This means that patients are being managed appropriately closer to home, which in turn reduces stress, burden, and costs on patients, health workers, and the health system itself.

Assessment data for the 21 facilities over the life of project are shown in Figure 2 below. All assessments were followed by data analysis meetings with health facility teams, whereby participants analyzed assessment results and developed site-specific intervention plans. MCHIP supported the MOHCC and facilities to then implement activities according to the action plans, monitor for progress, and continue the QI cycle over time as challenges were gradually overcome.

Figure 2. Quality improvement performance scores in CH in 21 MCHIP-supported health facilities, 2011-2013



Though effective at improving the quality of MNC care in Mutare and Chimanimani, the SBM-R approach was not without challenges in terms of resource-intensity and complexity of implementation. Based on feedback received from health workers as well as others evaluating MCHIP’s activities, in the future MCHIP will simplify the SBM-R model and tools such that it can be rolled out to a broader coverage area more easily. In streamlining the tools, MCHIP will narrow the focus specifically on life-saving interventions like labor and delivery, management of complications, and essential newborn care.

Importantly, MCHIP’s impact in terms of improving quality of MNC care went beyond improved service provision in these two districts. The quality of care agenda has been fully adopted nationally and MCHIP has helped shape national QA/QI policy, strategy, implementation, and measurement; clinical MNCH standards; and the integrated supportive supervision tool that is used to supervise health workers delivering MNC services. In the future, MCHIP will continue to advocate for adoption and scale up of QA/QI approaches by the MOHCC and other partners. For example, support from the HTF and World Bank for uptake and roll-out of SBM-R (or elements of SBM-R) will be critical for maintaining the momentum around quality improvement.



“MCHIP’s MNCH interventions have improved quality of care beyond the implementation sites. As a District Nursing Officer, I use SBM-R assessment tools during supportive supervision in all facilities in Chimanimani district. The result is that all health providers feel more confident in managing MNCH services, as well as emergencies, and we have reported a significant reduction in referrals.” – Chimanimani District Nursing Officer, S. Sifovo

MCHIP/Zimbabwe: Shifting the Focus toward Competency-Based MNCH Clinical Training

A key component of MCHIP’s quality improvement approach was building capacity of health workers at all levels of the health system. Rather than conducting traditional-style trainings (which tend to emphasize knowledge acquisition), MCHIP shifted the focus toward competency-based training (CBT) which emphasizes building of clinical skills.

Throughout its life of project, MCHIP employed a comprehensive CBT approach, which included:

- Development, updating, and/or finalization of training materials,
- Supply of clinical training equipment including anatomical models used for hands-on demonstrations, simulation, and practice,
- Incorporation of ancillary topics such as interpersonal counselling, waste management, and recording and use of HMIS data into MNCH trainings,
- Training of trainers in key MNCH topic areas as well as practice in applying CBT methodologies,
- Orientation of MNCH supervisors in planning for and conducting post-training follow up of trainees,
- Training of MNCH supervisors in planning for and conducting routine supportive supervision and providing on-the-job training and mentorship of lower-line health workers.

Notable quotes from MCHIP stakeholders regarding building skills through competency-based training*:

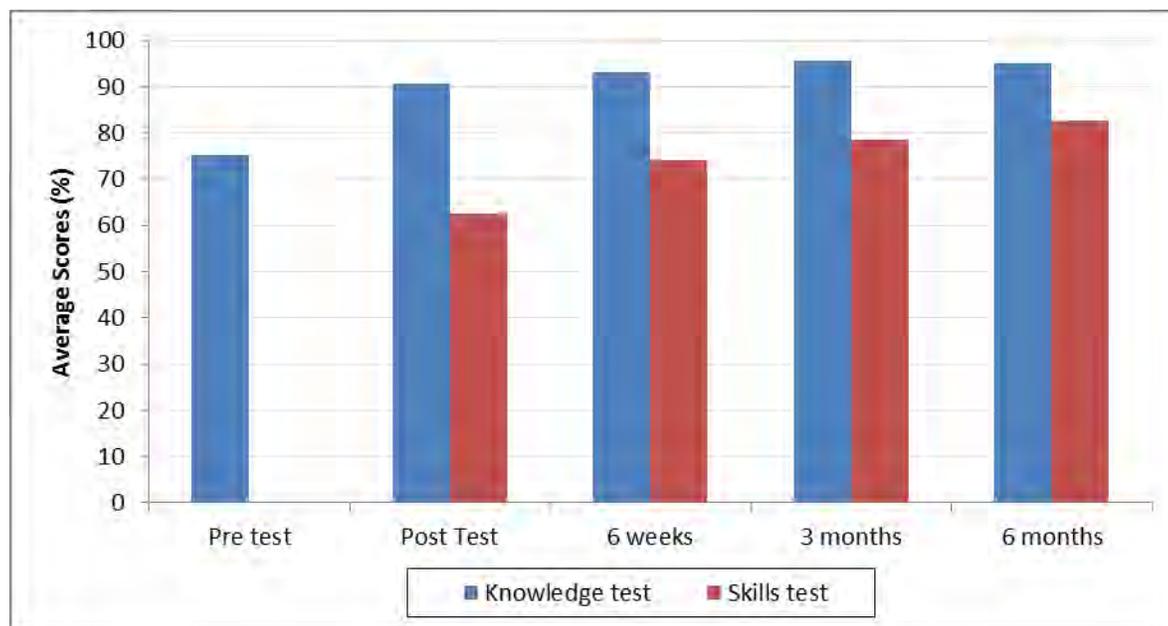
- “Now we don’t panic; we just manage as we were taught using the guidelines.”
- “MCHIP has trained us, supervised us and supported us!”
- “They demonstrate procedures and skills. They also provide essential small items.”
- “MCHIP didn’t just train, they followed up the training; this is very important.”

**Quotes were collected by USAID external consultants while conducting an end of project evaluation.*

From 2010 to 2014, MCHIP trained over 800 trainers and over 2,500 health workers in key MNCH topics including Basic Emergency Obstetric and Newborn Care (BEmONC), Helping Babies Breathe (HBB), Kangaroo Mother Care (KMC), Integrated Management of Newborn and Childhood Illnesses (IMNCI), Infant and Young Child Feeding (IYCF), Baby-Friendly Hospital Initiative (BFHI), Reaching Every District (RED) for immunization, and Health Information/Monitoring and Evaluation (HMIS/M&E). Trainings took place at national, provincial, and district levels (with a specific focus on building clinical capacity of Manicaland health workers). Trainings were designed to increase knowledge, skills, motivation, and confidence, and reinforced other performance quality improvement interventions being supported by the MOHCC and MCHIP.

Recognizing that health workers are prone to losing knowledge and clinical skills over time (especially in lower-level facilities where providers are unlikely to encounter/manage obstetric or neonatal emergencies frequently), MCHIP researched the extent to which health workers might retain competencies over time if given support for learner-driven self-study after training completion. In Chipinge district for example, MCHIP provided a small sample of health workers with their own HBB manikins post-training, and encouraged them to review training handouts and practice on the manikins in their spare time in order to keep their skills fresh. Results from this study indicated that not only did health workers’ knowledge and skills not deteriorate over time but actually increased, as shown in the figure below.

Figure 3: Average scores over time for health workers provided with HBB manikins for “self-directed practice” upon completion of formal training (n=16 HWs)



MCHIP/Zimbabwe: Supporting Scale-Up of Under-Utilized and New MNCH Interventions

In 2010 when MCHIP/Zimbabwe first began, the team identified several high-impact MNCH interventions which had previously been adopted as national policy (and in some cases partially implemented) but which had become “neglected” over time for various reasons. This meant that, though these interventions were known to

be effective, they were not being rolled out/scaled up to the extent needed to affect health outcomes nationally. Major examples of these evidence-based, high-impact interventions included:

- Kangaroo Mother Care (KMC) for managing low birth weight (LBW) babies,
- Integrated Management of Newborn and Childhood Illnesses (IMNCI) for managing sick infants and children,
- Revitalization of Oral Rehydration Therapy (ORT) corners and scaling up of zinc for preventing and treating diarrhea, and
- The Reaching Every District (RED) approach for strengthening routine immunization services and reaching the “hard to reach”.

New interventions needing support for introduction and roll out included the Helping Babies Breathe approach for building skills in newborn resuscitation.

MCHIP’s efforts at “rejuvenating” KMC were met with great success. In Manicaland, MCHIP provided the MOHCC with intense support and by 2013, eight functioning KMC units had been established and/or refurbished in Mutare (including at Mutare Provincial Referral Hospital) and Chimanimani districts. This was a marked increase in availability of KMC services, relative to the baseline presence of zero functioning KMC units in 2011.

Notable quotes from MCHIP stakeholders regarding revitalization of KMC Units*:

- “We saved a 700 gram baby with KMC and now it is 6 months old and thriving. The mother was just in with the baby yesterday. “
- “We used to refer babies born who were less than 2 Kgs to Mutambara Hospital and that was a problem because the mothers didn’t want to go but now we don’t have to refer them because we have KMC.”
- “Since April, we have had 50 admissions to the KMC unit. We see the benefits and so do mothers.”

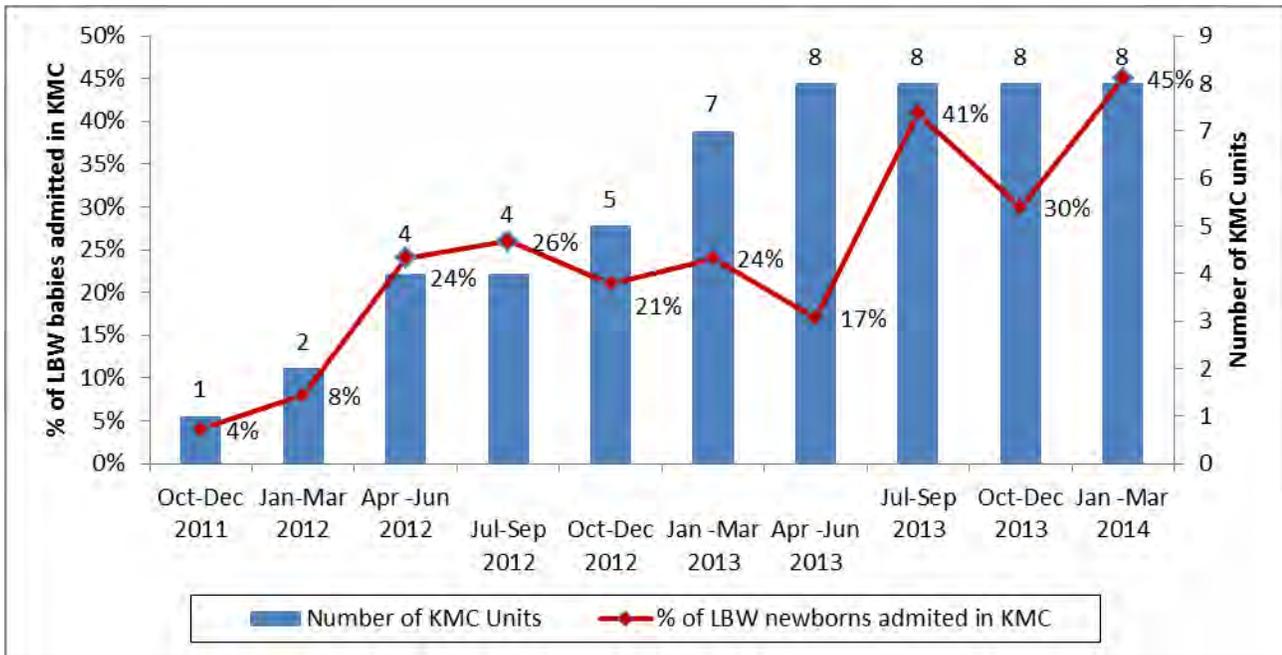
**Quotes were collected by USAID external consultants while conducting an MCHIP/Zimbabwe end of project evaluation.*

In terms of impact on mothers and babies, data from Manicaland indicate that KMC units improved mother/baby health outcomes. Based on case records from Mutare Provincial Hospital for the period October 2011 to March 2012, the average length of stay for mothers/babies who stayed in the normal post-delivery ward (non-KMC unit) was 12.4 days. In contrast, based on case records from the Sakbuva District Hospital KMC unit for the period April-September 2012, the average length of stay for mothers/babies in the KMC unit was just 5.3 days. This is seen as a very important outcome, as shorter hospital stays meant: (1) the health of babies receiving specific KMC care improved faster than that of babies receiving generalized emergency care in non-KMC wards; (2) KMC services were reducing the amount of time LBW babies spent in the LBW “danger zone”; (3) shorter stays in the health facility meant reduced exposure for mothers/babies to nosocomial (hospital-acquired) infections; (4) admission of babies into dedicated KMC units resulted in reduced case loads at referral hospital level, thereby freeing up higher-level resources for patients requiring more specialized care; and (5) reduced costs associated with hospitalization for families, facilities, and the public health system.

Over the life of the project, the proportion of LBW babies in Manicaland admitted to KMC units increased from 4% to over 45% (see figure below), with KMC register data indicating consistently full bed (ward) utilization⁶. In the future, MCHIP plans to expand its support for KMC revitalization in other areas of Manicaland, in order to increase access to this life-saving intervention.

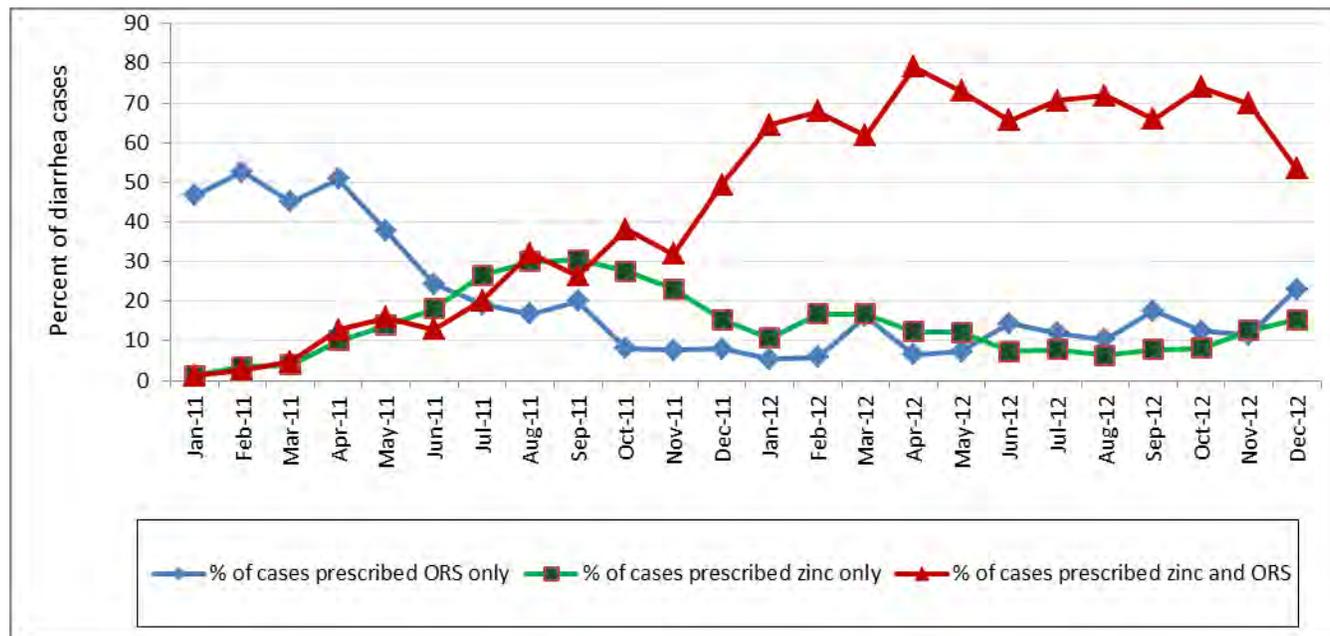
⁶ Unfortunately, as KMC ward space was a limiting factor, health workers had to prioritize admission of babies according to birth weight and severity of other conditions and either admit them to the KMC, refer them to the provincial hospital, or release them if there were no presenting problems. The lowest weight babies (under 1.2 kgs) were referred to MPH, while babies >2 kgs were assessed for ability to breastfeed and if able to feed, were released with instructions to the mothers about KMC practices to be used at home. Those who are sent home to practice KMC are typically followed up by VHWs, ideally, within the first 3 days of birth.

Figure 4. Percent of LBW babies admitted into KMC units in Mutare and Chimanimani districts, compared to the number of KMC units available for use during each quarter (Oct. 2011-Mar. 2014)



In terms of diarrhea prevention and treatment, MCHIP revitalized ORT corners in all 73 Mutare and Chimanimani facilities, after 2011 baseline data showed that only 35% of all facilities in the two districts had an established and functional ORT corner. MCHIP provided procurement support for ORT corner materials and supplies and supported the MOHCC in scaling-up the 7-point plan for diarrhea management. A major MCHIP priority in this area was improving HW knowledge around zinc and scale-up of zinc prescription and low-osmolarity oral rehydration salts (ORS) for all children with diarrhea. This effort included training of HWs in diarrhea treatment protocol, monitoring prescription patterns during SS/OJT, and distribution of job aids and BCC materials to facilities. Figure 10 below shows improved zinc and ORS prescription patterns in Chimanimani district, comparing prescription patterns between January 2011 and December 2012 (note that 47% of health facilities had zinc stock-outs from Sep-Dec 2012).

Figure 5. Trends in Zinc and ORS prescription in managing children presenting with diarrhea at health facilities in Chimanimani



Source: MOHCC outpatient registers.

MCHIP/Zimbabwe: Supporting Revitalization of Routine Immunization and the Introduction of New and Underutilized Vaccines

Prior to 2011, Zimbabwe’s Expanded Program on Immunization (EPI) program was facing a number of challenges including: limited human and material resources in the MOHCC EPI unit which led to partial national implementation of activities like the RED approach; limited coverage of immunization-related training for health workers at sub-national levels; outdated immunization schedules; the “verticalization” of EPI activities; a limited number of vaccine antigens; and complacency among communities surrounding taking children for immunization. In response to these challenges, MCHIP provided much-needed technical and financial support to the MOHCC at national and sub-national levels in the areas of planning, coordination, policy, capacity-building, M&E, and community mobilization for routine immunization. MCHIP’s goals for immunization were primarily two-fold: to support the Zimbabwe EPI program nationally and to increase routine immunization coverage to at least 80% in every Manicaland district specifically.

Over the life of project, MCHIP technical support for routine immunization included:

- Secondment of an EPI Technical Officer to the national EPI Unit,
- Technical support for updating of the EPI comprehensive Multi-Year Plan,
- Facilitation of the revision of the national immunization policy and various implementation guidelines,
- Facilitation of the revision of the national immunization schedule and updating of the child health card,
- Support for updating of the Adverse Events Following Immunization (AEFI) guidelines and updating of the Pharmacovigilance Plan,
- Participation in three East and Southern Africa regional EPI Managers’ Meetings,
- Support for national EPI quarterly review meetings as well as review meetings at provincial level,

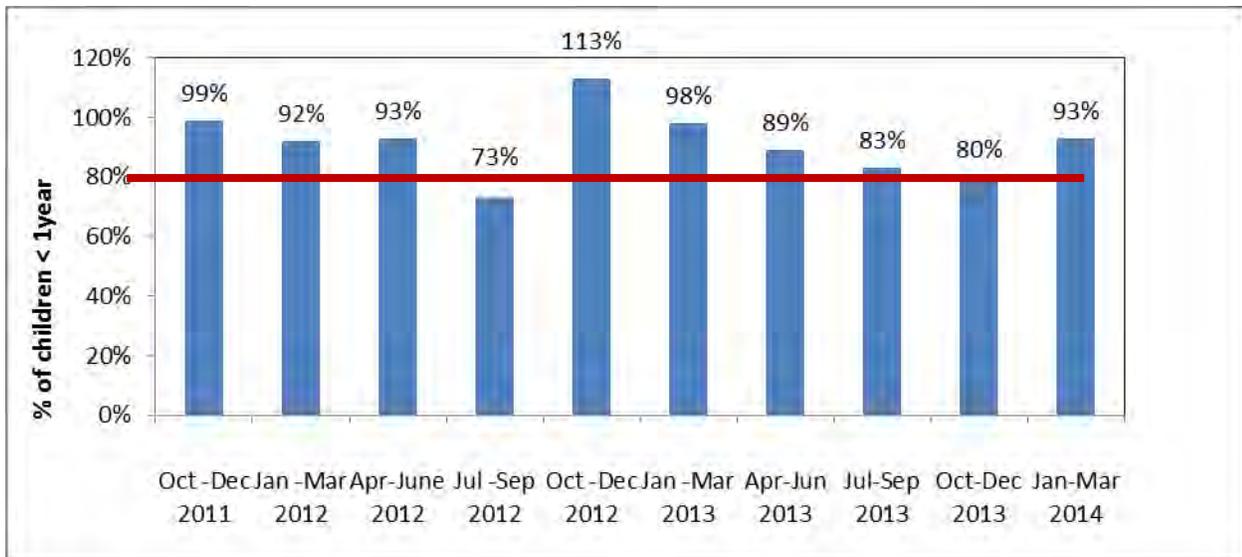
- Support for updating/finalization of national training materials and field guides (e.g., in RED, Immunization in Practice (IIP), and training for Mid-Level Managers (MLM)),
- Training of national trainers and support for cascade training of over 350 health workers in all seven districts of Manicaland and elsewhere,
- Support for Data Quality Self-Assessments (DQS) in all seven districts in Manicaland province to improve immunization data quality and usage.

