Strengthening Health Management Information Systems for Maternal and Child Health: Documenting MCHIP's Contributions

December 2013

Prepared by:

Molly Strachan
Mary Drake
Barbara Rawlins
Vikas Dwivedi
Becca Levine
Moussa Ly
Gbenga Ishola

Published by:
Jhpiego Corporation
Brown's Wharf
1615 Thames Street
Baltimore, MD 21231-3492, USA

Table of Contents

Acknowledgments

The primary purpose of this paper is to document and share the Maternal and Child Health Integrated Program's (MCHIP) efforts to improve maternal, newborn, and child health- -related elements of the routine national Health Management Information System (HMIS) in multiple countries. This undertaking requires the inputs and contributions of many people, and the authors would like to recognize those individuals who made this paper possible. First, we want to thank the MCHIP country teams and their ministry partners in Democratic Republic of Congo, India, Nigeria, Mali, Mozambique, and Rwanda for drafting or contributing to case studies. We would also like to thank MCHIP technical teams for their contributions to accurately documenting MCHIP's achievements.

In addition to the authors listed, the U.S.-based technical team included Kait Atkins, who designed and oversaw the online survey, and reviewers Anita Gibson, Linda Fogarty, and Theo Lippeveld for providing thoughtful insights to strengthen the paper.

We would also like to thank our colleagues at the United States Agency for International Development's Office of Health, Infectious Disease and Nutrition, especially Allison Moran.

This report was made possible by the generous support of the American people through the United States Agency for International Development (USAID), under the terms of the Leader with Associates Cooperative Agreement GHS-A-00-08-00002-00. The contents are the responsibility of the Maternal and Child Health Integrated Program (MCHIP) and do not necessarily reflect the views of USAID or the United States Government.

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.

Abbreviations and Acronyms

ASC	Agents de Santé Communautaire
ANC	Antenatal care
ARI	Acute respiratory infection
ASACO	Community health association
BCC	Behavior change communication
BCG	Bacille de Calmette et Guérin (TB vaccine)
CECAP	Cervical cancer prevention
CHC	Child health care
CHERG	Child Health Epidemiology Reference Group
CHW	Community health worker
CSCOMs	Centres de Santé Communautaire
DPT	Diptheria, pertussis and tetanus
EmONC	Emergency Obstetric Neonatal Care
EPI	Expanded program on immunizations
FANC	Focused antenatal care
FCHV	Female Community Health Volunteers
FP	Family planning
HBB	Helping Babies Breathe
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information Systems
HMN	Health Metrics Network
HSA	Health service assistants
iCCM	Integrated community case management
ICT	Information and communications technology
IEC	Information, education, and communication
IUD	Intrauterine device
KMC	Kangaroo mother care
LAM	Lactational amenorrhea method
L&D	Labor and delivery
MCHIP	Maternal and Child Health Integrated Program
MDG	Millennium Development Goal
Medex	Medical extension nurses
MOH	Ministry of Health
MOHCW	Ministry of Health and Child Welfare
M&E	Monitoring and evaluation
MNCH	Maternal, newborn, and child health

NSSK	Basic newborn care and resuscitation program (Hindi translation)
OPV-0	Oral Polio Vaccine-0
PCV	Pneumococcal Conjugate Vaccine
PPH	Postpartum hemorrhage
PPIUD	Postpartum intrauterine device
PRRINN	Partnership for Reviving Routine Immunization in Northern Nigeria
RAPID	Regular appraisal of performance of immunization
RDQA	Routine data quality assessment
RED	Reaching Every District
SBM-R®	Standards-Based Management and Recognition
SEC	National essential community package
SVA	Single visit approach
TA	Technical assistance
TA	Technical Advisory Groups
TB	Tuberculosis
TSHIP	Targeted States High Impact Project
UNICEF	United Nations Children's Fund
USAID	United States Agency of International Development
VIA	Visual Inspection with acetic acid
WHO	World Health Organization

Executive Summary

MCHIP is the U.S. Agency for International Development's flagship global program for scaling up evidence-based interventions to help countries achieve the desired reductions in newborn and maternal mortality outlined in Millennium Development Goals 4 and 5. As part of it its efforts to improve the quality of maternal, newborn, and child health (MNCH) care in low-income countries, MCHIP has taken specific steps to improve the monitoring of MNCH services through strengthening routine HMIS. These efforts have led to better monitoring and evaluation, higher-quality data, and informed decision-making in 28 countries across MNCH interventions. Ongoing efforts to improve HMIS will increase country and global access to information-rich systems to support MNCH program strengthening. This report summarizes successful HMIS-related interventions and innovations in countries where MCHIP is operating and at the global level. It highlights what MCHIP has done to strengthen HMIS and which MCHIP contributions have been integrated and institutionalized in national HMIS systems, and describes lessons learned.

Heightened global attention to MNCH measurement and accountability requires significant inputs into the health management information system (HMIS). Globally and locally, MCHIP has participated in 10 technical working groups that enhance *HMIS coordination and leadership* and supported six countries with *human and financial HMIS resources*. To improve routine availability of data on content and quality of MNCH care, MCHIP has provided global and country-level leadership to formulate and test new *indicators* or revise and update existing indicators. These indicators have been integrated with national facility- and community-based HMIS *data sources* for new health programs, such as cervical cancer, for pilot initiatives in 14 countries, and to strengthen existing registers and data collection tools in four countries. MCHIP has contributed to *data management*, data quality assessments, and strengthening of data flow and aggregation for both facility- and community-based programs in seven countries, and built the capacity of health care workers to use HMIS tools correctly and consistently in seven countries. Furthermore, MCHIP has facilitated the use of *information products* that enable quick visualization of data such as results posters and scorecards in 12 countries, leading to routine use of data for program monitoring and planning. These tools can lead to quicker action, increased accountability, and revitalization of commitments to improve health outcomes. *Data use* to inform program planning, evaluation, and program improvement is the ultimate goal of a well-functioning HMIS system. To that end, MCHIP has developed or scaled up innovative approaches such as Reaching Every District in 11 countries to improve the quality of services provided to clients and expand coverage of key interventions.