In addition to the above, MCHIP provided strategic support to the MOHCC in the introduction of two new vaccines: Pneumococcal Conjugate Vaccine (PCV) for protection of children against certain types of pneumonia, and Rotavirus vaccine for protection of children against certain types of diarrheal disease. MCHIP technical support for new vaccine introduction included:

- Support at national level for development of GAVI proposals for introduction of new vaccines,
- Participation in technical working groups tasked with planning, coordination, and monitoring of new vaccine introduction activities,
- Development of training materials and field guides for PCV 13 and Rotavirus vaccine introduction,
- Support for health system strengthening (e.g., cold chain strengthening, updating of the HMIS, etc.)
- Support for new vaccine launch activities and national roll out of health worker training,
- Support for PCV 13 Post-Introduction Evaluation.

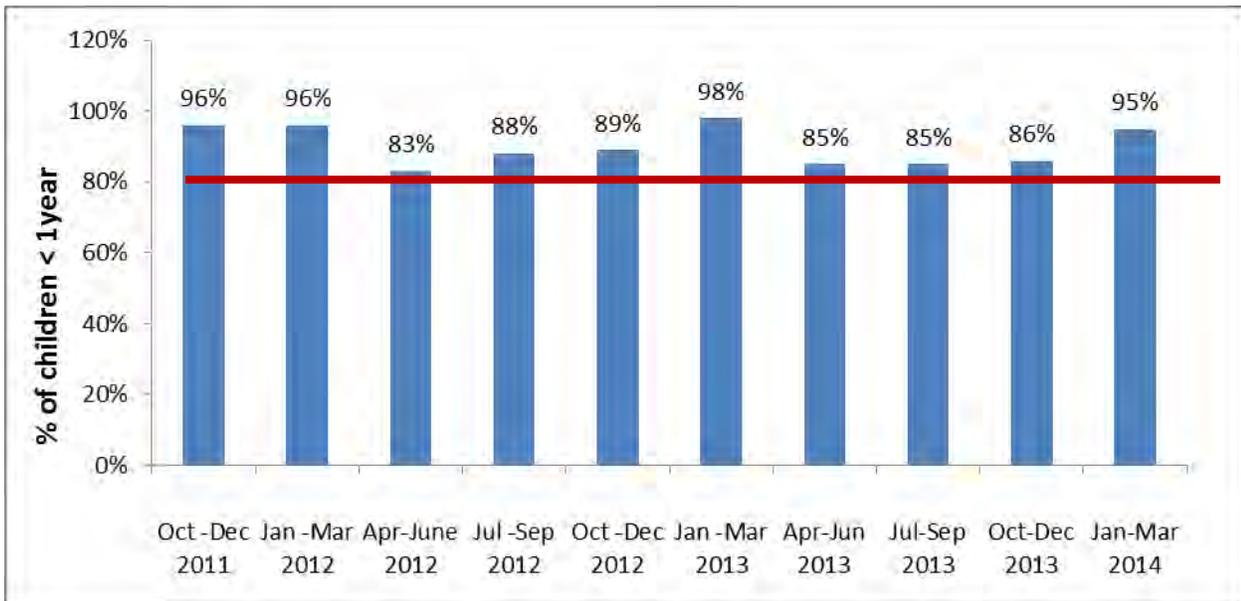
The figures below show routine immunization coverage statistics for Manicaland from 2011-2014. During most quarters, average district coverage for Penta 3 and measles vaccines was above the 80% coverage target.

Figure 6. Percent of children <1 year who received Penta 3 in Manicaland Province



Source: MOHCC Health Management Information System. NB: Red line indicates national coverage target (80%). Coverage statistics that exceed 100% may be due to large numbers of children coming for vaccination from outside of the catchment area, problems with population data, or other reasons.

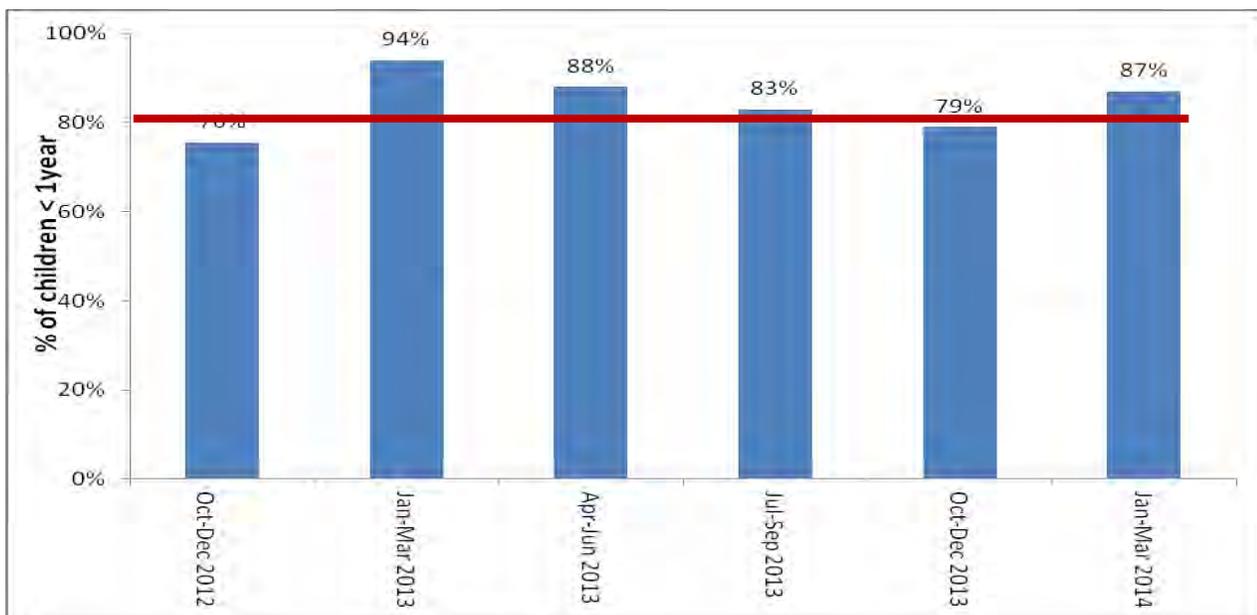
Figure 7. Percent of children <1 year who received measles vaccines in Manicaland Province



Source: MOHCC Health Management Information System. NB: Red line indicates national coverage target (80%).

Pneumococcal vaccine (PCV 13) was introduced by the MOHCC with support from MCHIP and other partners in July 2012. The figure below shows PCV 13 coverage (third dose) in Manicaland province, from the point of introduction to March 2014. Coverage was below the national target (80%) during the first quarter after introduction, likely due to initial data recording problems. During most quarters thereafter however, PCV 13 (third dose) coverage was above the 80% coverage target in the province.

Figure 8. Percent of children < 1 year who received Pneumococcal 3 in Manicaland Province



Source: MOHCC Health Management Information System. NB: Red line indicates national coverage target (80%).

MCHIP/Zimbabwe: Strengthening Integrated Community-based MNCH

At community level, MCHIP strengthened the capacity of Village Health Workers (VHWs) to provide high quality MNCH services (including for malaria and nutrition) in their catchment areas. MCHIP piloted a performance quality improvement (PQI) approach which drew heavily from the facility-based SBM-R model described above. This approach included interventions like innovative peer-to-peer driven multi-dimensional supportive supervision and the use of a standard set of tools to improve community HMIS. For the first time in the history of community-level MNCH care in Zimbabwe, a structured approach was used to measure the quality of care provided by VHWs during antenatal care (ANC) home visits, post-natal care (PNC) home visits, and community case management for sick children and adults. Results from Chimanimani district, where MCHIP worked with VHWs using the PQI approach, showed a statistically significant improvement in the quality of MNCH care provided compared against VHWs who did not use the PQI approach. As of the end of the project, the PQI model had gained the interest of stakeholders nationally and has the potential to be adopted and implemented at scale beyond the two MCHIP-supported districts in the future (see additional details in program learning section).

Notable quotes from MCHIP stakeholders regarding strengthening services at community level*:

- “VHWs and the Village Health Committee now discuss health with people getting the services. The community now works together.”
- “Our communities really appreciate MCHIP services and how the VHWs extended the services!”
- “The community itself appreciates the services and the Community Quality Committee does exit interviews with clients!”

**Quotes were collected by USAID external consultants while conducting an end of project evaluation.*

MCHIP placed a particularly strong emphasis on building local capacity in the area of malaria community case management. Manicaland experiences high annual malaria incidence and in 2013 suffered a severe malaria outbreak in multiple districts. During this outbreak, MCHIP and the National Malaria Control Program supported community-level malaria sensitization and training for over 500 community leaders. Throughout 2012-2014, MCHIP also trained health workers in malaria case management at facility level and VHWs in malaria community case management using national guidelines. Subsequent review of MOHCC data indicates that VHWs have increased coverage of early screening, diagnosis, and treatment of uncomplicated malaria at community level and that this has likely averted excess morbidity and mortality due to malaria.

Impact of MCHIP-Supported Activities on Maternal, Newborn, and Child Morbidity and Mortality

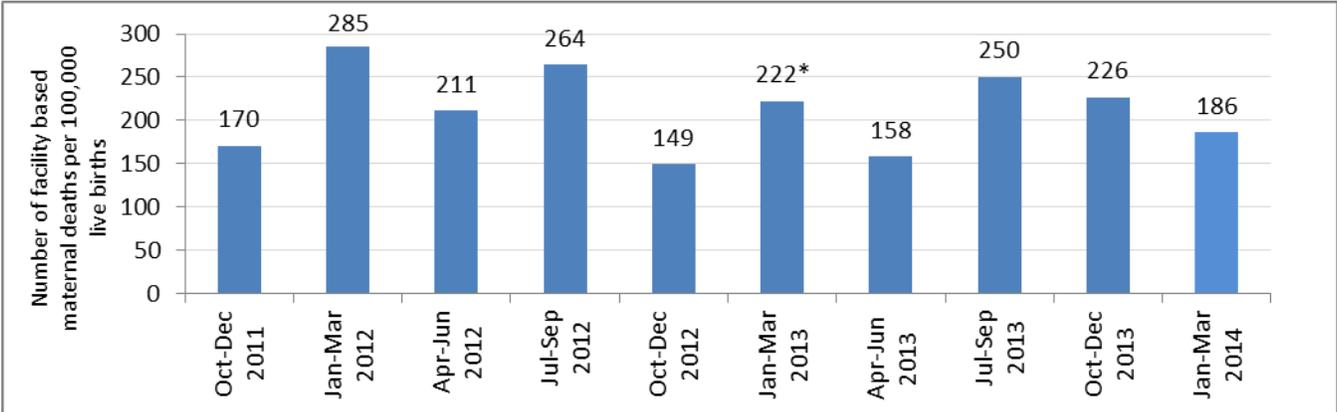
One of MCHIP’s goals was to be able to link process data with health outcome data, in order to see if improvements in health worker and health system performance over time could be linked to improved health for mothers and children. Although attribution of results to MCHIP is not possible given current measurement limitations (multiple overlapping partners and projects were being conducted in Manicaland in addition to MCHIP throughout MCHIP’s LOP, for example significant support being provided by the Health Transition Fund and the World Bank’s Performance-Based Financing project), certain insights can still be drawn from a review of select MNC health outcome data during the period 2011-2014.

The figure below shows facility-based maternal mortality data for 73 health facilities in Mutare and Chimanimani, over the period October 2011 to March 2014. As is common with maternal death data, the

statistics shown are “noisy” due to the relative rareness of the event as well as other factors. Clear patterns are difficult to discern but a lack of consistent reduction in deaths over time suggests that MCHIP should adjust its maternal health strategy in the future. The vast majority of maternal deaths shown below occurred at Mutare Provincial Hospital (MPH, the provincial referral hospital) rather than at rural health centers, which suggests that in the future, MCHIP should focus more attention on:

- Building capacity in the five other (non-MCHIP intervention) districts in Manicaland – all of which refer complicated maternal cases to MPH – especially in the area of referral care,
- Building capacity at MPH in not just BEmONC but also in comprehensive EmONC (e.g., Caesarean sections) so that these critical skills are strengthened in managing obstetric emergencies,
- Continuing to support regular maternal and perinatal mortality audits across the province such that high-volume facilities are reporting, analyzing, discussing, and utilizing mortality data to implement corrective measures and address systemic challenges to quality care.

Figure 9: Number of facility-based maternal deaths per 100,000 live births for 73 health facilities in Mutare and Chimanimani districts (October 2011 – March 2014)

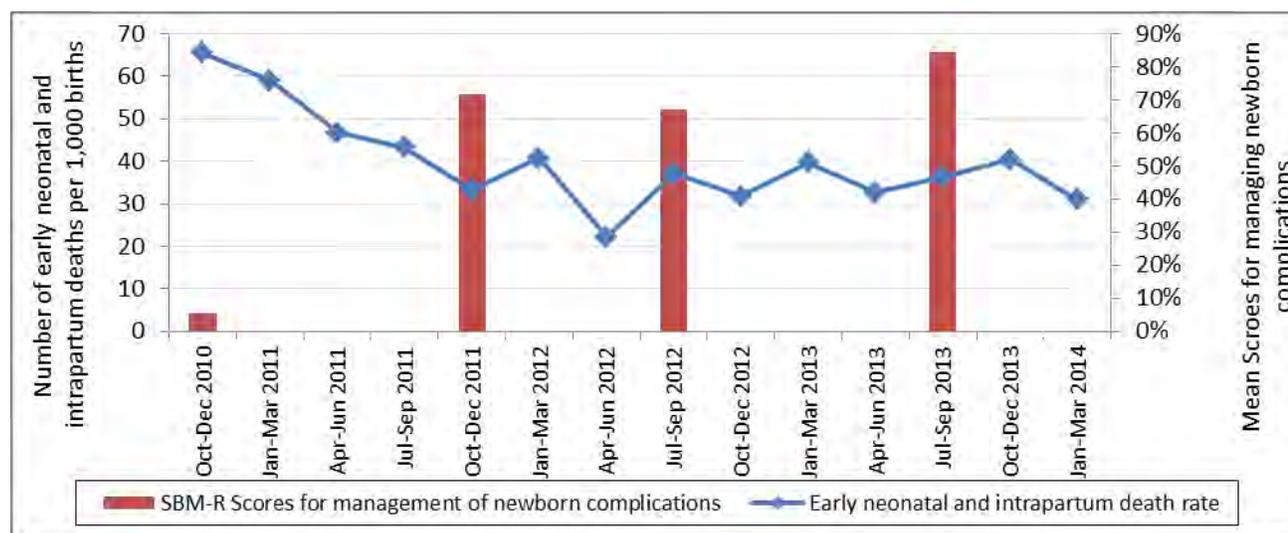


Source: MOHCC HMIS data and facility records. *A malaria outbreak occurred in the province during this quarter and there was a spike in material deaths due to malaria. For trend analysis purposes, an average quarterly mortality ratio (222) for the 8 quarters outside the malaria epidemic period was used here.

The figure below shows the facility-based early neonatal and intrapartum deaths per 1000 births, by month, for the period October 2010 to March 2014 in the 17 MNH SBM-R supported facilities. Overall, there was a decline in the facility-based early neonatal and intrapartum death, though with some stagnation in the last year. Over 95% of these deaths occurred at MPH (90% of the total) and Mutambara hospitals, and were mainly due to birth asphyxia and complications of prematurity/low birth weight. At the same time that the mortality rate was declining, health facility achievement in managing newborn complications increased over time. MCHIP support for roll out of HBB training at scale and revitalization of KMC likely played a role in this achievement.

In the future, MCHIP will respond to the mortality stagnation by focusing on additional interventions such as: use of the partograph to detect fetal abnormalities early; interventions to prevent preterm labour; use of corticosteroids to mature babies’ lungs to ensure their ability to breathe; capacity-building around advanced neonatal resuscitation; and capacity-building around neonatal infection management. Focus in these areas may help to further reduce neonatal mortality beyond what was seen during the 2010-2014 period.

Figure 10: Number facility-based early neonatal and intrapartum deaths per 1,000 births vs. performance scores in management of newborn complications (n=17 SBM-R sites, Mutare and Chimanimani, 2010-2014)



Source: MOHCC Health Management Information System and SBM-R assessment data.

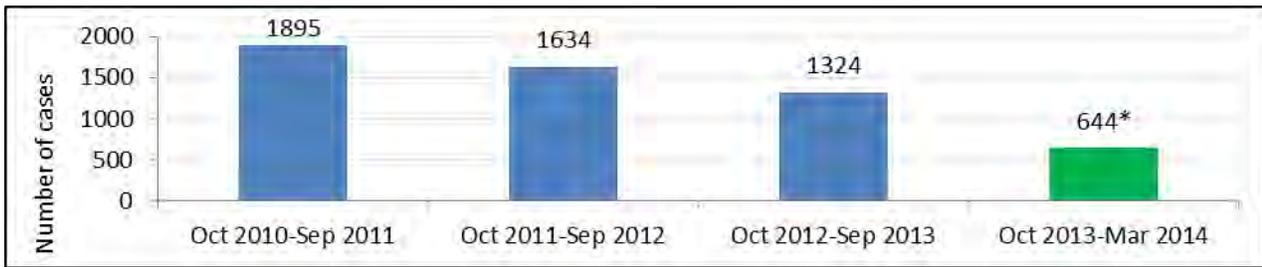
The number of facility-based deaths among children under five years of age was similar for 2012 and 2013. Although the total number of children treated at health facilities for pneumonia, diarrhea, and malaria increased over the two year period, cause-specific case fatality rates due to these causes declined over the same period (Table 4). For instance, pneumonia-case fatality rates reduced from 7.4% in 2012 to 5% in 2013 (a reduction of 32%) and to 3% during the period Jan-Mar 2014. Case fatality rates from malaria decreased from 6.9% in 2012 to 1.6% in 2013, a 77% reduction. These gains coincided with MCHIP interventions in scaling up IMNCI trainings, expanding QI activities for CH, introduction of PCV 13 vaccine, and strengthening of community case management for malaria by VHWs.

Table 4. Facility-based deaths in children <5, from Mutare Provincial Hospital (Jan. 2012- Mar. 2014)

Condition	Jan.-Dec. 2012		Jan.-Dec. 2013		Jan.-Mar. 2014 (NB: Data is for 6-month period)	
	No. of < 5 cases seen	No. of < 5 deaths	No. of < 5 cases seen	No. of < 5 deaths	No. of < 5 cases seen	No. of < 5 deaths
Pneumonia	973	72	1122	56	430	13
Diarrhea	678	8	837	26	156	3
Malaria	72	5	250	4	117	3
All causes	-	173	-	175	-	35

A further review of data from Mutare and Chimanimani showed a steady decline in the number of children seen with severe pneumonia from 2010-2014 (25% reduction in severe pneumonia cases between 2011 and 2013). While attribution is not possible, MCHIP’s support for facility-level, community-level, and new vaccine (PCV 13) introduction activities may have contributed to this decline.

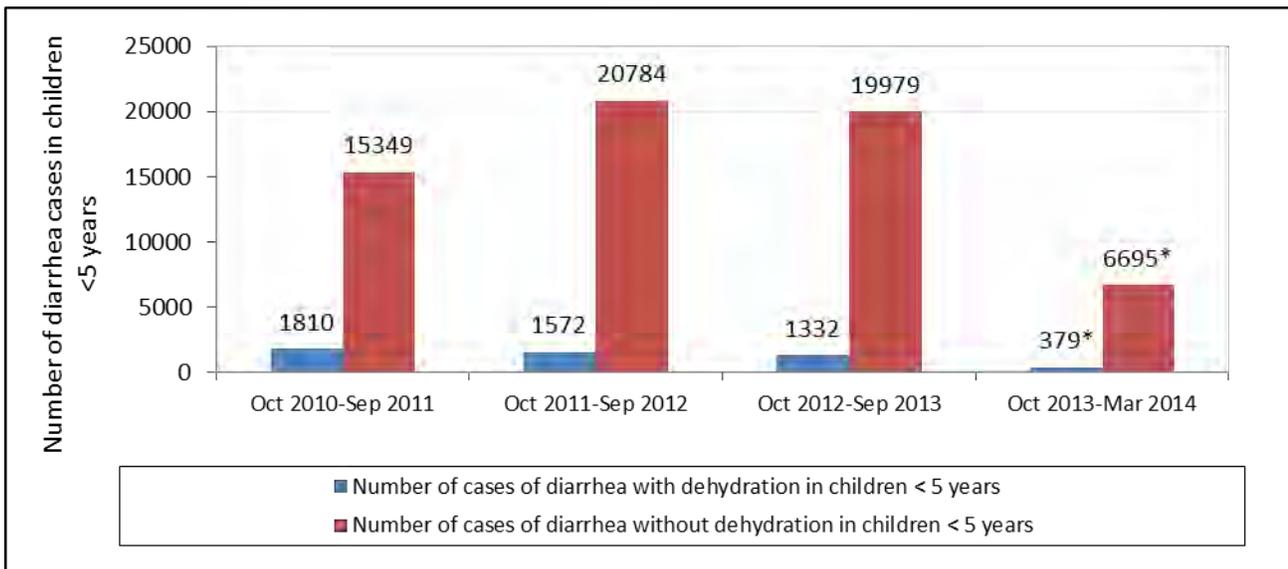
Figure 11. Cases of Severe Pneumonia in Mutare and Chimanimani Districts, 2010-2014



Source: HMIS data. * Data is for 6-month period.

Figure 12 shows the number of reported cases of children with diarrhea with and without dehydration in Mutare and Chimanimani district, from 2010/11 to October 2013. The proportion of diarrhea cases with dehydration declined from 11.8% in PY3 to 7.6% in PY4, and then to 6.5% in PY5, which indicates a clear downward trend. This is despite the fact that between October 2010 and October 2013, more children with diarrhea sought care at health facilities. It is possible that this reduction in cases with severe diarrhea could be due to early detection of cases by VHWs at community level and referral, as well as early care-seeking behaviors by caregivers. The increase in number of diarrhea cases with no dehydration might be due to improved and early treatment in the community as well as referral for zinc to the facility.

Figure 12. Trends in diarrhea cases in children under 5 in Mutare and Chimanimani districts



* Data is for 6-month period.

Cross-Cutting Themes

In addition to working across multiple technical areas, MCHIP was also designed to work across several cross-cutting themes. These included:

Equity: MCHIP prioritized increasing equity in health care access and utilization by focusing on hard-to-reach populations as well as religious objector groups in Manicaland. Involvement of Apostolic sect VHWS in MCHIP programming was one of the approaches used in promoting equitable distribution and use of services in Manicaland.

Scale-up: While MCHIP worked intensively in Mutare and Chimanimani districts, all MCHIP activities were designed with scale-up in mind. At national level, MCHIP disseminated evidence of promising results and innovations (like the SBM-R and PQI approaches) and will continue in the future to advocate for adoption of MCHIP interventions in other areas. In the future MCHIP will also scale-up current approaches to the remaining districts in Manicaland.

Integration: MCHIP truly worked across the maternal and child continuum of care, and prioritized integration of activities to the maximum extent possible. For example, at community level, MCHIP built VHW capacity in integrated community case management (ICCM) rather than just focusing on community case management for a single disease such as malaria. At national level, MCHIP supported national integration efforts for example by supporting finalization of integrated supportive supervision tools, integrated data quality audit/assessment protocols, and integrated health worker job aids.

Community: MCHIP supported community-level activities in Mutare and Chimanimani, with a focus on building capacity of VHWS to deliver high-quality MNCH (including in malaria and nutrition) services. This included training of VHWS, provision of job aids, provision of supportive supervision, and support for collection, reporting, and use of community health data.

Measurement: Measurement was the cornerstone of quality improvement activities. Health workers were supported to develop skills to monitor and measure their own performance as a way of ensuring internalization of skills and sustainability after MCHIP.

Training: MCHIP prioritized competency-based training approaches that focused on building skills as well as knowledge of health workers. MCHIP trained extensively throughout Manicaland and also supported training of trainers at the national and provincial level to ensure that skills were spread to other non-MCHIP supported districts and provinces. Tools such as registers, flip charts, and other job aids were developed for use in a wider context than the MCHIP focus districts.

Notable quotes from MCHIP stakeholders regarding improved integration of services*:

- “We are a one stop shop now.”
- “We are now doing ‘head to toe’ examinations.”
- “With MCHIP we are using a ‘holistic approach’ and assessing mother and baby together at each visit and it is reducing the workload.”
- “We care for the needs of the parent as well as the needs of the child at each visit.”
- “IMNCI has improved things; babies are now managed holistically.”

**Quotes were collected by USAID external consultants while conducting an end of project evaluation.*

Quality: MCHIP’s flagship MNCH strengthening approach, at the national, facility, and community levels, was quality improvement. MCHIP was a key partner in the MOHCC’s efforts to develop a national QA/QI policy and strategy and was critical in broadening the national dialogue to include “thinking beyond the numbers” in terms of assessing public health impact. At facility and community levels, MCHIP introduced the SBM-R and PQI approaches to quality improvement, and evidence suggests that these approaches have been effective at raising the standard and quality of MNCH care being provided in Manicaland.

Program Learning

MCHIP/Zimbabwe was designed as a “learning project”, in which innovations could be tested, evidence generated, results documented, and lessons learned (positive and negative) shared with stakeholders within and outside of Zimbabwe. Mutare and Chimanimani – MCHIP’s focus districts – were referred to as “learning sites” because interventions and activities supported there were designed to also generate evidence to improve national program implementation, identify key lessons learned, and inform international best practices.

Throughout the life of project, MCHIP/Zimbabwe supported an internal “program learning agenda”, whereby key operations research-type questions were identified and tracked by the team. MCHIP identified a handful of priority topics and developed standard program learning protocols for each. By the end of the project, each of these studies had been completed and results are being disseminated as appropriate (see Annex 5). A description of MCHIP’s program learning topics and main findings are summarized in the table below.

Table 5: MCHIP program learning topics, key findings, and utilization

Operations research topic	Key findings	Utilization	Tools/publications
<p>1. SBM-R for MNCH</p>	<p>Improved performance of HCWs in MCHIP supported facilities. Trends in mortality improved in SBM-R facilities compared to non SBM-R facilities.</p>	<p>Results were used to develop:</p> <ul style="list-style-type: none"> • National MNCH standards • National QA/QI policy and strategy • National MNH record/register • National IMNCI register • National SBM-R MNH atlas • National clinical training packages • National SS checklist • National MNCH protocols 	<ul style="list-style-type: none"> • National MNCH standards • National QA/QI policy and strategy • National MNH record/register • National IMNCI register • National SBM-R atlas for MNH • National clinical training packages • National SS checklist • National MNCH protocols
<p>2. The role of trainee-led skills retention strategies for HBB post-training</p>	<p>Regular trainee-led skills practice assists in retaining competencies for BEmONC/HBB.</p>	<p>Preliminary results to inform PTFU strategies and skills retention strategies for in-service trainings.</p>	<ul style="list-style-type: none"> • Trainee-led self-practice guide following HBB training • Report: Role of trainee-led skills retention strategies in managing neonatal emergencies (TBD)

Operations research topic	Key findings	Utilization	Tools/publications
3. Zinc prescription patterns in managing diarrhea among health workers in two districts	Health workers' adherence to zinc prescription protocol for managing diarrhea improves with OJT and SS.	Findings to be used by MOHCC to inform proper utilization of zinc through appropriate targeted interventions like training of health workers before introduction. It will also be used to inform importance of constant supply of zinc.	<ul style="list-style-type: none"> Report: Zinc prescription pattern study.
4. Oxytocin potency study	There is no problem with the quality of oxytocin in labor wards in Manicaland	Findings to be disseminated and used to inform procurement, storage and use of oxytocin as a uterotonic of choice in Zimbabwe.	<ul style="list-style-type: none"> Report: The oxytocin potency study in Zimbabwe.
5. Performance and quality of MNCH care provided by VHWs at community level	VHWs who received the intervention significantly improved the quality of MNCH care they provided.	<ul style="list-style-type: none"> Baseline data on quality of care provided by VHWs/CHWs shared at national level. NMCP adopted the model for MCCM. 	<ul style="list-style-type: none"> Peer-to Peer supportive supervision guidelines for CHWs Community HMIS tools for use by VHWs
6. Quality of MCCM by VHWs	There was improvement in malaria community case management (MCCM) as evidenced by positive comments from the community which has resulted in increased client confidence in community health care service provision. Some DHE supervisors have adopted this approach and used it in non-SBM-R sites during SS.	<ul style="list-style-type: none"> MCHIP supported the National Malaria Control Program (NMCP) in development and printing of a standardized MCCM training package. The training package has been adopted for national use in managing malaria at community level. 	<ul style="list-style-type: none"> National MCCH standards National MCCM policy and strategy National MNH record/register National MCCH register National MCCH training packages National MCCH SS checklist National MCCH protocols National MCCM job aids Video from MCCM beneficiaries
7. IPTp coverage in Mutare	Despite achievements in health worker training, poor knowledge, lack of timely utilization of ANC services, and lack of availability of resources (medicines in particular) affect the performance of the IPTp program.	<ul style="list-style-type: none"> Preliminary results will inform revision of the IPTp program in Manicaland in terms of availability of medicines and SS of health workers in adherence to national standards of care. 	<ul style="list-style-type: none"> National policy for DOTs for IPTp developed Revision of the geographical mapping for malaria hot spots
8. Factors associated with high dropout rates in immunization in Mutare district	Challenges with poor accessibility and availability of immunization services were the major causes of immunization drop-outs in the district.	<ul style="list-style-type: none"> Results will be used to revise immunization coverage maps, improve approaches to scale up immunization services, reduce immunization drop-outs, and map outreach sites. 	<ul style="list-style-type: none"> National headcount report generated Revised immunization coverage maps Revised outreach sites report

Operations research topic	Key findings	Utilization	Tools/publications
<p>9. Maternal mortality trends in Manicaland Province, 2009 to 2012</p>	<p>Maternal mortality in the period under review was decreasing, but with challenges in terms of poor utilization of ANC/ maternity services and management of third stage of labor. Increasing incidence of malaria in pregnancy was also a challenge.</p>	<ul style="list-style-type: none"> • Results will be used to review the factors contributing to high maternal mortality and improve the quality of services for pregnant women during and after delivery. 	<ul style="list-style-type: none"> • National Maternal and Perinatal Mortality guidelines • Revision of mapping for high malaria burden districts

Challenges

Throughout the life of the MCHIP project, many challenges—some internal and some external—presented themselves. While challenges are always to be expected, they played an important role in shaping the project, influencing implementation, and in some cases affecting project outcomes both positively and negatively. Fortunately for the project, the sustained flexibility, resiliency, and creativity on the part of MCHIP’s stakeholders, implementers, advocates, and communities helped to overcome potential barriers to project success. Experience and lessons learned throughout MCHIP’s implementation will be used to inform future MCHIP programming in Zimbabwe (under the upcoming Associated Award, or “AA”), as well as shared widely to benefit project implementation elsewhere.

- ***Lack of high-level coordination for MNCH activities within the MOHCC.*** Major challenges persisted throughout MCHIP’s life of project, in terms of lack of high-level coordination for MNCH activities within the MOHCC. MCHIP supported multiple departments/units within the MOHCC, and all MCHIP activities depended on consistent MOHCC leadership, coordination, and support. A lack of high-level coordinating platforms (e.g., working groups, steering committees, etc.), as well as general coordination between MOHCC departments, slowed the progress of some key national/provincial/district/community-level initiatives which MCHIP sought to support. In terms of mitigation strategies, MCHIP sought opportunities to raise awareness about these issues among high-level decision-makers and consistently advocated for and helped facilitate strengthened national-level coordination. For example, MCHIP dedicated significant effort toward supporting the functioning of the national Child Survival Technical Working Group, in order to facilitate progress of national-level initiatives for child health (such as finalizing and rolling out the national IMNCI training package).
- ***Personality management.*** At times throughout the project, MCHIP staff (particularly senior leadership) had to dedicate significant amounts of time and energy to managing difficult personalities and personality conflicts between stakeholders. These conflicts, if left unmanaged, can negatively affect the team’s ability to work effectively and move key activities forward. In all cases where personality/relationship issues occurred, MCHIP managed the situation deftly, but the challenges presented by such issues were generally an unwelcome distraction from project implementation.
- ***Mismatched expectations regarding per diem for government counterparts.*** Questions arose consistently throughout the life of project about MCHIP’s per diem policy as it relates to government counterparts engaged in MCHIP activities. At times there was a significant disconnect between what MCHIP was able to pay and what government counterparts wished to receive, as well as confusion about MCHIP’s rules/regulations surrounding payment mechanisms. The impact of the per diem issue was felt at multiple levels and resulted in many challenges (e.g., delays and possible cancellation of the NIHFA/QoC study, challenges in getting local counterparts to agree to participate in MCHIP activities, competition between different implementing partners based on variations in per diem schedules). Over time, MCHIP clarified its per diem policy, and staff formed strategies to communicate MCHIP policies effectively and consistently to government counterparts before activities began to ensure that expectations were clear and agreed upon beforehand.
- ***Difficulties collecting indicator data and ongoing data quality issues.*** Challenges related to health data availability, timeliness, and quality were significant. These challenges generally affected the project’s ability to identify areas of need, monitor the impact of interventions, and report on activity progress. By design,

many of the project's indicators depended on data collected and reported through the national HMIS, as MCHIP wanted to avoid creating parallel data systems, to the extent possible. As such, some project indicators were difficult to measure, given the current state of data collection tools/forms/registers in Zimbabwe's health facilities and challenges faced by the country's HMIS. For example, the project initially set out to measure the provision of essential newborn care services at facility level, but no routine data is currently collected on these services at this level. In addition, child mortality data is not consistently collected through service delivery points, which made it challenging for the project to monitor child mortality trends over time. Lack of population data also made accurate calculations of immunization coverage impossible at sub-national levels. In response to these challenges, the project provided significant technical support to the MOHCC at national, provincial, district, and community levels in terms of monitoring and evaluation/HMIS training for health workers, supporting data collection tool/register development and rollout, and providing HMIS strengthening support at the policy level.

- ***Selection of inappropriate cadres for participation in MCHIP supported trainings and training of trainers (TOTs).*** MCHIP invested significant resources each year in building the capacity of health workers through clinical trainings, workshops, and meetings, and always in response to MOHCC requests for support. Although the technical needs were undeniable, in some cases MCHIP was concerned about specific individuals selected by the MOHCC to participate in trainings and TOTs. For example, appropriate participants selected for a BEmONC training might include nurses and midwives who deliver hands-on clinical maternal and newborn care, such as in labor/maternity wards. In some cases, however, actual participants selected for training might include providers unlikely to ever put new knowledge or skills to good use, and who presented a challenge in terms of post-training follow up and ongoing supportive supervision. Inclusion of inappropriate cadres meant that training resources were reduced for those who could actually benefit from training and provide a return on training investments. To combat this challenge, MCHIP advocated strongly among stakeholders to identify appropriate participants for training and TOT activities.
- ***Tight training schedule at district level.*** As many partners were active in Manicaland at the same time as MCHIP, at times it was difficult to coordinate schedules with the Provincial Health Team and confirm "training slots", particularly in Mutare district. Some MCHIP activities occurred later than anticipated due to tight schedules at the district level. Scheduling will hopefully be less of an issue under the follow-on MCHIP Associate Award, as MCHIP will implement activities more broadly across all seven districts of Manicaland; this will allow the project to focus activities on certain districts while waiting for other districts to become available.
- ***Constraints to MCHIP's available human and material resources.*** Despite having ambitious project objectives, targets, and expectations, the MCHIP team was relatively small (in terms of number of staff members) and the project's budget relatively modest. Through effective team and resource management, delivery of highly technical expertise, and active partnership/leveraging of other partner funds, however, MCHIP was able to achieve impressive results across a wide array of technical areas. Under the MCHIP Associate Award, resource constraints will continue to be a significant challenge for the team as new technical activities are added and wider geographical coverage expected. Enhanced strategies and approaches will also be needed with this follow-on project in order to "do more with less", including by increasingly harnessing the ability of other donors/partners (such as the Health Transition Fund and the World Bank's Results-Based Financing program) to maintain momentum in Manicaland.

Recommendations and Way Forward

Zimbabwe, while showing some encouraging data gains in combatting mortality and morbidity, still has a long way to go to reverse the ever growing mortality crisis among women and children under five. In early-2014, MCHIP/Zimbabwe will transition to a new three-year, USAID-funded Associate Award, and, as during the October 2010-May 2014 period, will continue supporting the Zimbabwe MOHCC's MNCH efforts. During this next phase of the project, MCHIP/Zimbabwe will incorporate the following recommendations into its programmatic design⁷. The MCHIP team is confident that doing so will increase the odds of success in the future, with the ultimate project goal remaining improving health for the country's women, children, and families.

At national level, recommendations for MCHIP's way forward include:

- Continue to advocate for/support provision of high-level coordination for MNCH activities within the MOHCC, in order to strengthen national-level strategic planning, coordination, and program implementation. Use existing relationships to leverage efforts and resources of other partners and initiatives such as HTF, ISP, and Global Fund in order to amplify MCHIP's technical reach nationwide.
- Continue to support the MOHCC's efforts in developing key, evidence-based national policies, standards, guidelines, and training packages. Continue to assist the MOHCC and other stakeholders to engage with global public health initiatives and emerging international best practices, including those for new vaccine introduction and roll out.
- Continue to advocate for a "beyond the numbers" approach to providing high-quality health care nationwide. Assist the MOHCC to identify a single national approach to QI and roll out a national QI implementation strategy.
- Advocate for inclusion (and standardization) of MNCH packages (especially high-impact interventions) and CBT approaches into pre-service education curricula (e.g., advocate with the MOHCC Nursing Directorate to include basic EmONC in the general nursing curriculum).
- Improve MNCH service integration. Work with partners and provide technical support to MOHCC counterparts to ensure that current national ANC and PNC platforms are used to strengthen Malaria in Pregnancy (MIP), maternal nutrition and anemia, IYCF, PMTCT, and PFP/PPIUD interventions.
- Continue to provide support as identified and prioritized by the MOHCC in health information systems and M&E. Support the MOHCC in its efforts to strengthen the HMIS at all levels, prioritizing issues related to data quality assessments, the MPMA system, and integrated SS. In addition, advocate for piloting and/or adopting innovative metrics and M&E approaches, such as inclusion within national HMIS of indicators that measure quality of health services, approaches linking performance/process indicators with health outcome data, and inclusion of additional community indicators in the HMIS system. Finally, advocate for and support MOHCC to develop improved means for collecting and interpreting under-5 child morbidity data.
- Continue technical assistance and support for national MNCH advocacy, communication, and social mobilization activities (e.g., World Breastfeeding Week, African Vaccination Week, new vaccine introduction, etc.).

⁷ Many of these recommendations originate from a USAID external evaluation which was conducted by USAID/Zimbabwe in late 2013.

At provincial/district level, recommendations for MCHIP's way forward include:

- Improve, expand, and maintain facility-based MNH SBM-R activities in Manicaland:
 - Expand coverage of SBM-R activities to new districts to equip health workers to deliver evidence-based, integrated services that are humanistic, respectful, and client-centered.
 - Increase focus on provincial hospital and high-volume referral sites (i.e., non-learning site district hospitals in Manicaland). Prioritize all Manicaland district hospitals and Mutare Provincial hospital (MPH) for additional targeted interventions.
 - Seek ways to simplify SBM-R tools/reduce the number of SBM-R performance standards/verification criteria without compromising the resulting quality of care. Adapt SBM-R tools such that they have a greater focus on the main causes of MNH mortality and morbidity (e.g., greater focus on critical pathways).
 - Refine the SBM-R model to include capacity-building activities for all health facility staff (e.g., including nurse aides) such that performance improvements can be more widespread and more easily sustained.
 - Consider using champions (leaders) from Mutare and Chimanmani facilities to introduce SBM-R approaches in and mentor staff at new service delivery sites (possibly through innovative routine monitoring and mentorship methods).
 - Revise the SBM-R scoring system to make it less punitive and more encouraging.
 - Change the SBM-R approach such that participating HWs are recognized in an appropriate manner earlier in the process, in order to increase motivation and retention.
 - Continue to revise/improve the SBM-R approach as piloted in Zimbabwe for child health, for example by making tools more responsive to changes in the quality of care delivered to children. Pilot new QI tools to address quality of services provided to sick children at provincial/district hospital level. In addition, work with Mutare Provincial Hospital specifically to improve in-patient care for sick children.
 - Involve more partners and engage more policymakers in the quality improvement process, to facilitate national-level adoption, scale-up, and roll-out.
 - Test new ways to link quality of care improvements to MNC mortality/outcome data.
- Prioritize districts with high MNCH mortality and morbidity, and within these, prioritize support for high-impact MNCH interventions and activities such as KMC, HBB, EmONC, malaria case management, and RED:
 - Focus future technical support on the main causes of maternal, newborn, and child mortality, with greater emphasis, for example, on up-skilling nurses to manage complications at the time of labor and delivery and in the immediate postpartum period. Focus ANC strengthening support on improved supervisory visits.
 - Increase the number of KMC units at the district level to increase coverage of this intervention, overcome limitations with current supply, and keep up with growing demand.

Notable quotes from MCHIP stakeholders regarding improving the SBM-R approach*:

- “We need more staff to provide quality care; you need to spend time with patients to provide good care and if you do that waiting is too long. We don’t want patients to say, ‘Ah, if you go there you spend all day!’”
- “The SBM-R scoring system is harsh! It is demotivating. However it has been effective.”
- “We need some sort of recognition!”

**Quotes were collected by USAID external consultants while conducting an end of project evaluation.*

- Expand malaria case management training to facilities across Manicaland Province, with special focus on facilities in areas prone to malaria outbreaks. Ensure that health workers have sufficient time to gain experience in malaria management before the next malaria season.
 - Continue province-wide support for roll out of the RED approach, building on lessons learned in the previous years of implementation. Support improvement in collection/reporting of provincial and district EPI coverage statistics. Also, work with MOHCC to engage PMTCT partners and HWs for introduction of a village EPI/child health register.
 - Work with MOHCC and partners to cascade Immunization in Practice (IIP) training to sub-national levels and lobby MOHCC counterparts to identify/select appropriate cadres for participation in MCHIP-supported trainings and TOTs in order to minimize the risk that training investments may not produce desired down-stream results.
- Continue to utilize a competency-based training (CBT) approach to capacity-building at sub-national level, with a sustained emphasis on post-training follow up, on-the-job training, and supportive supervision. In addition, advocate among MOHCC counterparts for identification/selection of appropriate cadres for participation in MCHIP-supported trainings and TOTs lest future training investments fail to produce desired downstream results.
 - Continue to support strategic planning, coordination, data review/M&E, and evidence-based decision-making at provincial/district/facility levels. Continue focus on providing technical assistance to the MOHCC and seeking opportunities to leverage partner resources in order to amplify MCHIP's technical reach within the province/districts.

At community level, recommendations for MCHIP's way forward include:

- Scale up integrated community-based child survival interventions (e.g., early care seeking for pneumonia, reducing indoor air pollution, cYCF, malaria community case management, use of long-lasting insecticide-treated bednets, etc.), in conjunction with strengthening health facility service provision. A key recommendation is to continue, refine, and expand the community PQI (cPQI) approach to one or more additional Manicaland districts and further assess results in 6-12 months:
 - Disseminate results of cPQI activities at a national stakeholders meeting to inform, advocate, and encourage wider adoption.
 - Work with the MOHCC M&E unit to standardize a community integrated register that supports cPQI efforts.
 - Refine the PQI approach such that VHWs participating in quality improvement activities are recognized in an appropriate manner earlier in the process, in order to increase motivation and retention.
 - Engage the MOHCC Nursing Division (responsible for basic VHW training) in future cPQI efforts in order to increase consideration for national adoption by the VHW program.
- Prioritize civil society capacity-building to a greater extent in the future, by partnering with local Civil Society Organizations (CSOs) and strengthening their capacity to mobilize communities for improved knowledge, access to, and utilization of MNCH services. Working with CSOs will foster further community engagement and facilitate sustainability and local ownership of community interventions.
 - Work with VHWs and CSOs to engage religious sub-populations in Manicaland to seek immunization services. In addition, seek to add an "equity indicator" in future M&E plans in order to measure the proportion of children accessing immunization services by religious group.
 - Work with VHWs and CSOs to engage Manicaland communities in dialogue on barriers to utilization of health services among women (apostolic and other) and children; gender and decision-making roles within families; and prevention of early marriage and early pregnancy.

Annex 1a: Indicator Matrix

***Color codes Key (based on international PEPFAR Guidelines)**

Green = > 90% of target

Yellow = 75%-90% of target

Red = below 75% of target

Indicator	Indicator Definition	Baseline Value (Oct. 2009 - Sep. 2010)	MCHIP PY3 Achievement (Oct. 2010 – Sep. 2011)	MCHIP PY4 Achievement (Oct. 2011 – Sep. 2012)	MCHIP PY5 Achievement (Oct. 2012 – Sep. 2013)	MCHIP PY6 Achievement (Oct 2013 – Mar 2014)	LOP MCHIP Achievement (Oct 2010- Mar 2014)	Overall LOP Target (Oct 2010- Mar 2014)	Overall % progress achieved *	Notes
GOAL: To increase access to quality MNCH services and strengthen health services in Zimbabwe by supporting the MOHCC and contributing to the scale up and roll out of evidence-based, high-impact interventions that will reduce maternal, newborn, and child morbidity and mortality and contribute to the attainment of Millennium Development Goals (MDG) 1c, 4, 5 and 6.										
G1. Facility-based maternal mortality ratio (MMR)	# of facility-based maternal deaths, divided by the total # of facility-based live births in MCHIP learning districts (Chimanimani and Mutare), multiplied by 100,000.	296/100,000 live births (n=79 HFs in 2 learning districts) (Jan –Dec 2009 data; source: MOHCC, 2009)	265/100,000 live births (Mutare and Chimanimani districts)	232/100,000 live births (Mutare and Chimanimani districts)	273/100,000 live births (Mutare and Chimanimani districts)	207/100,000 live births (Mutare and Chimanimani districts)	246/100,000 live births (average over LOP, Mutare and Chimanimani districts)	215/100,000 live births	62%	The year 3 target was taken as the overall project target since the target for this indicator was cumulative.
G2. Facility-based early neonatal mortality rate (ENMR)	Total # of facility-based fresh stillbirths and neonatal deaths within 24 hours of delivery, divided by total # of facility-based births (live births plus still births) in MCHIP learning districts, multiplied by 1,000.	63/1,000 total births (n=79 HFs in 2 learning districts) (Jan –Dec 2009 data; source: MOHCC, 2009)	54/1,000 total births	33/1,000 total births (Mutare and Chimanimani districts)	31/1,000 total births (Mutare and Chimanimani districts)	28/1,000 total births (Mutare and Chimanimani districts)	37/1,000 total births (average over LOP, Mutare and Chimanimani districts)	46/1,000 total births	153%	The year 3 target was taken as the overall project target since the target for this indicator was cumulative.
Objective 1: Support the MOHCC to formulate national health policies, strategies and programs that increase the population’s access to affordable, evidence-based, high impact MNCH/FP interventions										

Indicator	Indicator Definition	Baseline Value (Oct. 2009 - Sep. 2010)	MCHIP PY3 Achievement (Oct. 2010 – Sep. 2011)	MCHIP PY4 Achievement (Oct. 2011 – Sep. 2012)	MCHIP PY5 Achievement (Oct. 2012 – Sep. 2013)	MCHIP PY6 Achievement (Oct 2013 – Mar 2014)	LOP MCHIP Achievement (Oct 2010-Mar 2014)	Overall LOP Target (Oct 2010-Mar 2014)	Overall % progress achieved *	Notes
1.1 # of national policies/ guidelines/ protocols/ strategies developed with MCHIP support	# of national policies, regulations, strategy documents developed or revised with MCHIP support.	0	4	5	8	1	18	10	180%	The overall target was surpassed by 80%. This was a result of under-targeting especially in year 1.
1.2 # of MNCH/FP evaluations/reviews conducted with findings shared with stakeholders	# of evaluations and reviews conducted to gather information relevant for a particular program or activity in order to improve knowledge or understanding about the program/MNCH.	0	3	7	6	1	17	9	189%	The overall target was surpassed by 89%. This was a result of under-targeting especially in year 1.
Objective 2: Improve the quality of maternal, newborn and child health services provided at health facilities in learning sites and support national level scale up plans										
2.1 # of health facilities receiving MCHIP support for MNCH interventions	# of health facilities receiving MCHIP-supported MNCH interventions.	0	20 SBM-R supported HFs 79 HFs (100% in Mutare and Chimanimani) supported with other activities 283 HFs (100% in Manicaland supported with EPI activities)	22 SBM-R supported HFs 73 HFs (100% in Mutare and Chimanimani) supported with other activities 277 HFs (100% in Manicaland supported with EPI activities)	22 SBM-R supported HFs 73 HFs (100% in Mutare and Chimanimani) supported with other activities 277 HFs (100% in Manicaland supported)	22 SBM-R supported HFs 73 HFs (100% in Mutare and Chimanimani) supported with other activities 277 HFs (100% in Manicaland supported)	22 SBM-R activities supported HFs 73 HFs (100% in Mutare and Chimanimani) + others TBD supported with other MNCH 277 HFs (100% in Manicaland supported with EPI activities)	22 SBM-R activities supported HFs 73 HFs 100% in Mutare and Chimanimani + others TBD supported with other MNCH 277 HFs (100% in Manicaland	100%	There were 6 Health facilities in Chimanimani district that were closed down in PY4

Indicator	Indicator Definition	Baseline Value (Oct. 2009 - Sep. 2010)	MCHIP PY3 Achievement (Oct. 2010 – Sep. 2011)	MCHIP PY4 Achievement (Oct. 2011 – Sep. 2012)	MCHIP PY5 Achievement (Oct. 2012 – Sep. 2013)	MCHIP PY6 Achievement (Oct 2013 – Mar 2014)	LOP MCHIP Achievement (Oct 2010- Mar 2014)	Overall LOP Target (Oct 2010- Mar 2014)	Overall % progress achieved *	Notes
								supported with EPI activities)		
2.2 # of trainers trained in MNCH	# of trainers trained in MNCH with MCHIP support	0	154	412	50	255	871	145	601%	It was unclear at the beginning of the project (when targets were set), how extreme the training needs would be in Manicaland. Thus initial targets were set too low.
2.3 # of health workers trained in MNCH	# of health workers trained in MNCH training packages with MCHIP support	0	398 (from learning sites, other districts, national level)	1012	734	506	2,650	860	308%	
2.4 % of MCHIP SBM-R supported facilities achieving set target for MNH clinical standards for the year	# of MCHIP SBM-R supported facilities achieving the set annual performance and quality improvement target for MNH clinical standards, divided by total # of MCHIP SBM-R supported HFs.	0	41% of HFs (7/17) reaching at least 60% of MNH standards (n=17 HFs in 2 learning districts)	24% of HFs (4/17) reaching at least 80% of MNH standards	76% of HFs (13/17) reached at least 80% of MNH standards (Last assessment done in Sep 2013; was a self-assessment)	(Last assessment done in Aug 2013)	76% of HFs (13/17) reached at least 80% of MNH standards (at final Aug 2013 assessment)	100% of HFs reaching at least 80% of MNH standards	76%	The target for PY3 was set at a conservative level of 60% as the quality improvement using the SBM-R approach was started in that year.
2.5 % of MCHIP SBM-R supported facilities achieving set target for CH clinical standards for the year	# of MCHIP SBM-R supported facilities achieving the set annual performance and quality improvement target for CH clinical standards, divided by total # of MCHIP SBM-R supported HFs.	0	5% of HFs (1/20) reaching at least 60% of CH standards (n=21 HFs in 2 learning districts)	29% of HFs (6/21) reaching at least 60% of CH standards	71% of HFs (15/21) reached at least 60% of CH standards	(Last assessment done in Aug 2013)	71% of HFs (15/21) reached at least 60% of CH standards (at final Aug 2013 assessment)	70% of HFs (15/21) reached at least 60% of CH standards	101%	The year 3 target was taken as the overall project target since the target for this indicator was cumulative.

Indicator	Indicator Definition	Baseline Value (Oct. 2009 - Sep. 2010)	MCHIP PY3 Achievement (Oct. 2010 – Sep. 2011)	MCHIP PY4 Achievement (Oct. 2011 – Sep. 2012)	MCHIP PY5 Achievement (Oct. 2012 – Sep. 2013)	MCHIP PY6 Achievement (Oct 2013 – Mar 2014)	LOP MCHIP Achievement (Oct 2010-Mar 2014)	Overall LOP Target (Oct 2010-Mar 2014)	Overall % progress achieved *	Notes
2.6 # of pregnant women receiving first ANC visit	# of pregnant women receiving first ANC visit in MCHIP learning districts.	17,215 (n=79 HF in 2 learning districts) (Jan –Dec 2009 data; source: MOHCC,2009)	18,946 (n=79 HF in 2 districts) (for Mutare and Chimanimani reporting period is Oct 2010-Aug 2011) (NB: 18,946 = 14,545 women in Mutare from Oct 2010-Aug 2011 plus 4,401 women in Chimanimani from Oct 2010-Aug 2011 10,467 (n=17 SBM-R supported HF in 2 learning districts)	20,240 (15,077 in Mutare and 5,163 in Chimanimani) 9,852 (n=22 SBM-R supported HF in 2 learning districts)	19,055 (14,328 Mutare and 4,727 Chimanimani) 9,195 (data from 22 SBM-R supported HF in 2 learning districts)	9780 (7,224 Mutare and 2,556 Chimanimani) (Oct 2013-Mar 2014) 5047 (data from 22 SBM-R supported HF in 2 learning districts) (Oct 2013–Mar 2014)	68,021 (data from Mutare and Chimanimani districts) 34,561 (data from 22 SBM-R supported HF in 2 learning districts)	53,967	126%	The baseline figure was for the two districts (Mutare and Chimanimani). No baselines were set for the SBM-R supported sites for this indicator, but a subset of the performance of the SBM-R sites is shown. There was no target set for the period Oct 2010-Sep 2011. For the calculation of the overall three year target, the actual achievement for that period was used. The issue of under-targeting, especially in the first year led to over-achievement.

Indicator	Indicator Definition	Baseline Value (Oct. 2009 - Sep. 2010)	MCHIP PY3 Achievement (Oct. 2010 – Sep. 2011)	MCHIP PY4 Achievement (Oct. 2011 – Sep. 2012)	MCHIP PY5 Achievement (Oct. 2012 – Sep. 2013)	MCHIP PY6 Achievement (Oct 2013 – Mar 2014)	LOP MCHIP Achievement (Oct 2010-Mar 2014)	Overall LOP Target (Oct 2010-Mar 2014)	Overall % progress achieved *	Notes
2.7 # of pregnant women receiving at least four ANC visits	# of pregnant women receiving at least four ANC visits in MCHIP learning districts.	9,139 (calculated given 71% utilisation rate for ANC 4+ reported in ZDHS 2005/06, multiplied by ZIMSTAT 2011 expected pregnancies for Mutare and Chimanimani)	17,198 (n=79 HFs in 2 learning districts; reporting period for both Mutare and Chimanimani is Oct 2010 – Aug 2011) (NB: 17,198=12,862 women in Mutare from Oct 2010-Aug 2011 plus 4,336 women in Chimanimani from Oct 2010-Aug 2011) 11,209 (n=17 SBM-R supported HFs in 2 learning	19,264 (14,584 in Mutare and 4,680 in Chimanimani) 11,720 (n=22 SBM-R supported HFs in 2 learning districts)	18,803 (14,541 in Mutare and 4262 Chimanimani) 10,535 (data from 22 SBM-R supported HFs in 2 learning districts)	10,253 (8,644 Mutare and 1,609 Chimanimani) (Oct 2013-Mar 2014) 5,354 (data from 22 SBM-R supported HFs in 2 learning districts) (Oct 2013-Mar 2014)	65,518 (data from Mutare and Chimanimani) 38,818 (data from 22 SBM-R supported HFs in 2 learning districts)	50,909	129%	The baseline figure was for the two districts (Mutare and Chimanimani). No baselines were set for the SBM-R supported sites for this indicator, but a subset of the performance of the SBM-R sites is shown. There was no target set for the period Oct 2010-Sep 2011. For the calculation of the overall three year target, the actual achievement for that period was used. The issue of under-targeting, especially in the first year led to over-achievement.
2.8 % of pregnant women receiving malaria IPT2 during ANC	# of pregnant women receiving malaria IPT2 during ANC, divided by # of pregnant women receiving first ANC in MCHIP learning districts.	14% (Source: national estimate, MIMS 2009)	New indicator introduced in FY12	9,444/20,240= 47% (Mutare and Chimanimani)	10,307/19,055 =54% (Mutare and Chimanimani)	5759/9780 =59% (Mutare and Chimanimani) (Oct 2013 – Mar 2014)	25,510/49,075 =52% (data from Mutare and Chimanimani)	50%	104%	

Indicator	Indicator Definition	Baseline Value (Oct. 2009 - Sep. 2010)	MCHIP PY3 Achievement (Oct. 2010 – Sep. 2011)	MCHIP PY4 Achievement (Oct. 2011 – Sep. 2012)	MCHIP PY5 Achievement (Oct. 2012 – Sep. 2013)	MCHIP PY6 Achievement (Oct 2013 – Mar 2014)	LOP MCHIP Achievement (Oct 2010- Mar 2014)	Overall LOP Target (Oct 2010- Mar 2014)	Overall % progress achieved *	Notes
2.9 # of deliveries with a skilled birth attendant (SBA)	# of deliveries with a SBA in MCHIP learning districts. "SBA" includes medical officers, nurses, or midwife.	10,460 (n=79 HFs in the 2 learning districts) (Jan –Dec 2009 data; source: MOHCC, 2009)	8,952 (n=79 HFs in 2 districts) (for Mutare reporting period is Jan-Sep 2011; for Chimanimani period is Oct 2010-Aug 2011) (NB: 8,952=7,036 deliveries in Mutare from Jan –Sep 2011 plus 1,916 deliveries in Chimanimani for Oct 2010-Aug 2011) 9,310 (n=17 SBM-R supported HFs in 2 learning districts)	14,559 11,503 (Mutare) and 3,056 (Chimanimani) 13,082 (n=22 SBM-R supported sites)	15,892 (12,557 in Mutare and 3,335 in Chimanimani) 12,721 (data from 22 SBM-R supported HFs in 2 learning districts)	8,081 (6,429 in Mutare and 1,652 in Chimanimani) 6,348 (data from 22 SBM-R supported HFs in 2 learning districts)	47,484 (data from Mutare and Chimanimani) 41,461 (data from 22 SBM-R supported HFs in 2 learning districts)	34,610	137%	The baseline figure was for the two districts (Mutare and Chimanimani). No baselines were set for the SBM-R supported sites for this indicator. There was an intensive support in quality improvement interventions in the SBM-R supported sites. The target for the period Oct 2010-Sep 2011 was very low (490). For the calculation of the overall three year target, the actual achievement for that period was used.

Indicator	Indicator Definition	Baseline Value (Oct. 2009 - Sep. 2010)	MCHIP PY3 Achievement (Oct. 2010 – Sep. 2011)	MCHIP PY4 Achievement (Oct. 2011 – Sep. 2012)	MCHIP PY5 Achievement (Oct. 2012 – Sep. 2013)	MCHIP PY6 Achievement (Oct 2013 – Mar 2014)	LOP MCHIP Achievement (Oct 2010- Mar 2014)	Overall LOP Target (Oct 2010- Mar 2014)	Overall % progress achieved *	Notes
2.10 % of MCHIP SBM-R facilities meeting set performance and quality improvement targets for AMTSL	# of MCHIP SBM-R supported facilities achieving the set annual performance and quality improvement target for AMTSL, divided by # of MCHIP SBM-R supported HF.	0	76% (13/17) (n=17 facilities in 2 learning districts)	11/17=65% (n=17 facilities in 2 learning districts)	16/17=94%	(Last assessment done in Aug 2013)	16/17=94% (At last assessment done in Aug 2013)	100%	94%	
2.11 % of women with vaginal births receiving a uterotonic immediately after birth	# of women giving birth who received a uterotonic during the third stage of labor in MCHIP SBM-R supported facilities, divided by total # women giving birth in MCHIP SBM-R supported HF.	72% (n=17 SBM-R supported HF in 2 learning districts) (Source: MOHCC, Oct 2010)	87% (n=17 SBM-R supported HF in 2 learning districts)	89% (data from 17 SBM-R supported sites)	11,682/12,721 =92% (data from 22 SBM-R supported HF in 2 learning districts)	6,293/6,348=99.1% (data from 22 SBM-R supported HF in 2 learning districts)	92% (average) (data from 22 SBM-R supported HF in 2 learning districts)	100%	92%	
2.12 % of LBW newborns admitted in KMC	# of LBW newborns (below 2.5 kg) admitted in KMC, divided by total # of LBW newborns born in Mutare and Chimanimani.	0	719 (Absolute figure not % due to missing denominator data)	215/1,401=15% (Mutare and Chimanimani districts)	287/1,015=28% (Mutare and Chimanimani districts)	222/612=36% (Mutare and Chimanimani districts)	724/3,028=24% (Mutare and Chimanimani districts) (LOP, calculated starting in PY4)	50%	48%	8 KMC units in the two districts are currently functional. . District-wide KMC coverage is still very low due to a still-limited supply of facilities offering KMC services. Increasing the number of KMC units available in the districts is crucial to ensuring

Indicator	Indicator Definition	Baseline Value (Oct. 2009 - Sep. 2010)	MCHIP PY3 Achievement (Oct. 2010 – Sep. 2011)	MCHIP PY4 Achievement (Oct. 2011 – Sep. 2012)	MCHIP PY5 Achievement (Oct. 2012 – Sep. 2013)	MCHIP PY6 Achievement (Oct 2013 – Mar 2014)	LOP MCHIP Achievement (Oct 2010- Mar 2014)	Overall LOP Target (Oct 2010- Mar 2014)	Overall % progress achieved *	Notes
										higher coverage of this intervention.
2.13 # of confirmed cases of malaria in children under 5 years at health facility level	# of confirmed cases of malaria in children under 5 years of age at health facility level in MCHIP learning districts.	3,585 (n=79 HFs in the 2 learning districts) (Jan –Dec 2009 data; source: MOHCC, 2009)	13,003 (n=79 HFs in 2 districts; for Mutare reporting period is Jan-Sep 2011; for Chimanimani period is Oct 2010-Aug 2011) (NB: 13,003=10,189 cases in Mutare from Jan-Sep 2011 plus 2,814 cases in Chimanimani from Oct 2010-Aug 2011) 5,129 (n=17 SBM-R supported HFs in 2 learning districts)	5,651 3,186 (Mutare) and 2,465 (Chimanimani) 2,685 (data from 22 SBM-R supported sites)	13,446 (9,236 in Mutare and 4,210 in Chimanimani) 6,450 (data from 22 SBM-R supported sites)	6,860 (4,291 in Mutare and 2,569 in Chimanimani) 3,254 (data from 22 SBM-R supported sites)	38,960 (data from Mutare and Chimanimani) 17,518 (data from 22 SBM-R supported sites)	29,129	134%	The baseline figure was for the two districts (Mutare and Chimanimani). No baselines were set for the SBM-R supported sites for this indicator. There was an intensive support in quality improvement interventions in the SBM-R supported sites. The target for the period Oct 2010-Sep 2011 was very low (309). For the calculation of the overall three year target, the actual achievement for that period was used.

Indicator	Indicator Definition	Baseline Value (Oct. 2009 - Sep. 2010)	MCHIP PY3 Achievement (Oct. 2010 – Sep. 2011)	MCHIP PY4 Achievement (Oct. 2011 – Sep. 2012)	MCHIP PY5 Achievement (Oct. 2012 – Sep. 2013)	MCHIP PY6 Achievement (Oct 2013 – Mar 2014)	LOP MCHIP Achievement (Oct 2010-Mar 2014)	Overall LOP Target (Oct 2010-Mar 2014)	Overall % progress achieved *	Notes
2.14 # of cases of diarrhoea seen in children under 5 years at health facility	Total # of cases of diarrhea seen in children under 5 years at health facility level in MCHIP learning districts.	1,746 (n=79 HFs in the 2 learning districts) (Jan –Dec 2009 data; source: MOHCC,2009)	17,159 (data from Mutare and Chimanimani) 6,412 (n=17 SBM-R supported HFs in 2 learning districts)	22,086 16,950(Mutare) and 5,136 (Chimanimani) 10,465 (n=22 SBM-R supported sites)	21,407 (16,343 in Mutare and 5,064 in Chimanimani) 10,015 (data from 22 SBM-R supported sites)	8,097 (6,014 in Mutare and 2,083 in Chimanimani) 4,245 (data from 22 SBM-R supported sites)	68,749 (data from Mutare and Chimanimani) 31,137 (data from 22 SBM-R supported sites)	41,912	164%	<i>“Cases seen” means cases “with dehydration” plus cases with “no dehydration” on the T5 form.</i> The baseline figure was for the two districts (Mutare and Chimanimani). No baselines were set for the SBM-R supported sites for this indicator. There was an intensive support in quality improvement interventions in the SBM-R supported sites. The target for the period Oct 2010-Sep 2011 was very low (182). For the calculation of the overall three year target, the actual achievement for that period was used. The issue of under-targeting especially in year 1 led to “over-achievement” of this indicator.

Indicator	Indicator Definition	Baseline Value (Oct. 2009 - Sep. 2010)	MCHIP PY3 Achievement (Oct. 2010 – Sep. 2011)	MCHIP PY4 Achievement (Oct. 2011 – Sep. 2012)	MCHIP PY5 Achievement (Oct. 2012 – Sep. 2013)	MCHIP PY6 Achievement (Oct 2013 – Mar 2014)	LOP MCHIP Achievement (Oct 2010-Mar 2014)	Overall LOP Target (Oct 2010-Mar 2014)	Overall % progress achieved *	Notes
2.15 % of MCHIP SBM-R facilities meeting set performance and quality improvement targets for diarrhea case management	# of MCHIP SBM-R supported facilities achieving the set performance and quality improvement target for diarrhea case management, divided by total # of MCHIP SBM-R supported HF.	New indicator introduced in MCHIP PY4	New indicator introduced in MCHIP PY4	8/21 = 38%HF s (data collected from 21 SBM-R supported sites)	10%	(Last assessment done in Aug 2013)	10% (At last assessment done in Aug 2013)	80%	12.5%	There was low achievement in this area due to delayed implementation of IMNCI interventions. Continued strengthening of IMNCI will assist in improving the management of diarrhea cases in children under 5.
2.16 # of cases of pneumonia treated in children under 5 in health facilities	# of cases of pneumonia treated in children under 5 years of age at facility level in MCHIP learning districts.	19,002 (n=79 HF in the 2 learning districts) (Jan –Dec 2009 data; source: MOHCC,2009)	40,837 (data from Mutare and Chimanimani) 14,458 (n=17 SBM-R supported HF in 2 learning districts)	44,306 (34, 570 (Mutare) and 9,736 (Chimanimani)) 20,782 (n=22 SBM-R supported sites)	40,877 (32,395 in Mutare and 8,482 in Chimanimani) 16,463 (data from SBM-R supported sites)	19,009 (14,336 in Mutare and 4,673 in Chimanimani) 9,209 (data from SBM-R supported sites)	145,029 (data from Mutare and Chimanimani) 60,912 (data from SBM-R supported sites)	69, 458	209%	<i>“Cases treated” means “moderate (pneumonia)” plus “severe (pneumonia)” on the T5 form.</i> The target for the period Oct 2010-Sep 2011 was very low (353). For the calculation of the overall three year target, the actual achievement for that period was used instead. The issue of under-targeting especially in year 1 led to “over-achievement” of this indicator.

Indicator	Indicator Definition	Baseline Value (Oct. 2009 - Sep. 2010)	MCHIP PY3 Achievement (Oct. 2010 – Sep. 2011)	MCHIP PY4 Achievement (Oct. 2011 – Sep. 2012)	MCHIP PY5 Achievement (Oct. 2012 – Sep. 2013)	MCHIP PY6 Achievement (Oct 2013 – Mar 2014)	LOP MCHIP Achievement (Oct 2010- Mar 2014)	Overall LOP Target (Oct 2010- Mar 2014)	Overall % progress achieved *	Notes
2.17 % of MCHIP SBM-R facilities meeting set performance and quality improvement targets for pneumonia case management	# of MCHIP SBM-R supported facilities achieving the set performance and quality improvement target for pneumonia case management, divided by total # of MCHIP SBM-R supported HFs.	New indicator introduced in MCHIP PY4	New indicator introduced in MCHIP PY4	9/21 = 43% HFs (data collected from 21 SBM-R supported sites)	64.3% of HFs (11/18)	(Last assessment done in Aug 2013)	64.3% of HFs (11/18) (At last assessment done in Aug 2013)	80%	80%	
Objective 3: Improve the coverage and quality of high-impact MNCH/FP interventions provided by health care workers in the community, including VHWs and other agents										
3.1 # of VHWs trained in community MNCH	# of VHWs trained in community MNCH services (e.g., cIMNCI) within MCHIP supported districts. Data will be disaggregated	0	0	370	263	200	833	700	114%	
3.2 # of pregnant women receiving at least two ANC home visits	# of pregnant women receiving at least two ANC home visits from MCHIP supported VHWs in MCHIP learning sites.	0	New indicator introduced in MCHIP PY5	2,214	1063	1,352	4,629	7,200	64%	Delayed implementation of community-based interventions may have contributed to under-achievement. Also, challenges exist with VHWs knowing when women in their communities get pregnant and visiting them in a timely manner.

Indicator	Indicator Definition	Baseline Value (Oct. 2009 - Sep. 2010)	MCHIP PY3 Achievement (Oct. 2010 – Sep. 2011)	MCHIP PY4 Achievement (Oct. 2011 – Sep. 2012)	MCHIP PY5 Achievement (Oct. 2012 – Sep. 2013)	MCHIP PY6 Achievement (Oct 2013 – Mar 2014)	LOP MCHIP Achievement (Oct 2010-Mar 2014)	Overall LOP Target (Oct 2010-Mar 2014)	Overall % progress achieved *	Notes
3.3 # of newborns receiving a postnatal home visit within the first 3 days of delivery	# of newborns visited within the first 3 days of life by MCHIP supported VHWs in MCHIP learning sites.	0	New indicator introduced in MCHIP PY5	944 (from 16 SBM-R supported sites in Chimanimani and Mutare)	482 (from 16 SBM-R supported sites in Chimanimani and Mutare)	312	1,738	7,200	24%	Delayed implementation of community-based interventions may have contributed to under-achievement of this indicator. Also, challenges exist with VHWs' ability to get to women's homes within the 3 day period indicated here.
3.4 # of cases of malaria treated by VHWs in children under 5	# of cases of malaria treated by VHWs in children under 5 in MCHIP learning districts.	0	New indicator introduced in MCHIP PY5	1,218	1,491	1,035	3,744	2,160	173%	Over-achievement of this indicator was facilitated by a malaria outbreak which occurred during the Jan-Mar 2013 period.
Objective 4: Increase routine immunization coverage in Manicaland province, and support the nationwide introduction of pneumococcal vaccine in 2012 and rotavirus vaccine by 2013										
4.1 % of children less than 12 months of age who received Penta 3	# of children less than 12 months who received Penta 3 in MCHIP supported districts, divided by # children <12 months in MCHIP supported districts.	52.1% (Source: Manicaland provincial estimate, ZDHS 2010/11)	56,006/56,554 = 99% (7 districts in Manicaland) 23,365/18,214 =128% (Mutare and Chimanimani) 6,910/7663 = 90% (n=17 SBM-R HF's)	54,534/60,706=90% (7 districts in Manicaland) 17,065/18,216 =94%; 12,943/14,184 =91% (Mutare) and 4,826/4,032=120% (Chimanimani) 7,625/8,856=86% (n=22 SBM-R	60,219/62,928 =96% (7 districts in Manicaland Oct 2012 – Sept 2013) 20,173/18,216 =111% 15,158/14,184 =107% (Mutare) and 5,015/4,032=124% (Chimanimani)	25,081/29,193=86% (data from 7 districts in Manicaland) 8,394/9021=93% (data from Chimanimani and Mutare) Data on HF specific denominators	195,840/209,381=94% (data from 7 districts in Manicaland) 68,997/63,667 =108% (data from Chimanimani and Mutare)	98%	96%	The denominators for the period Jan – Mar 2014 are based on ZIMSTAT 2012 census figures, which are lower than the projected figures from the 2002 census.

Indicator	Indicator Definition	Baseline Value (Oct. 2009 - Sep. 2010)	MCHIP PY3 Achievement (Oct. 2010 – Sep. 2011)	MCHIP PY4 Achievement (Oct. 2011 – Sep. 2012)	MCHIP PY5 Achievement (Oct. 2012 – Sep. 2013)	MCHIP PY6 Achievement (Oct 2013 – Mar 2014)	LOP MCHIP Achievement (Oct 2010- Mar 2014)	Overall LOP Target (Oct 2010- Mar 2014)	Overall % progress achieved *	Notes
4.2 % of children less than 12 months of age who received measles vaccination	# of children <12 months who received measles vaccination in MCHIP supported districts, divided by # children <12 months in MCHIP supported districts.	64.5% (Source: Manicaland provincial estimate, ZDHS 2010/11)	54,591/56,554 = 97% (7 districts in Manicaland) 17,832/18,214 =98% (Mutare and Chimanimani) 6,746/7663 = 88% (n=17 SBM-R HFs in 2 learning districts)	56,010/60,706=92% (7 districts in Manicaland) 17,955/18,216=99% ; 13,141/14,184 =93% (Mutare) and 4,814/4,032=119% (Chimanimani) 7,763/8,856=88% (22 SBM-R supported sites)	56,069/62,928 =89% (7 districts in Manicaland Oct 2012 - Sept 2013) 18,298/18,216 =100% 13,486/14,184 =95% (Mutare) and 4,812/4,032=119% (Chimanimani) 7,568/8,856=85% (data from 22 SBM-R supported sites)	26,372/29,193=90% (7 districts in Manicaland) 8,875/9,021=98% (data from Mutare and Chimanimani) Data on HF specific denominators for the 2014 not available	193,042/209,381=92% (7 districts in Manicaland) 62,960/63,667 =99% (data from Mutare and Chimanimani)	98%	94%	The denominators for the period Jan – Mar 2014 are based on ZIMSTAT 2012 census figures, which are lower than the projected figures from the 2002 census.
4.3. # of districts receiving MCHIP support for strengthening immunization services	# of districts receiving MCHIP supported immunization activities	0	7 (100% of Manicaland districts)	7 (100% of Manicaland districts)	7 (100% of Manicaland districts)	7 (100% of Manicaland districts)	7 (100% of Manicaland districts)	7 (100% of Manicaland districts)	100%	The denominators are based on ZIMSTAT 2012 census figures
4.4. % of children less than 12 months of age who received PCV 3 vaccination	# of children <12 months who received PCV 3 vaccination in MCHIP supported districts, divided by # children <12 months in MCHIP	0	New indicator introduced in PY5	New indicator introduced in PY5	52,843/62,928 =84% (7 districts in Manicaland Oct 2012 –Sept 2013)	24,058/29,193=82% (data from 7 districts in Manicaland)	76,901/92,121 =83% (data from 7 districts of Manicaland) 26,595/27,237 =98% (data from Mutare	98%	85%	The denominators for the period Jan – Mar 2014 are based on ZIMSTAT 2012 census figures, which are lower than the projected figures

Indicator	Indicator Definition	Baseline Value (Oct. 2009 - Sep. 2010)	MCHIP PY3 Achievement (Oct. 2010 – Sep. 2011)	MCHIP PY4 Achievement (Oct. 2011 – Sep. 2012)	MCHIP PY5 Achievement (Oct. 2012 – Sep. 2013)	MCHIP PY6 Achievement (Oct 2013 – Mar 2014)	LOP MCHIP Achievement (Oct 2010- Mar 2014)	Overall LOP Target (Oct 2010- Mar 2014)	Overall % progress achieved *	Notes
	supported districts.				18,367/18,216 =101% 13,784/14,184 =97% (Mutare) and 4,583/4,032=114% (Chimanimani) 7,851/8,856=89% (data from 22 SBM-R supported sites)	8,228/9,021=91% (data from Mutare and Chimanimani) Data on HF specific denominators for the 2014 not available	and Chimanimani districts)			from the 2002 census.

Annex 1b: Additional Indicators on Newborn Resuscitation (HBB)

Indicator	Oct.–Dec. 2012	Jan.–Mar. 2013	Apr.–Jun. 2013	Jul.–Sep. 2013	Total Oct. 2012–Sep. 2013	Oct.–Dec. 2013	Jan.–Mar. 2014
Total number of persons trained	90	101	127	80*	398	0	0
Breakdown of Total number reported (from above)	Tutors-54 Doctors-5 Midwives-30 RGNs no midwifery -1	Tutors-0 Doctors-0 Midwives-33 RGNs no midwifery –28 PCN -35 SCN -5	Tutors-0 Doctors-3 Midwives-30 RGNs no midwifery –50 PCN -31 SCN -1 Other (midwifery students)-12	Tutors-0 Doctors-9 Midwives-35 RGNs no midwifery –22 PCN -12 SCN -1 Other (clinical officer)-1	Tutors-54 Doctors-17 Midwives-128 RGNs no midwifery –101 PCN -78 SCN -7 Other-13	0	0
Number of training kits distributed/ average number of babies born per equipment set distributed	0 training kits distributed	19 NeoNatalies distributed	10 NeoNatalies distributed	0 training kits distributed	29 NeoNatalies distributed	0	0
Number (and percent if available) of babies not breathing at birth that were resuscitated successfully	113/145=92% (data from 22 SBM-R supported sites)	283/302=94% (data from 22 SBM-R supported sites)	200/213=94% (data from 22 SBM-R supported sites)	149/157=95% (data from 22 SBM-R supported sites)	745/817=91% (data from 22 SBM-R supported sites)	223/246=91% (data from 22 SBM-R supported sites)	188/197=95% (data from 22 SBM-R supported sites)

*22 were trained as trainers.

Annex 2: Success Stories

Success stories included below, written during the PY6 extension period:

- Improving health worker capacity to manage emergency cases in Manicaland Province of Zimbabwe: Skills Capacity Strengthening + Commitment = Saving Lives
- Increasing number of children who are immunized as health facilities focus efforts to reach the hard to reach children with lifesaving vaccines
- Assess, Classify and Treat Tool: Piloting a lifesaving tool implemented in USAID/MCHIP Zimbabwe learning sites
- Jowasi Masuka: Village Health Worker and community health champion in Mutare District
- Every breath counts: Commemorating the fight against pneumonia and prematurity
- Advancing MCHIP's Mission outside of the workplace: How exposure to health information to non-health professionals can have remarkable effect: Warren Chekera's Story
- Improving access to prompt and effective malaria case management: A case study of Village Health Workers in the Muchadziya Community
- The power of partnerships: Creative ways to reuse, renew and distribute maternity kits to improve quality of services and save lives
- BORN TOO SOON: Pre-mature births can be successful if "BORN IN THE RIGHT HANDS"
- Newborn Care Corners: A cornerstone in saving newborn lives: "The story of Chakohwa Clinic and its community to save newborn lives"
- The Golden Minute: Helping Babies Breathe saves lives of newborn babies
- "Beyond policies": A Three step plan for diarrhea management that reduces diarrhea deaths in children below the age of 5

Additional success stories written between 2010 and 2013, available upon request:

- MCHIP/Zimbabwe Staff Help Save A Mother's Life
- Community Mobilization Helps Improve Immunization Coverage
- MCHIP Collaborates with Key Partners to Build National Capacity in Newborn Resuscitation
- MCHIP Facilitates Major Changes in Zimbabwe's National Immunization Program
- Zimbabwe Launches a Life Saving Vaccine and a New Child Health Card
- Motivating VHWS to better performance – a little support goes a long way
- USAID/MCHIP Contributes Critically Needed Supplies towards the Fight to Reduce Maternal, Newborn, and Child Mortality in Manicaland
- Kangaroo Mother Care Shortens Hospital Stays for Low Birth Weight Babies in Mutare
- Local Heroes Improve Access to Malaria Treatment in Hard to Reach Areas - A Case of Utseya Village
- Communities Embrace New Newborn Care Practices to Save Babies' Lives
- Sharing Skills – Saving lives: Impact of an Integrated Approach for Safe Deliveries and Saving Newborns
- Enhanced Health Worker Skills for Better Management of Sick Infants and Children are Key to Child Survival

Improving health worker capacity to manage emergency cases in Manicaland Province of Zimbabwe: Skills Capacity Strengthening + Commitment = Saving Lives

Expecting a baby is one of the most joyful experiences of womanhood, and ensuring good health care throughout the gestational period is at the core of ensuring the best possible outcome. Globally, maternal deaths have remained at unacceptable levels with approximately **287,000 women dying in pregnancy and childbirth yearly, or one maternal death every 2 minutes, for a total of 800 each day**, and often from preventable causes. Pre-eclampsia, a dangerous condition that can occur during pregnancy, is characterized with high blood pressure and presence of protein in the urine, and is one of the 3 leading causes of maternal morbidity and mortality. Pre-eclampsia, if not identified and appropriately managed, leads to convulsions (known as eclampsia) and other life threatening conditions which usually result in fatality. However, if equipped with the right skills to screen, detect and effectively manage pre-eclampsia, health care workers can save many lives of mothers and babies.

Since 2010, USAID/MCHIP has been involved in broad capacity building and strengthening of health care workers skills throughout Manicaland Province in Zimbabwe. Manicaland Province has 7 districts and a total of 291 health facilities. One of these critical trainings is the Basic Emergency Obstetric and Newborn Care (BEmONC) training. Through this important training nurses learn to assess for signs of pre-eclampsia, and eclampsia utilizing skills and steps such as visual observation, physical examination, checking the blood pressure, inquiring of the patient and initiating urine testing to determine protein levels. Overall, this practical training has increased nurses' skills and boosted their confidence in managing complicated cases and/disorders, such as Pre-eclampsia. In the three years that MCHIP has been actively engaged in this training, a total of 718 health care workers have been trained in BEmONC. Registered General Nurse (RGN) and Midwife (M/W) Nyashega of Hauna Hospital is testimony to the invaluable benefits capacity building in BEmONC has brought to the health care workers in Manicaland. This is her testimony:

"I, RGN/M/W Nyashega attended to a 24 week pregnant woman who presented at Hauna Hospital with severe pre-eclampsia. Coincidentally, I had just come from a training supported by USAID/MCHIP on BEmONC where I had learnt how to manage severe pre-eclampsia. The woman had slight blurred vision and dizziness, and on examination, her blood pressure and urine levels (of protein) were extremely high. We gave the woman Hydralazine and magnesium sulfate therapy that is used to manage such conditions, while waiting for the Doctor's consultation. The woman responded well to this therapy and was soon seen by the Doctor who prescribed Nifedipine and Methyldopa (drugs used to stabilize high blood pressure in pregnant women) as maintenance doses. The general condition of the woman greatly improved as she became stable and the fetal condition stabilized."

"I feel that BEmONC workshops are very useful even if you are a midwife you still need the training as things are changing each day. Thumbs up to BEmONC!"

Increasing the number of children who are immunized as health facilities focus efforts to reach the hard to reach with lifesaving vaccines

We often hear the loving calls of mothers and fathers alike, such as “wash your hands before you eat” or “put on your seat belt” and the popular “don’t do that...I’m warning you”, to protect their children from possible causes of harm. For optimal child health, provision of immunizations has proven to be one of the most effective approaches of child protection against childhood diseases, diseases that if not prevented and treated, can lead to death. Caregivers are called upon to be good stewards in ensuring that their babies and children receive all their immunizations, at the right time, and starting from birth. Sadly, not all children have access to these essential vaccinations and often miss out on their invaluable benefits. There are areas in Zimbabwe where immunization services are not accessible, and even when they are, due to religious barriers, they are greatly underutilized. These groups of children are often referred to as “hard to reach children” and are therefore a great priority for MCHIP’s vaccination efforts. Other factors that prevent these hard to reach children from accessing these immunization services are varied can include issues of affordability/accessibility of transportation and even misinformation or non-information of protective benefits of vaccines for children and are all factors considered with MCHIP’s programming.

Manicaland, one of Zimbabwe’s Provinces, and MCHIP’s focus Province has historically had high numbers of unvaccinated children, especially as compared to other provinces (ZDHS 2010). In 2011, Manicaland Province in collaboration with MCHIP prioritized improving the immunization coverage, and reaching as many children as possible, through the Reaching Every District (RED) Approach. RED is an intervention that has been globally proven to increase immunization coverage. In 2002, the RED approach was developed and introduced by WHO, the United Nations Children’s Fund (UNICEF) and other partners in the GAVI Alliance, in order to improve immunization systems in areas with low coverage and is designed to strengthen capacity at the district and health facility levels by addressing common immunization obstacles. The RED approach outlines five operational components that are specifically aimed at improving coverage in every district and include: re-establishment of regular outreach services; supportive supervision: on-site training; community links with service delivery; monitoring and use of data for action; and better planning as well as management of human and financial resources. This approach encourages countries to use coverage data to undertake an analysis of the distribution of unimmunized infants, and thereby prioritize districts with poor access and utilization of immunization. And at the district level, districts are encouraged to make microplans to identify local problems and adopt corrective solutions for overcoming challenges and improving coverage (Source: WHO).

- Zimbabwe implemented RED in 2003, following a national training of trainers.
- Initially implemented in 10 districts focusing on poorly performing districts but because of funding it was not rolled out nationally.
- Training and revitalisation of the RED strategy started in 2011 in Manicaland, after adapting and printing the RED Field Guide with support from MCHIP.

MCHIP/Zim supported data collection and analysis at 59 sites to determine how well the RED approach was working in previously poor performing sites. Initially, the project chose to focus on a sub-set of 59 sites of the 180 total health facility sites that were poor performing, because this sub-set had on-going supportive supervision activities, which facilitated data collection. Evidence was gathered and analyzed for the period of October 2010



12,678 more children reached for vaccinations!

and October 2013, and focused on vaccines for measles and Pentavalent (Penta). The pentavalent vaccine is a combination of five vaccines in one: diphtheria, tetanus, whooping cough, hepatitis B and Haemophilus influenza type b (the bacteria that causes meningitis, pneumonia and otitis). The results speak for themselves, and demonstrate the great increase in numbers of children reached. Collectively, the 59 facilities had increased the number of children immunized with Penta 1 in the first nine months of 2013 by 60% of the same period in 2010; from 6,565 to 10,534 children. Children reached with Penta 3 increased from 5,710 in 2010 to 9,871 in same period for 2013, showing a 42% increase. Children reached by measles vaccine increased from 5,143 in 2010 to 9,691 in 2013, a 47% increase. These figures translate to **12,678** more children reached for vaccinations, and indicate that coverage for Penta 1, Penta 3 and Measles was increasing over the 4 consecutive years.

Critical to this success was the early and ongoing involvement of the community leaders, many of whom are of the apostolic faith. The community leaders are very influential and respected, and through them, it was easier to gain acceptance into a community, receive critical support for vaccination campaigns, and increase numbers reached. The other key to success was the dedicated of the well-trained VHWs. The VHWs traveled to the various health facilities to check register books, determine who has been immunized and who has not. And through consistent follow-up with families who were not reached, the VHWs were successful at increasing the numbers of children vaccinated. They developed a feedback loop back to the health facilities, to ensure that registers were updated and reflected additional children vaccinated. The VHWs went into people’s homes, talked with families and encouraged them to vaccinate at the outreach events, and even brought the parents and children to the outreach sites for immunization. Because of MCHIP support, the VHWs had the added advantage of having bicycles, as well as service kits to undertake minor repairs which greatly increased their mobility and ability to reach hard to reach children. The health workers’ performance and motivation to increase vaccination coverage in their respective health facilities, was enhanced following structured, regular and supportive supervision supported by MCHIP. The RED approach has proved to be effective in empowering Manicaland province health facilities to provide quality services to children in hard to reach areas and will continue to contribute to the reduction of child morbidity and mortality due to vaccine preventable diseases.

Testimonies from beneficiaries on the benefits of the RED approach



“Manicaland had the lowest EPI coverage in the country prior to the introduction of the RED in 2010 but with the RED approach we have one of the highest coverage in the country. We used to report measles cases but since 2011 we have not reported a single confirmed measles case. Through community involvement we managed to reach out to the underserved populations.” Margaret Zvirahwa Provincial EPI Officer.

Using the RED approach health facilities such Nyanyadzi Rural Hospital managed to reach unvaccinated and underserved populations, and continues to provide opportunities for the community.



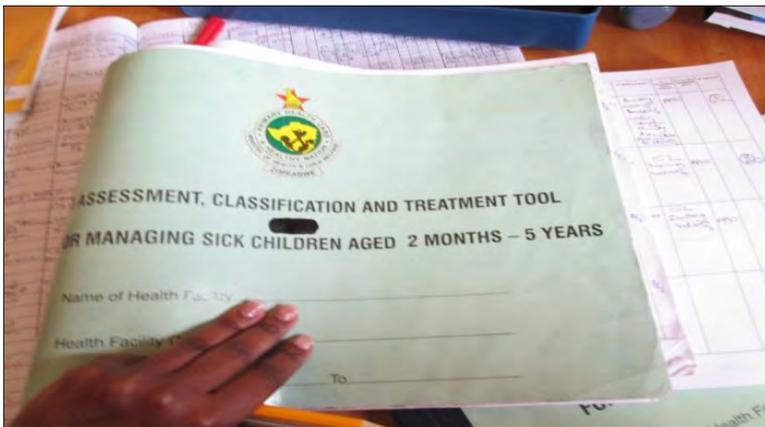
“Ever since an outreach point was opened up back in 2011 I have asked my VHWs to make sure that every child is vaccinated. No child in my area is unvaccinated”.

Village Head Albert Chiora, Nyanyadzi, who has seized the opportunity to take advantage of the benefits that outreach points provided through the RED approach offers.

Assess, Classify and Treat Tool: Piloting a lifesaving tool implemented in USAID/MCHIP Zimbabwe learning sites

Children below the age of 5 are more vulnerable to diseases and infections that can alter their growth, and if not identified and treated in a timely manner, can be fatal. The health care worker (HCW) has a vital role to play when screening sick children that visit the health facility for care. The World Health Organization (WHO) recommends the use of the Integrated Management of Neonatal and Childhood Illnesses (IMNCI) strategy for management of sick children below the age of 5, and accurate, standardized recording and reporting is critical in order for quality care services to be provided. In Zimbabwe, the Ministry of Health and Child Care (MOHCC) was implementing IMCI (with the later addition of “newborn” services as indicated by WHO), but had not been able to adequately and fully capture the sessions at the health care facilities, as they had no standardized tools.

Starting in 2011, the MOHCC, in collaboration with MCHIP and other technical health organizations such as WHO, UNICEF etc., took it upon their collective selves to develop and pilot an IMNCI tool that guides and records the assessment, classification and treatment of sick young infants aged 0-2 months and sick young children aged 2-59 months. However, during the pilot testing phase, it was only possible to pretest the 2-59 months register tool, due to the fact that the “under 2 month” babies were not accessible to the team. The tool now affords health care workers, a useful job aide that helps the HCWs document information on baby’s health and illnesses in a standardized and comprehensive way and provides improved quality of services.



The pilot process, carried out in August 2013, provided useful information and feedback from the users (HCWs) from the selected sites in Mutare and Chimanimani districts in Manicaland Province. Below are some sentiments captured from the HCWs during the pilot process:

The Voices of HCWs:

“The tool is good and improves case management and quality of care given to sick children” – Primary Care Nurse Mangezi at Chakohwa Rural Health Centre, August 2013.

“The tool helps me coach student nurses seconded to Biriiri Rural Hospital. It also helps HCWs at my hospital to manage the child holistically, even those not trained in IMNCI” – Sister in Charge (SIC) Elizabeth Tinofa, based at Biriiri Rural Hospital in Chimanimani District.

“The IMNCI tool has immensely helped us in the management of sick children below the age of 5 years. All one has to do is follow the columns in the tool to make sure you give the ultimate treatment to the child”

Primary Care Nurse Mutsa Chadzingwa (*far left*) based at St. Andrews Hospital, in Mutare District, August 2013. The picture shows the nurse in action as she attends to a sick child (*held by the mother far right*), while MOHCC Sister in Charge Community for Mutare District (in the background) observes during the piloting of the tool.



Photo taken by MCHIP’s Patience Panganai, August 2013.

From the pre-testing: The numbers behind the words:

Ninety percent (90%) described the tool as user friendly, acceptable size (79%) with adequate writing space (80%) and facilitated adherence to IMNCI protocol (96%).

Eighty three percent (83%) of health facilities described the tool as well organized, easy to read (90%), logical information flow (94%) and thus facilitates provision of quality care.

Improves documentation of care given to sick children (93%) hence facilitating on job training and coaching on identified areas of weakness during supportive supervision.

Throughout the course of the pilot, supportive supervision sessions were undertaken to provide monitoring support and to determine if the tool was being used and filled in properly. And, during these sessions, feedback from the HCWs confirmed the usefulness and appropriateness of the tool. Additionally, the pilot showed a significant improvement in the comprehensiveness of the documentation recorded. Prior to the utilization of this tool, HCWs were recording some key information, but the data was written in a non-formatted way, in blank notebooks or scraps of paper and was neither uniform nor complete and did not consider the holistic and inter-connected aspects of a child’s health. The tool provided clear information to guide HCWs in the assessment, classification and treatment of sick children and thereby improved their ability to diagnosis and or to better understand when to defer decision making to supervisors.

The pilot also demonstrated that through continual joint efforts of the national health office and technical health partners, we can innovate and develop improved ways to ensure that, every child brought to the health facility is well attended to, given adequate consultation time *and* treated appropriately in the endeavor to reduce child mortality in the country. This tool is a great help for aiding HCWs in managing under 5s and a huge step for child survival, and for improving quality of child health care services in Zimbabwe. As MCHIP continues activities through its Associate Award, the project plans to print these tools for the whole Province of Manicaland and also for Matebeland North and South (non USAID funded project). Additionally, MCHIP will continue advocacy discussions with MCH Director at the MOHCC for National adoption and scale-up/utilization of this tool.

Jowasi Masuka: Village Health Worker and community health champion in Mutare District

Jowasi Masuka is one of the eight male Village Health Workers (VHW) from the catchment area of the Mt Zuma Clinic in Mutare District, Manicaland. Mt Zuma Clinic has 20 villages in its catchment area and as of 2013, had a total population of 7,504. Jowasi covers four villages, with a total number of 470 households in his catchment area. A two-thirds majority of the households in his area belong to one of the Apostolic religious sects which make referring and seeking health care a serious challenge. The Apostolic faith are averse to seeking medical treatment from the health facility and believe in the power of prayer, using holy water and oil to cure any form

of ailment. Jowasi is in a unique position, as he understands these beliefs well, and he is an Apostolic and holds the position of “Evangelical Leader” within the religious sect, which is the third highest position within the church. What is so remarkable about his story and work as a VHW is that he has been able to use his influence to help others in his church see the power of medicine, both curative and preventative, especially when centered on the health and survival of mothers and children.



VHW Jowasi Masuka of Mt Zuma Clinic, Mutare District.

It was during the malaria outbreak in February 2013, when we first met Jowasi. During this outbreak in Mutare district, MCHIP supported the Ministry of Health and Child Care (MOHCC) to conduct community sensitization meetings on malaria and oriented Village Health Workers on how to use Rapid Diagnostic Tests (RDTs) for the management of malaria at community level. Jowasi was one of the VHWs who benefited from this orientation and training specific to management of malaria.



VHW Jowasi (circled) during the orientation for malaria community case management in February, 2013 at Mt. Zuma Clinic.

What he learned in this sensitization was very different from what he knew previously, through the church’s teachings, which hold that drinking lots of water with a lot of salt to induce vomiting is the way to cure malaria. Jowasi was taken by the insight and public health knowledge he gained, believed in what he had learned and was eager to apply this new information to help others in his community and protect them from the ills of malaria to prevent such an outbreak from occurring again. When Jowasi returned to his community, after his orientation, he informed them that he was

now able to manage and treat malaria at the community level. At first, some of the people in his community did not necessarily trust in what he was saying and many refused to come to seek help when

they suffered from malaria, but as the epidemic continued to wreak havoc in the community, this changed. Despite the fact that members of this apostolic sect do not seek medical care, Jowasi managed to treat six children below the age of 5 and 12 adults suffering from malaria from June to October 2013. This was due to mostly to his relentless advocacy for such treatment and his belief he could save lives this way.

Working as a Village Health Worker in a community of objectors and non-believers is no small feat but, Jowasi is motivated by personal experience and a desire to save lives and realizes that his place within his religion and his public health training can work together to save lives. He said, “My wife had suffered from 3 miscarriages and

for her fourth pregnancy I encouraged my wife to go to the hospital for assistance. I knew my wife would get all the needed care at the hospital. When the nurses at the clinic realized what we had done, they approached me to become a VHW so as to help other church members within my community.” In addition to the first-hand experience with his wife and her health problems, he had seen the challenges that the women and children were facing in his community. In 2009, during a measles outbreak, he was truly at a loss in what to do to help and he wanted to assist and try to make things better.

Initially, the church elders did not like this new role that he had taken up as a VHW. However, the elders have accepted the work he is doing at the health facility and regard it as work for the “government.” The elders and members of the church recognize that “Government work” is necessary and important and in this sense it is acceptable to undertake this work. With this seeming vote of confidence in his work, Jowasi continues to encourage uptake of health services especially within his own religious sect of Apostolics. For MCHIP, his dedication is critical for our work and we will seek ways in the future to continue to utilize his influence and showcase him as a positive deviant for other in his community and elsewhere in Manicaland.

Through his role, Jowasi has been able to mobilize women from his church for antenatal care services and a large number of women of child bearing age have been approaching him seeking family planning and paracetamol tablets –all of which were not common practice. Learning how to manage malaria at the community level has served as an important entry point for Jowasi and his mission and there has been a remarkable change in the attitudes of his community towards seeking treatment. He is a brave man to try to carry out this work, make these changes and he is motivated to save lives. Through his persistence and caring, as well as the fact that he is well-respected among his community and within his sect, he has used his learnings, the past outbreaks to say to his community “Let’s not let this happen again to our women and our children.”

Every breath counts: Commemorating the fight against pneumonia and prematurity

Globally, 1.5 million children below the age of 5 die annually due to pneumonia, while 15 million babies are born too soon and underweight. In Zimbabwe 4, 000 children below the age of 5 die annually due to pneumonia and between 10 -15 % are born prematurely. In general, babies born too soon are born through the 37th week, whereas full term infants are born between the first day of the 38th week and the last day of the 42nd week of pregnancy. And, though the timing of a baby's birth is important, birth weight is also a critical and powerful predictor of infant deaths. Normal birth weight is defined as birth weights greater than or equal to 2.5 kgs, whereas low birth weight (lbw) are birth weights less than 2.5 kgs and very low birth weight (vlbw) is defined as birth weights less than 1.5 kgs.

On the 13th of November, Harare Central Hospital, a major referral center in Zimbabwe was awash with nurses in blue and purple t-shirts chanting slogans and carrying signs to raise awareness about pneumonia and babies born too soon (prematurity). The Ministry of Health and Child Care (MoHCC) in collaboration with development partners; the Paediatric Association of Zimbabwe (PAZ), UNICEF, SAVE the Children and USAID's Maternal and Child Health Integrated Program (MCHIP) hosted by Harare Central Hospital held a joint event to commemorate World Pneumonia and Prematurity Day for the first time in Zimbabwe.

Commemorated under the theme, "**Every breath counts. Fight Pneumonia. Fight Prematurity**" the event sought to:

- Raise awareness and create an advocacy platform for the commemorations of these important childhood conditions;
- Promote dissemination of information on early detection and care seeking behavior for pneumonia to caregivers and communities ; and
- Promote low cost interventions for the care of pre-mature and low weight babies, especially Kangaroo Care.



Participants march at Harare Central Hospital to raise awareness on pneumonia and prematurity.

Speaking at the commemorations Professor Rose Kambarami, the Country Director of MCHIP Zimbabwe highlighted the importance of empowering communities and caregivers with information to prevent preventable deaths of newborns. She stated that, "*Every newborn with birth weight of less than 2.5kgs should receive Kangaroo Care wherever that infant is. This is an evidence-based, low cost, high-impact, life-saving intervention.*" She called on all present to get involved in the national scale up of Kangaroo Care. Kangaroo Care is a high impact intervention, which is easy to practice and can reduce preterm deaths by 75%.

Specifically, Kangaroo care is the early, prolonged, and continuous skin-to-skin contact between the mother (or a caretaker/substitute) and her baby, both in the hospital and after discharge, with support for positioning, feeding (ideally, exclusive breastfeeding), as well as information on prevention and management of infections and breathing difficulties.

Two sets of parents, whose babies were born prematurely, gave testimonials on how effective and simple the Kangaroo Care method is. They highlighted the role Kangaroo Care had played in increasing the chances of their babies' survival, especially as their babies had been born below 1000grams.

A husband who was accompanying his wife also spoke on the benefits of Kangaroo Care, as he highlighted that it's a method that "makes the baby's heart beat in unison with the mother and reminds the baby to breath, thus increasing their chances of survival." The other parent who gave a testimonial is the wife of a local celebrity, Munyaradzi Chidzonga, who took part in the Big Brother Africa, 2011. Their child is now 3 years old and she indicated the importance of Kangaroo Care as a low cost intervention that saved her baby.



A couple giving a testimonial on the benefits of Kangaroo Care that saved their premature baby who had been born weighing below 1000 grams.

The other important topic addressed at this commemoration was childhood pneumonia. A mother, whose child had suffered from pneumonia and was admitted and successfully treated at Harare Central Hospital, gave her testimony on how she had quickly noted the change in her child's everyday condition and went to the hospital to seek assistance. She credits her ability to act quickly to having heard key messages about her child's health during immunization services and routine check-ups. At the hospital, her child was diagnosed with pneumonia and given medicine to treat this illness. Because the mother was well-informed, she made sure to give her child the medicine as directed.

Dr. Stamps, the Health Advisor to the President of Zimbabwe, gave remarks at this event, and encouraged the health care workers gathered to further reach out to the communities because that's where primary health care starts. If communities are reached with key messages, then diseases as well as deaths of newborns and under 5s can be prevented. He concluded by stating that primary health care requires an integrated approach to health. Also important to reinforcing the work of the HCWs are the on-going campaigns and messages through radio and other channels, which encourage people to remain informed on vital issues of public health.

This event was the first time that this type of commemoration was held in Zimbabwe. There was a good turnout of health care workers, and beneficiaries and we are optimistic that participation will increase steadily at the next planned event, to be held in November of 2014. Child survival activities remain a critical part of MCHIP's activities in Zimbabwe and these types of community awareness and empowerment events are a key part of a comprehensive approach to reaching people, increasing uptake in quality services and improving child health outcomes.

Advancing MCHIP's Mission outside of the workplace: How exposure to health information to non-health professionals can have remarkable effect: Warren Chekera's Story



Warren Chekera, Finance Manager with MCHIP/Zimbabwe.

The photograph included introduces readers to MCHIP Zimbabwe Finance Manager, Warren Chekera and his typical day. Each day, Warren diligently works on financial statements and makes sense of the figures and budgets that underpin the maternal, newborn, and child health (MNCH)-related work implemented by MCHIP's technical team. Warren has been with MCHIP since the project's inception in 2010, and plays a key role in handling the project's finances. Generally, Warren's exposure to the technical aspects of the project is through attending routine progress update meetings, reviewing project reports, and participating in informal discussions with colleagues. In addition, Warren sometimes comes across behavior change communication (BCC) materials that are produced by MCHIP, intended to raise awareness and increase knowledge in the communities of Manicaland Province where MCHIP works.

One such BCC material that made a particular impression on Warren was a brochure on Pregnancy Induced Hypertension (PIH), or high blood pressure during pregnancy. This brochure was developed by MCHIP in collaboration with the Ministry of Health and Child Care, and provides essential, lifesaving information about this dangerous condition. Through reading the brochure out of his own interest, Warren learned about the definition of PIH as well as its signs and symptoms.

Back in his own community and armed with new information, Warren was able to identify the danger signs of extreme high blood pressure in a neighbor who had mistakenly taken symptoms she was experiencing (swollen hands and feet, puffy face) as a reaction to something she had eaten. Warren, noticing her symptoms, strongly advised her to seek medical assistance at the hospital and even volunteered to transport her. Immediately the woman took heed of Warren's advice and Warren helped to get her to the hospital in timely manner. Upon arrival, the woman's blood pressure was found to be dangerously high and the doctors arranged for an emergency caesarian section in order to save her life as well as that of her baby. The woman safely delivered a baby boy and continues to be grateful for the support she received from Warren.

When asked about this brave and decisive move, Warren confidently confided that, *"I was fully equipped with information through reading the brochure on Pregnancy Induced Hypertension that had been distributed at the office by our Health Promotion Officer."* Warren expertly translated knowledge into action within his community. Rarely does one find a male financial expert who takes such an interest in issues that are outside of his technical area of work, as well as outside of his normal comfort zone. His was a show of great care, and by carrying health messages from the workplace *into* the community, Warren helped save two lives. Warren is a clear example of MCHIP personnel who truly live by the project's motto "Committed to Saving the Lives of Mothers, Babies, and Children".

Improving access to prompt and effective malaria case management: A case study of Village Health Workers in the Muchadziya Community

Health facility Profile

Muchadziya Health Facility is a health facility in Chimanimani District that was hardest hit by malaria during the period of October 2012 to May 2013. Situated on top of a hill, the health facility is located 44km from Chimanimani town on the eastern border with Mozambique, and provides health services to populations from both Zimbabwe and Mozambique. Below is the population breakdown excluding the Mozambican population.



Total population	8149
Under 1 year population	360
1 to 4 years	1649
5 to 14 years	3540
Over 15	6059
WCBA	1784
Expected Pregnancies	444
Expected births	325
<i>Source: ZIMSTAT Census Projected data, 2002</i>	

The staff establishment is composed of 4 nurses, 1 Registered General Nurse (started work in May 2013) 3 Primary Care Nurses, 1 Nurse Aid and 1 General hand. From the Zimbabwean side the health facility has a catchment area of 15 villages supported by 5 village health workers. The top five conditions for the under 5 years at the health facility are 1st Malaria, 2nd Diarrhoea 3rd Pneumonia, 4th Injuries, and lastly eye conditions.

In February of 2012, Village Health workers were trained by MOHCC with support from MCHIP in Malaria community Case Management (MCCM). However, despite the initial training, actual implementation of case management activities was delayed for several months due to external factors, including inadequate resources from the District Health Executive for the resource support to the VHWs and a lack of supportive supervision.



VHW receiving commodities from MCHIP Country Director Professor Kambarami.

In August 2012, MCHIP conducted a baseline assessment to define baseline performance, measure gaps in performance and resources. After the baseline assessment, an implementation plan was agreed upon by the district and MCHIP. Key activities included training, supply of commodities and supportive supervision through VHW peer supervisors. In November, VHWs from Muchadziya were trained in Health Management Information System which also included aspects of Malaria Community Case Management. This acted as a refresher course and during this training, nurses from Muchadziya participated. The nurses' participation was critical to orient them to the VHW programme and tools so they could support the VHWs and also use the data from the VHW reports on malaria cases management. In December, VHWs were supplied with commodities for use such as

bicycles, thermometers, aprons, stopwatches and mackintosh jackets. Chiefs and councilors from Muchadziya community were present during the handover ceremony and this event also served as an opportunity for

broader community sensitization and buy-in to raise awareness on VHW activities including malaria case management.

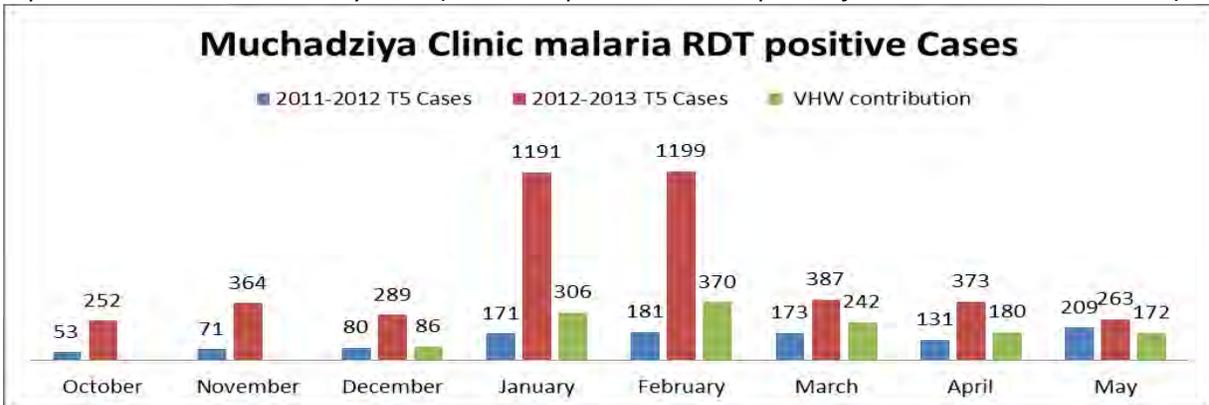
VHW Malaria Community Case Management Outcomes

Delays in starting appropriate treatment are a major contributor to malaria mortality. Many children and adults with suspected malaria in sub-Saharan Africa, where medical services are not easily accessible, start treatment much too late or do not receive it at all. And, as a result, often die at home without any contact with formal medical services. However, following MCHIP’s efforts, this is no longer the case with the Muchadziya community, even with its challenging terrain and access issues to the health facilities. During the peak of the malaria outbreak (December 2012 to May 2013) in Muchadziya there were no Malaria related deaths reported at the facility or community level, and the facility did not have complicated malaria cases or referrals out. And, during that same time period, only 8 cases of pregnant women were treated for malaria. These positive outcomes can be attributed to the contribution of community case management by VHW that not only brought much needed health services to the communities’ doorstep, but also removed costs of seeking health care services from other institutions bordering Muchadziya. On average, more than 36% of positive cases reported on the T5 Health Center form during the outbreak period were tested and treated by the VHWs. Speaking to PCN Mbingwana who works at Muchadziya Clinic she said:



As a clinic we are proud that we managed the malaria outbreak at facility and community level and had zero fatalities. Our communities are rather mobile and engage in risky behaviours which include gold panning at night and going to the market early in the morning when the anopheles mosquito is active. However, with the assistance of the VHWs at community level we did not have complicated malaria cases or referrals out due to complicated malaria.”

Below is a graph indicating monthly VHW contribution to malaria case load reported by the Health Facility on T5 for the period October 2012 to May 2013 (These are positive cases reported for both adults and Children).



Malaria Community Case Management not only improved access to early treatment for malaria, but acted as an entry point for early detection and management of childhood illnesses including diarrhoea and referral for immunisation in the community. VHW Midia Gowerowho works in Muwana village in the Muchadziya area highlighted that,



“Having brought malaria testing and treatment to the door – steps of the community has made us assist our communities early and be able to prevent deaths in our villages. Malaria Case Management in the community has also helped us to be able to screen for and manage other childhood illnesses such as diarrhoea when parents bring their children for malaria rapid diagnostic testing to us.” During the period under review, 63 sick children under 5 years who were brought to the VHWs for RDT testing were treated for diarrhoea by the VHWs and referred to the health facility for Zinc.”

As a result of MCCM, utilisation of community data for decision making at Muchadziya Health Facility has improved. A detailed review of health facility Staff–VHW monthly meeting minutes indicated that health facility staff are now utilising VHW data, especially Malaria data, for resource allocation, as seen firsthand by Febbie Moyambo. Febbie is a VHW from Vhimba community, and personally, she has witnessed an increase supply of Co-artemether and RDT kits, and has greatly benefited from receiving targeted supportive supervision from the health facility staff. Because of the Malaria statistics submitted to the health facility by Febbie and others, partners such as UMCOR (United Methodist) also used the data to target the Vhimba community with mass distribution of Mozlotion for the prevention of Malaria.

The success of implementing Malaria Community Case Management is positively associated with provision of a complete package of training, resource support and supportive supervision. MCCM when supported with good data collection tools has a multiplier effect of improving early detection and management of childhood illnesses including immunisation in the community. Linking VHWs to Health facility support is important, as is orientation of health facility staff to the VHW activities and tools for data collection, as these will better ensure successful coordination, collaboration and improved malaria treatment outcomes. MCHIP has also improved coordination with PSI to ensure that the health facility health workers are acquainted with the MCCM work and tools.

The power of partnerships: Creative ways to reuse, renew, and distribute maternity kits to improve quality of services and save lives

Boxes of unwanted, discarded medical equipment



In Zimbabwe, as well as other severely resources constrained settings, innovation, partnership and leveraging of resources are important concepts, particularly for public health and ensuring that investments are used efficiently to achieve the best possible health outcomes. The four boxes featured in the picture above, contain lifesaving equipment that can be used to facilitate deliveries and stitching of minor injuries, and when sterilized are completely reusable. These boxes of medical equipment, various kinds of forceps, are from Population Services International (PSI). PSI, who is spearheading the voluntary medical male circumcision (VMMC) program in Zimbabwe no longer had any use for the equipment, as these forceps were part of ready-made VMMC surgical kits. Through a routine USAID Implementing partner’s meeting, members from PSI and MCHIP discussed this surplus and devised a plan to recycle and reuse this equipment that would otherwise be wasted.



MCHIP realized that these items of excess surgical equipment from the VMMC program could be sterilized and reused to prepare much needed “delivery packs” for Health

Facilities (HFs) within its learning sites. With the forceps donated by PSI, MCHIP then procured various additional supplies – which included delivery (locally known as “green”) towels, cord clamps, and many other items, listed in the attached table. * MCHIP also partnered with the MOH and the facilities themselves to ensure that the other key components to these delivery kits were provided by the MOHCC and available at MCHIP sites. The photo and table show the list of items contributed by partners to formulate packs used for deliveries and stitching of minor injuries.

Contributory Organization	Item	Quantity
PSI	Needle holders/plain scissors	2 000
	Mosquito forceps {straight & curved}	2 000 straight 2 000 curved
	Long forceps	2 000
MCHIP	Cord scissors	406
	Cord clamps	24 000
	Green towels	3 990
	Sterilization bags	1 400 bags
	Sensitive tape	106 reams
	Mackintosh, waterproof sheeting to line the beds	110 pieces
	Urine testing strips	500 tins
Ministry of Health and Child Care (MOHCC)*	Stainless steel large receivers	As per requirement for each HF.
	Stainless steel gullipots & bowls	

Table showing specific contributions from MNCH partners.

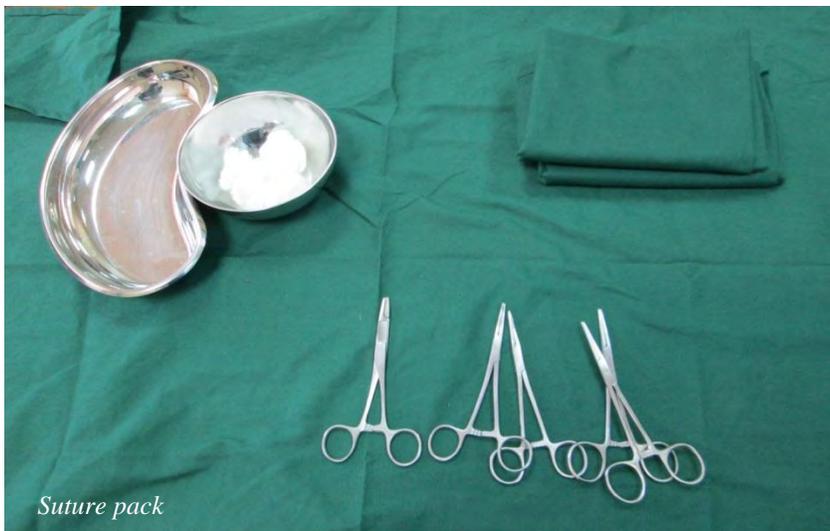
Additionally, MCHIP also took this opportunity to supply much needed urine stripes, used to detect protein levels in pregnant women’s urine –which, if found to be abnormally high, poses a major concern as it indicates the presence of pre-eclampsia – a life threatening condition if not managed immediately.

When it all comes together:

This equipment, when combined formulates what are known as delivery and suture packs. Delivery and suture packs contain equipment, best kept in sterilization bags, which are critical to reduce infection during surgery and procedures. Prior to this initiative, sterilization bags, while available in Zimbabwe, were consistency out of stock. In the absence of sterilization bags, the packs are sterilized and wrapped in towels. Due to the superior quality of the sterilization bags and lack of sufficient supplies of towels, MCHIP decided to purchase the sterilization bags for this initiative. An additional advantage of these packs is the convenience of having all of the required equipment in one place, facilitating efficient, speedy and more effective processes needed to save lives.

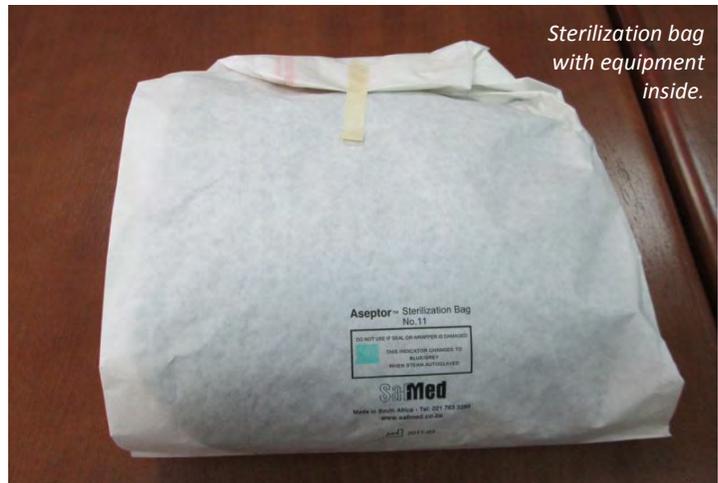
Delivery packs consists of 4 small and 4 large green towels, 1 cord scissors {contributed by MCHIP}, 2 long forceps, 1 long scissors {contributed by PSI} and 2 stainless steel gulli pots, 2 stainless steel large receivers and 1 stainless steel bowl {contributed by MoHCC}.

Delivery packs are essentially used to facilitate deliveries, i.e. green towels are used to receive the baby and cord scissors are also used to cut the umbilical cord to separate mother and baby at the time of delivery. Cord clamps (not in this picture) are used to hold the baby’s umbilical cord in place when the cut is made, until it dries off.



A suture pack, consisting of 2 large and 2 small green towels {provided by MCHIP}, 1 stainless steel gulli pot, 1 stainless steel receiver (provided by MoHCC), 2 mosquito forceps, and 2 needle holders (provided by PSI). These packs are essentially used to conduct minor suturing i.e. stitching of tissues after deliveries and other minor injuries.

The delivery and suture packs are kept in sterilization bags to ensure that equipment inside the bag is sterile. The bag has a sensitive bar that changes color to show that equipment is now sterile. The sensitive tape also serves the same function and can be used without the sterilization bags. For example, the equipment packs can be folded within one green towel sealed with a piece of sterilization tape that changes color to show that the equipment wrapped inside is now sterile.



Sterilization bag with equipment inside.

Provision of adequate sterile equipment combined with enhanced health worker skills are some of the critical efforts needed to provide quality MNC health (MNCH) services, and when sustained, will result in more lives being saved. Thanks to the strong and creative partnership and efforts of MCHIP, the MOHCC and PSI, these lifesaving medical packs were made available at health facilities and will contribute significantly towards provision of quality health care services for mothers and babies. It is these types of innovative solutions that we all must continue to look for throughout our work. MCHIP, through its active participation at the National MOHCC level, as well as at the provincial, district and community level, will continue to cultivate these collaborative efforts to leverage innovative approaches and localized solutions.

Born too soon: Pre-mature births can be successful if “born in the right hands”



Baby Tafadzwa Tekeza.

Baby Tafadzwa Tekeza was born on the 21st of March 2013 with a birth weight of 850g at Nyahode clinic in Chimanimani District. The mother, Antenecia Dhiwayo is a 16 year old married woman. Hers is the story of a pre-mature and low birth weight baby that received timely medical attention and with the foresight of the health care providers, as well as the mother’s initiative and subsequent follow-up, lived to be a healthy baby.

On the 20th of March 2013, in the early evening, Antenecia noticed that she was experiencing lower abdominal pain, backache and discharging a clear fluid. At first she thought that the discharge was going to stop and the pain would go away. Then, she remembered what she had been taught by the nurses and Village Health Workers about the danger signs to watch for during pregnancy. Her husband was at work, on night duty and she was home alone. She knew she had to go to the clinic for help so she gathered her courage and went to the neighbor’s house to ask for an escort. Fortunately, the boys who stayed at the house agreed to take her to the nearest health facility.



Nurse Chirahwi holding Baby Tafadzwa.

She arrived at the facility at around 2200hrs; PCN Chirahwi was on call on the day so she examined Antenecia. The nurse diagnosed preterm labor; she counselled Antenecia and informed her that she was going to deliver a preterm baby, and should be prepared to be transferred to the hospital for further management.

The baby was delivered around 0130hrs in the morning with a birth weight of 850g. According to nurse Chirahwi, the baby was too small, even to the extent that it was difficult to put on the hat and booties on the baby. Nurse Chirahwi is one of the nurses who went through the EmNOC training supported by USAID/MCHIP in which they covered management and care of a preterm baby. Through this training she learned that all babies born

under 2.5 kgs are considered to be low birth weight. She quickly put what she learned into practice, explaining to the mother about Kangaroo care, its benefits, and tying the baby between the mother’s breast in Kangaroo position. She organized public transport (locally known as a “combi”) to carry the mother and baby to

Chimanimani hospital, which is a larger facility within Manicaland Province. At Chimanimani Hospital the mother and baby were further transferred to Mutambara Hospital. During the transfers the mother was encouraged to keep the baby in kangaroo position.

Nyahode clinic is one of the clinics that has benefited from MCHIP support. Specifically, their health workers benefited from EmNOC trainings, as well as on-going supportive supervision conducted by MOHCW District health staff with technical support from USAID/MCHIP. At Mutambara, Antenecia and her baby were admitted into the Kangaroo Care unit. This is one of the units in Chimanimani District which was renovated with MCHIP support, and provides a warm, safe physical space for the mother and child to stay, to bond, to practice exclusive breastfeeding and to remain until the baby reaches a certain weight. She and her baby stayed in the Unit for 7 weeks and were discharged when the baby was 2480g, or 2.48Kgs. After discharge, she continued to do Kangaroo care at home, she faced some negative reactions from relatives, who felt like Kangaroo care is against tradition and socially unacceptable. Traditionally, women carry their babies on their back and with clothes, so the new concept of babies and caretakers having skin to skin contact, and carried on the mother's chest, took some getting accustomed to by others. Despite this new way of doing things, Antenecia followed the nurse's instructions and continued to see improvements in her baby's health and weight. The nurses at Nyahode Clinic continued to do weekly follow ups on Antenecia and the baby at the household level.

When asked about her experience with Kangaroo care, Antenecia had this to say:



"I saw my baby gaining weight every day. The Nurses and Nurse Aids who came to the unit encouraged us to breast feed our babies after every two hours and were very supportive. I learned that if one follows what the nurses tell you to do, you go home quickly. I am happy that my husband appreciated it and was very supportive to the extent that he was also doing the Kangaroo care at home to assist me. I was given literature to read and I also gave it to my husband. When I came home with the baby, most of the people in the village could not believe it; they thought that the baby with that weight was not going to make it. When they saw her, most of my relatives were excited and wanted to know more about Kangaroo care and I was happy to explain it to them. Ripple effect, bonding idea was mostly liked by my sister in law who was pregnant- so much that when she delivered a mature baby with normal weight, she went on to do kangaroo care for the first two weeks of the baby's life."

Antenecia and her baby Tafadzwa.

Today Antenecia is a happy mother, thanks to all the Health Workers who encouraged her and supported her to do Kangaroo care.

Newborn Care Corners: A cornerstone in saving newborn lives, “The story of Chakohwa Clinic and its community to save newborn lives”

According to the 2010 Global Systematic Analysis of National Causes of Child Mortality Report around 10,758 newborns die each year in Zimbabwe, primarily due to three causes, preterm delivery (37 percent), failure to breathe (27 percent) and infection (19 percent). Helping Babies Breathe is a critical intervention that is being used to save the lives of newborns, which have difficulties breathing soon after birth. Currently, in Zimbabwe it is mandatory for a health facility to have a newborn care corner; a physical space where a newborn will be resuscitated in the event that they are unable to breathe. Despite the policy, many delivery rooms and maternity wards of health centers and district hospitals had limited space, equipment and capacity to provide optimal newborn care immediately after birth. And, in some cases, especially in the rural health centers, the actual newborn care corners did not exist. Now, with MCHIP’s support for Helping Babies Breathe (HBB) in Manicaland, facilities now have newly created and/or improved newborn care corners, as well as the corresponding equipment and trainings to successfully implement newborn resuscitation. And, while it is great that the actual physical space is a mandatory National policy, having skilled HCWs with improved preparedness and confidence and who are enabled to handle emergencies as well as the equipment in which to do so is just as vital. Critical equipment includes a resuscitation mask, bag and suction bulb, and a stethoscope.



Rusitu Mission Hospital Newborn Care Corner: Space and equipment ready for newborn resuscitation.

Helping Babies Breathe (HBB) is an evidence-based educational program to teach neonatal resuscitation techniques in resource-limited areas. Helping Babies Breathe emphasizes skilled attendants at birth, assessment of every baby, temperature support, stimulation to breathe, and assisted ventilation as needed, all within "The Golden Minute" after birth. HBB is designed to be used as part of a coordinated and comprehensive teaching approach to early neonatal care and can be effectively integrated with other curricula. HBB focuses on practices that all persons who care for babies at birth can learn to care for healthy babies and/or assist babies who do not breathe on their own.

MCHIP started implementation of HBB in Manicaland in 2010, and after rolling out HBB trainings health care workers now greatly appreciate how HBB saves lives of newborns and contributes to the reduction of infant mortality in Zimbabwe. Personnel have since taken the initiative to set up newborn care spaces ranging from

just preparing space and equipment to be ready for resuscitation, to imitations of the modern newborn resuscitaire through low-cost, innovative ideas utilizing whatever materials they have access to. Specifically, following the MCHIP supported training, Chakohwa Clinic nurses were very creative in that they designed a resuscitaire which was made locally with the assistance of their community. The resuscitaire has an overhead light for heating and lighting and is in line with HBB requirements where the area should be warm with good light. In the absence of resources, innovation can save the lives of newborn babies.



Nurses at Chakohwa Clinic at the resuscitation table they designed.



Chakohwa Clinic resuscitation area with overhead light.



Sister in Charge, Chakohwa Clinic, Otilia Mbano; standing next to the resuscitation table. The light can be adjusted up and down.

The newborn resuscitaire made at Chakohwa Clinic is evidence of the commitment of health care workers and their community in saving the lives of newborn babies. Zimbabwe is a resource limited country, and the rural health centers are among the worst off in terms of resources and equipment. When health workers and communities come together and work towards lifesaving interventions it shows the commitment towards achieving Millennium Development Goal 4. MCHIP is excited about this innovative work and plans are underway to share this success story globally. And, in Zimbabwe, efforts will be undertaken to invite the National level MOHCC, specifically representatives from the Department of Reproductive health to see this innovation. Other ideas to be developed further include utilizing these nurses as well as pictures and basic documentation of the “how to” of this innovation at other facilities and trainings, to disseminate this innovation and scale it up.

The Golden Minute: Helping Babies Breathe saves lives of newborn babies

An estimated four million newborns die annually during their first month of life. Half of these deaths occur during delivery and within the first 24 hours following birth, often as a result of inadequate breathing or a failure to breathe. Every year, 10 million babies require help to breathe immediately after birth. Simple means to stimulate breathing, including drying and rubbing, and ventilation using a bag and mask, could save the majority of these babies who die. However, such care is available for less than one out of four newborns.

In 2010, at the advent of MCHIP/Zimbabwe, newborn deaths due to failure to breathe soon after birth were plaguing Manicaland Province. Health care workers were fighting a losing battle within the first sixty seconds of a newborn's life. It was the plague dubbed "gone in sixty seconds". For a newborn baby that is having difficulties in breathing, the first sixty seconds means the difference between life and death for that infant .

Starting in 2010, MCHIP proudly implemented the Helping Babies Breathe (HBB) initiative in Manicaland as a commitment to provision of lifesaving newborn care. HBB is a globally accepted intervention (initiated by the American Academy of Paediatrics in collaboration with the WHO, USAID, Saving Newborn Lives, the NICHD, Save the Children and other global health organizations) that is used to resuscitate newborns just after delivery. Helping Babies Breathe emphasizes skilled attendants at birth, assessment of every baby, temperature support, stimulation to breathe, and assisted ventilation as needed, all within "The Golden Minute" after birth.

Before MCHIP's work in Manicaland, no health care facility staff had been trained in HBB and only a few midwives had received pre-service training in newborn resuscitation, and even with that minimal training their performance was below the expected standard. During the baseline assessment for quality improvement, midwives and non-midwives scored poorly for the management of newborn complications, especially when a newborn has difficulties breathing. With a national figure of 27 newborns dying out of every 1000 live births, the number of babies losing their lives is a cause of major concern.

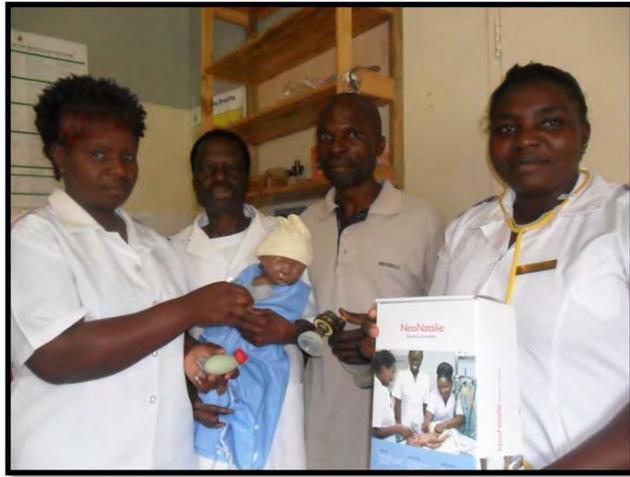
USAID/MCHIP embarked on a three pronged approach to address the situation. The approach included the following:

1. Training health care workers in newborn resuscitation using the Helping Babies Breathe (HBB) technique with the NeoNatalie model.



HBB training: participants practicing in pairs with the NeoNatalie model.

2. Supplying health institutions which conducted a lot of deliveries with the NeoNatalie HBB model to facilitate continued, on-going skills building and practicing.



Chimanimani Rural Hospital staff pose with the NeoNatalie model provided by USAID/MCHIP.

3. Supportive supervision to health workers, for on-going support, skills building and problem solving support.

In Zimbabwe, MCHIP has worked extensively in capacitating the health care workers in Manicaland Province to help babies breathe. Project monitoring data shows that nearly 1,000 babies were successfully resuscitated from 2010- 2013 in Manicaland Province. And, currently, Manicaland Province now has a 98% success rate in newborn resuscitation, statistics which were never captured before the introduction of MCHIP. Currently, at least 1 health care worker has been trained in every facility in Manicaland province. However, in the two districts where MCHIP was working intensively, almost all health care workers are trained in HBB and management of complications that occur in mothers. Evidence shows that training, mentoring, and supportive supervision has greatly improved the ability of non-midwives to manage babies having difficulties in breathing and to save more newborns within the first sixty seconds, the Golden Minute.

“Beyond policies”: A Three step plan for diarrhea management that reduces diarrhea deaths in children below the age of 5

Diarrhea is the fourth cause of under 5 (U5) deaths in Zimbabwe. It contributes to between 20-30% of children seeking care at the hospitals and 12% hospital admissions of children below the age of 5 nationally. MCHIP, in collaboration with the MOHCC helped to realize and roll-out best practices in management and treatment of diarrhea, thus facilitating translation of policy into action.

In 2007, and in an endeavour to reduce occurrences of diarrheal disease and deaths due to diarrhoea in children, Zimbabwe’s MOHCC adopted the use of Zinc and low osmolarity Oral Rehydration Solution (ORS) at facility level for the treatment of diarrhoea in children under five years. Despite this clear policy on diarrhoea case management, the Zimbabwe Demographic Health Survey (ZDHS) 2010- 2011 reported that only 0.1% of diarrhea cases countrywide received Zinc. The majority (74%) of the cases were given Oral Rehydration Therapy (ORT) or increased fluids, and in the same survey in Manicaland Province, (0%) of the diarrhoea cases received Zinc. Upon further reflection, it was determined that the policy was not being communicated through the proper channels at either the management level for the provinces and districts, as well as the facility level, the front-line health workers, and, because of this lack of knowledge, the policy was not translating into implementation. Additionally, there were no implementation guidelines and no specialized training on how to administer zinc. There was information on utilization of zinc in IMCI training, but at the time, these trainings were not being done, due to lack of funds.

Manicaland Province has a population of 1,700,684, with 136,055 people living in Chimanimani. Chimanimani district is one of the seven districts in Manicaland. The under-five population for Chimanimani District is 29,252. And, even as late as 2011, a comprehensive review of U5 registers, where all patients below the age of 5 are recorded, revealed that less than 30% of diarrhoea cases were prescribed Zinc and ORS at health facilities in Chimanimani district. In view of these numbers the MOHCC with support from MCHIP implemented a 3 step plan to address the gap in the prescription of Zinc and ORS. This plan included group based clinical trainings, Supportive Supervision (SS) coupled with on the job mentorship and provision of ORT equipment.



Figure left: ORT corner before MCHIP support. Figure right: ORT corner with equipment supplied by MCHIP.

At the ORT corner we demonstrate how to make Salt and Sugar Solution, educate and empower caregivers on how to protect and prevent diarrhea in children. The equipment MCHIP gave us is helping a lot.



For the Water and Sanitation Hygiene (WASH) topics, MCHIP collaborated with Population Services International (PSI) who made presentations on water point of use purification during the training. It complemented work done by the International Rescue committee (in 10 wards in Chimanimani District) in relation to WASH programs.

In the first quarter of 2011, prescription patterns for Zinc and ORS were significantly low (1.2%). After that, from April the same year interventions such as Supportive Supervision and on the job mentoring for Diarrhoea case management were intensified by the District Health Executive of Chimanimani District and MCHIP. A gradual increase in the correct prescription of Zinc and ORS was observed with most facilities reaching 79% by 2012. This significant increase in Zinc and ORS prescription in 2012 can be attributed to the diarrhoea case management, WASH and Integrated Management of Neonatal and Childhood Illnesses (IMNCI) trainings that took place within that year with support from MCHIP. Correct prescription in the treatment of diarrhoea, using Zinc and ORS is an intervention which reduces the severity, duration and future episodes of diarrhoea in children and will positively contribute to the reduction of deaths in children below the age of 5 due to diarrhoea. Next steps for MCHIP under the Associate Award include a continued roll-out of the three step process, as well as its inclusion in IMNCI training, creation and supply of job aides, and roll-out to more sites in Manicaland. MCHIP will also continue its efforts in continued advocacy with the MOHCC for National scale-up, and to facilitate the expansion of this treatment methodology to VHWs. Just recently, the MOCHH distributed an official memo allowing VHWs to administer zinc and ORS to treat under 5 diarrhoea, which is an excellent development and further testimony to the successful work and partnership between MCHIP and MOHCC.

Annex 3: List of Presentations at International Conferences and Publications

Presentation title	Presenter name and title	Conference name and location	Date
“Zimbabwe: Scaling Up Prevention and Management of Postpartum Hemorrhage and Pre-eclampsia/ Eclampsia” poster	Rose Kambarami, Country Director; Hillary Chiguvare, Technical Director; Engeline Mawere, Clinical Training Advisor; Elizabeth Dangaiso, Newborn Technical Officer	MCHIP State of the Art Maternal Health Conference and Helping Babies Breathe Master Training Course. (Addis Ababa, Ethiopia)	February 2011
“Zimbabwe: Putting newborn health at the center of MNCH programming” poster	Rose Kambarami, Country Director, and Elizabeth Dangaiso, NH Officer	Global Newborn Health conference. Prof. Kambarami and Ms. Dangaiso were part of the Zimbabwe delegation together with representatives from the MOHCW, USAID, UNICEF, and others. (South Africa)	April 2013
“Addressing an acute malaria outbreak in Mutare and Chimanimani Districts”	Patience Panganai, Health Promotion Officer.	PMI BCC workshop on malaria. Patience Panganai was part of the Zimbabwe delegation, along with representatives from USAID, PMI Zimbabwe, and PSI (Addis Ababa, Ethiopia)	September 2013
“Integrated Community Case Management (ICCM) In Zimbabwe” poster	Leocadia Mangwanya Child Health Technical Officer and Edhina Chiwawa, Community Coordinator.	ICCM Evidence Review Symposium. Leocadia Mangwanya and Edhina Chiwawa was part of the Zimbabwe delegation together with representatives from MOHCC and UNICEF (Accra, Ghana)	March 2014

Annex 4: List of Materials and Tools Developed or Adapted by the Project

National Policies

- Food and Nutrition Security Implementation Matrix for Food and Nutrition Security Policy
- Quality Assurance/Quality Improvement (QA/QI) Policy and Strategy (in draft as of Oct. 2013)

Assessments (with associated data collection tools), Research, Technical Reports

- Zimbabwe MNCH Situation Analysis (June 2010)
- National Integrated Health Facility Assessment/Equity and Quality of Care (NIHFA/EQOC) report
- Standards-Based Management and Recognition (SBM-R) for Maternal, Newborn, Child Health Baseline Assessment Reports
- SBM-R Atlas
- Child Health Third SBM-R Assessment Report
- Community PQI (cPQI) Baseline Assessment Report
- cPQI Second Assessment report
- New Vaccine Applications to GAVI
- Chimanimani Immunization Head Count Report
- Pneumococcal Vaccine (PCV) 13 Post-Introduction Evaluation (PIE) Report (national)
- Assessment of Health Worker Knowledge, Attitudes, Behaviors (KAB) towards Breastfeeding Report
- Barriers and Facilitators of Optimal IYCF: Beliefs, Influences and Practices
- Infant and Young Child Feeding (IYCF) National Programme Review Report
- Newborn Corner Assessment Report (national)
- Assessment of IMNCI Tools Report
- Malaria Case Management Report (2011-2012)
- Repositioning Family Planning in Zimbabwe Dissemination Report
- Assessment of Health Data Quality in Manicaland Province

Training Guides/Manuals

- Emergency Obstetric and Newborn Care (EmONC) Training Package (Facilitator's Guide and Participant's Guide, Training of Trainers Guide)
- Kangaroo Mother Care (KMC) Training package (Facilitator's Guide and Participant's Guide)
- IMNCI Training Package (Chart Booklet, IMNCI DVDs, Recording forms)
- Malaria Community Case Management Training Package (Facilitator's Guide and Participant's Guide)
- RED (Reaching Every District) Field Guide
- PCV 13 Field Guide
- Immunization in Practice (IIP) Training Guide
- Rotavirus Training guide
- Postpartum Family Planning (PPFP) Training Package (in draft as of March 2014)

Health Worker Job Aids

- SBM-R Tools
- Supportive Supervision Guidelines
- Maternal and Perinatal Mortality Audit Guidelines
- Mother's Card

- Pregnancy Wheel
- IMNCI Recording forms
- New Child Health Cards
- IYCF Counseling Cards
- Baby Friendly Hospital Initiative (BFHI) posters
- 17 Key Household Practices Poster
- Health Worker Guidelines for Diarrhoea Control and Prevention in Children less than 5 years of age poster

Service Delivery Registers

- IMNCI Assessment, Classification and Treatment Tool (draft registers for 0-2 month olds and 2 month-5 year olds)
- KMC Admission and Follow-Up Registers
- Oral Rehydration Therapy (ORT) Corner Register
- Village Health Worker (VHW) Register

Other

- National and Provincial Partner Maps
- KMC Scale Up Maps
- Manicaland Provincial Training Database
- T-shirts with assorted commemoration day slogans, health messages, etc.
- VHW T-shirts, track suits, and bags

IEC/BCC Materials (Brochures, Fliers, Pamphlets, Booklets, Posters, Media)

- "What you need to know about high blood pressure in pregnancy" (English and Shona versions)
- "What you should know about malaria in pregnancy" (English, Shona, and Ndebele versions)
- "*Imi nepamuviri penyu*" booklet (Shona translation of the UNFPA-developed "You and Your Pregnancy" booklet)
- Maternal and Neonatal Health Record
- "Circles of support for breastfeeding mothers" pamphlet (English only)
- Kangaroo Care brochure (English and Shona versions)
- "What you need to know about measles" flier (English and Shona versions)
- "What you need to know about malaria" flier (English only)
- "Protect your child from pneumonia" flier (English and Shona versions)
- "*Zvamunofanirwa Kuziva Nezvemanyoka*" pamphlet ("What you need to know about diarrhea in children under 5" pamphlet, in Shona only)
- "*Kurapwa kwemanyoka Kumwana Ari Pasi Pemakore Mashanu*" poster ("Managing diarrhea in children under 5" poster, in Shona only)
- Revised EPI schedule poster
- Promote Key Family Practices (poster)
- World Breastfeeding Week 2013 Breastfeeding Support: Close to Mothers (poster)
- World Breastfeeding Week 2013 radio jingles in English, Shona, and Ndebele
- World Prematurity Day 2013 (posters, English & Shona)
- World Pneumonia Day 2013 (poster, English & Shona)
- World Malaria Day 2013 (banner)
- World Malaria Day 2013: Invest in the Future, Defeat Malaria (executive folders)
- World AIDS Day 2011 (banners)

Annex 5: Program Learning Dissemination

#	Program Learning Topic	Relevance of Topic	Plans for studying, documenting and disseminating	Results – Reports, presentations, etc. (with links to relevant documents)
1A	SBM-R & health outcomes: What is the relationship between facilities achieving 80% of SBM-R performance standards for AMTSL and reduction in PPH?	SBM-R has been successfully implemented in several countries as an approach to improve provider performance and adoption of positive health practices. In all cases, provider performance as measured by SBM-R scores, improved over time. The relationship between the improvements in adherence to performance standards and improvements in health outcomes has not been well documented.	<ul style="list-style-type: none"> • Study report and SBM-R Atlas: “Linking SBM-R-Based Performance Improvement to Health Outcomes for Mothers and Newborns: Chasm or Destiny?” • Results to be shared nationally and globally. 	<ul style="list-style-type: none"> • Results presented at district, provincial and national level by MCHIP and MOHCC colleagues. A multi-level brown bag presentation on the results was received overwhelmingly and formed the basis for a national quality improvement policy and strategy development as well as revision of clinical training packages, service delivery guidelines and a movement towards strengthening supportive supervision and post training follow up. The tools and approaches also formed the core of the national QoC study which provided information for national MNCH program design and delivery • The results have also been included in a multi-country manuscript to be published internationally • Write-ups have been completed and disseminated nationally (SBM-R atlas, SMB-R ppt.)
1B	What is the relationship between facilities achieving 80% of SBM-R performance standards for ENC/HBB and a reduction in newborn mortality?			
1C	SBM-R & child health: Does SBMR for CH improve IMNCI performance? Does improved SBMR performance impact on selected child health outcomes? What inputs were required to implement SBMR interventions?	SBM-R has not been applied previously to child health. This topic seeks to understand if the model is useful in improving the quality of CH services and can be scaled up for wider use.	<ul style="list-style-type: none"> • An Assessment report. Title TBD once protocol is finalized. • To be shared through national and global forums. 	<ul style="list-style-type: none"> • Topic Discontinued

2	A trial of the Effectiveness of Using a Trainee Directed Skills Practice Approach for enhancing the Retention of Neonatal Resuscitation Competencies in 5 districts of Manicaland.	Effective teaching methods and strategies exist for competency based training in HBB. Without effective strategies for knowledge and skills retention, few weeks post-training the acquired competencies in HBB will start to deteriorate and a year after the training the competency levels will reach pre-training levels. There is need to gather evidence on effectiveness of the strategies for knowledge and skill retention post in-service HBB training.	<ul style="list-style-type: none"> • Longitudinal study. Data collection done at baseline , 6 weeks, 3 and at 6 months. Preliminary report completed after 3 months data collection in February. • Results to be shared locally, targeting MOHCC and other key stakeholders. • Possibilities to share study at regional and global level being explored. 	<ul style="list-style-type: none"> • Skills assessment tools available. • Initial dissemination to stakeholders done at MCHIP close out event in February 2014. • Final report being completed.
3	Scale maps for ORS/Zinc: What are MCHIP’s lessons learned in improving management of DD with ORS/zinc in Mutare/Chimanimani?	Despite adoption of zinc in the management of diarrhea and subsequent distribution of Zinc into facilities, children were still managed with ORS only and Zinc tablets were expiring on the shelf in the clinics	<ul style="list-style-type: none"> • Study report. Potential title: “Zinc prescription patterns and associated factors among health workers managing sick children with diarrhoea in a rural district in Manicaland.” • Results to be disseminated to MOHCC (district and provincial levels), Child Survival TWG. 	<ul style="list-style-type: none"> • Data collection, analysis and report writing completed. Results shared at the MCHIP closeout ceremony in-country. IRB approval not sought because this was a record review, not a human subject study. • Results still to be disseminated to MOHCC (district and provincial levels), Child Survival TWG.
4	Oxytocin potency study: Does oxytocin lose any potency in the national supply chain (i.e., from arrival in-country to end user)? Is oxytocin at point of use in Mutare/Chimanimani health facilities potent?	Use of uterotonics in the management of PPH is well documented. With a consistently high uterotonic use of over 95%, and a considerably high incidence of PPH – related deaths, questions as to the potency of the uterotonic in use have arisen.	<ul style="list-style-type: none"> • Study report. Anticipated title: “A Post Market Surveillance Study of the Potency of Oxytocin along the Supply Chain in Public Health Facilities in Mutare and Chimanimani.” • Results to be shared locally, targeting MOHCC and other key stakeholders. 	<ul style="list-style-type: none"> • Study completed but results still to be shared with MOHCC and local partners.

5	<p>PQI for VHWs: What is the quality of maternal, newborn, and community case management services provided by VHWs at community level? What is the compliance of VHWs with CB-MNCH quality of care performance standards for ANC, PNC and CCM?</p>	<p>While revitalizing VHWs is crucial to delivery of cMNCH, information on what happens during contacts between VHWs and community is not well documented and the impact of the VHW's work in CB-MNCH is not fully documented. A structured assessment was necessary to document the performance, define gaps, and inform performance and quality improvement strategies for VHWs in CB-MNCH services.</p>	<ul style="list-style-type: none"> • Study report entitled, "A Performance and QI Approach for Village Health Workers in Community Based Maternal, Newborn and Case Management." • Results will be disseminated to MOHCC (national, provincial, and district levels) and as brownbag presentation at CCORE. 	<ul style="list-style-type: none"> • Study was successfully completed and results were shared during the MCHIP closeout event. • Results were also shared nationally as a brown bag at the CCORE.
6	<p>Quality of MCCM by VHWs: What is the effectiveness of VHWs in treating uncomplicated malaria cases with ACTs/RDTs in 2 districts? To what extent is malaria case management with ACTs/RDTs by VHWs perceived by communities in these 2 districts? What are the magnitude and composition of costs needed to sustain MCCM by VHWs? What is the contribution of MCCM by VHWs to reductions in morbidity and mortality in these 2 districts?</p>	<p>Adoption of policies that allow VHWs to deliver life saving treatments in the community is a welcome innovation. However, the quality of both the testing and care is still perceived with reservation by both communities and health care providers alike. It was necessary to carry out a structured assessment of MCCM delivery by VHWs</p>	<ul style="list-style-type: none"> • Study report entitled, "Improving access to prompt and effective treatment of uncomplicated Malaria by VHWs in Mutare and Chimanimani Districts." • Results will be disseminated to MOHCC (national, provincial, and district levels) and as brownbag presentation at the Collaborative Centre for Research and Evaluation (CCORE). 	<ul style="list-style-type: none"> • Study was successfully completed and results were shared during the MCHIP closeout event. • Results were also shared nationally as a brown bag at the CCORE. • The results were also shared at an international ICCM meeting in Ghana in March 2014.
7	<p>IPTp coverage in Mutare: Why is the IPT program is not meeting its targets in Mutare District? What factors are associated with low IPT coverage in the district? What inputs and processes were required to implement IPT program?</p>	<p>Despite the adoption of the IPTp policy and several trainings targeted at the control of malaria in pregnancy in moderate to high transmission areas, use of IPTp in pregnancy has remained far lower (37%) than the national target of 85%</p>	<ul style="list-style-type: none"> • Study report entitled, "Evaluation of the intermittent preventive treatment of malaria in pregnancy program in Mutare District, 2012." • Results to be disseminated to MOHCC (district and provincial levels). 	<ul style="list-style-type: none"> • The study was successfully carried out by a University of Zimbabwe (UZ) MPH student and results shared during the monthly Master of Public Health forum. • The results were also shared with the province and recommendations adopted for implementation in provincial plans. • A manuscript for publication is still being finalized.

8	<p>High immunization dropout rate (formerly newborn outcomes related to Maternal Nutrition status): What are factors associated with high dropout rates in immunization in Mutare district?</p>	<p>Mutare district recorded dropout rates consistently above the WHO set 10% threshold from 2008 to 2012 reporting drop out of 18%, 25%, 13%, 18% and 22% respectively. High dropout rate indicates a situation where children access immunization services but fail to continue utilizing the services.</p>	<ul style="list-style-type: none"> • Study report entitled, “Factors associated with high dropout rate in immunization in Mutare District, 2013.” • Results to be disseminated to MOHCC (district and provincial levels). 	<ul style="list-style-type: none"> • The study was successfully carried out by a UZ MPH student and results shared during the monthly Master of Public Health forum. • The results were also shared with the province and recommendations adopted for implementation in provincial plans. • A manuscript for publication is still being finalized.
9	<p>Maternal Mortality Trends in Manicaland Province, Zimbabwe. 2009 to 2012: What are the trends in maternal mortality in Manicaland? What are the demographic and socio-economic characteristics of maternal deaths in Manicaland?</p>	<p>MDG 5 targets reducing maternal mortality ratio by three quarters in the period between 1990 and 2015. While some countries such as Bolivia, China, Egypt, Equatorial Guinea, and Eritrea have made substantial progress in reducing maternal mortality, others such as Chad and Zimbabwe have made insufficient progress or none at all.</p>	<ul style="list-style-type: none"> • Study report entitled, “An analysis of maternal mortality data in Manicaland Province, 2006 to 2011.” • Results to be disseminated to MOHCC (district and provincial levels). 	<ul style="list-style-type: none"> • The study was successfully carried out by a UZ MPH student and results shared during the monthly Master of Public Health forum. • The results were also shared with the province and recommendations adopted for implementation in provincial plans. • A manuscript for publication is still being finalized.
10	<p>Development of KMC BCC materials: What is the uptake of KMC services in relation to total number of LBW? Are there challenges using the registers? How is KMC data in registers utilized/processed?</p>	<p>Zimbabwe is currently revitalizing KMC method nationally. MCHIP would like to conduct formative research that will contribute to the development of appropriate messaging for BCC/IEC material for community KMC practices.</p>	<ul style="list-style-type: none"> • Topic Discontinued. 	<ul style="list-style-type: none"> • Topic Discontinued.
11	<p>Supply side factors for low uptake of PPIUCD: Why is IUCD uptake in Manicaland low?</p>	<p>Knowledge of FP methods is high (98%) in Zimbabwe. CPR is relatively high at (63%), however uptake of PPF/PUCD remains low in Zimbabwe (<1%). One of the principal barriers to uptake lies in the fact that many service providers remain uncomfortable with the insertion of IUCDs.</p>	<ul style="list-style-type: none"> • No longer implementing this study due to USAID FP funding limitations. 	<ul style="list-style-type: none"> • Topic Discontinued.