Introduction

Accurate and timely information on health intervention coverage, quality, and equity is the foundation of public health practice. Good measurement facilitates increased accountability of national and international bodies, improves the ability to monitor progress toward global, national, and sub-national goals and objectives, and is critical to identifying strategic adjustments required to meet commitments.

The Maternal and Child Health Integrated Program (MCHIP), funded by the U.S. Agency for International Development (USAID), contributes to reductions in maternal, newborn, and child mortality and prioritizes *impact at scale,* which requires highly effective coverage at the national level, sustained on a continuing basis. MCHIP's global leadership role and mandate and the direct reach to over 40 country programs worldwide allow MCHIP to not only influence policies and programs that support improved health outcomes, but also to support systems that underpin these programs, including Health Management Information Systems (HMIS). Globally and locally, MCHIP has undertaken efforts to introduce interventions or innovations to strengthen HMIS. MCHIP teams have collaborated with host countries to develop new or modify existing data collection tools, introduce new indicators, enhance data management processes, and strengthen data quality improvement activities. The collaborations also have improved data accuracy and timeliness, and, most important, promoted the use of data for management and monitoring purposes. This report summarizes successful HMIS-related interventions and innovations in countries where MCHIP is operating and at the global level. It highlights what MCHIP has done to strengthen HMIS and which MCHIP contributions have been integrated and institutionalized in national HMIS systems, and describes lessons learned.

The audience for this paper is primarily health and HMIS professionals and health decision-makers who use data on a routine basis to inform the planning and improvement of health programs.

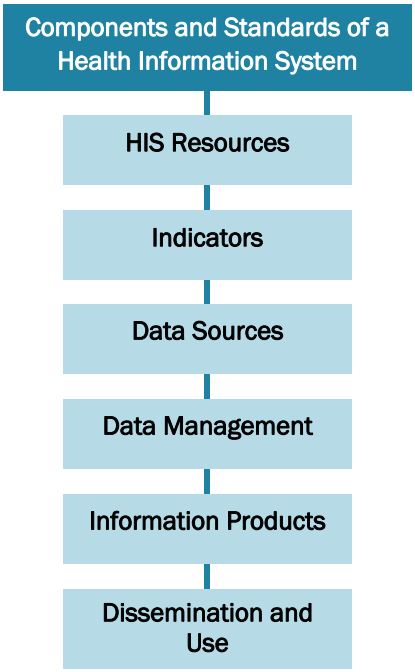
Background

MCHIP is USAID's flagship global program for scaling up evidence-based interventions to help countries achieve the desired reductions in newborn and maternal mortality outlined in Millennium Development Goals (MDGs) 4 and 5. Since 2008, MCHIP has worked with Ministries of Health and others in over 40 low-income countries to improve the quality and coverage of new and long-proven, evidence-based maternal, newborn, and child health (MNCH) interventions. An integral part of improving intervention coverage and quality is being able to accurately measure the intervention of interest. To this end, MCHIP has worked to improve measurement of MNCH interventions and services, and engaged key partners at the global, national, and sub-national levels to work to improve indicators and data collection tools used in population-based surveys, health facility surveys, and national HMIS. This paper focuses on the work MCHIP has supported to improve MNCH-related elements of the routine national HMIS in multiple countries.

The MDGs and the 2005 Paris Declaration on Aid Effectiveness focused attention on global health targets and require reporting on progress towards targets. These initiatives have led to a growing global emphasis on measurement and accountability in health, including what is being measured, how it is being measured, the quality of those data, and how they are being shared and used. The Countdown to 2015 and UN Commission on Information and Accountability for Women's and Children's Health were established to address the need for changes in the scale and scope of MNCH strategies to reach MDGs 4 and 5, to track progress, and to hold countries accountable for the progress or lack of progress they are making toward meeting national-level commitments. The Call to Action for Child Survival – A Promise Renewed focuses on three priority aims, one of which is to promote transparency and accountability of governments, civil society, and private sector partners through tracking and reporting on child survival strategies. Taken together, these initiatives highlight the priority and urgency that should be given to strengthening routine HMIS. Furthermore, as technical approaches to MNCH evolve, concurrent advances are required to adequately and accurately monitor health outcomes and the impact these advances are having in saving women's and children's lives.

The organizing framework for this paper is that put forward by the Health Metrics Network (HMN) (see Figure 1). HMN, launched at the World Health Assembly in May 2005, was established to help countries and partners work together to improve health information and monitoring systems and support evidence-based decision-making. The Secretariat of the Health Metrics Network is hosted by the World Health Organization (WHO), and members include ministries of health and national statistics offices, multilateral agencies, global health partnerships, bilateral donors, and technical experts. HMN members developed the framework with the intention that it serve as "the universally accepted standard for guiding the collection, reporting and use of health information by all developing countries and global agencies" and therefore it is the most appropriate framework to shape this paper.

Figure 1. The HMN Framework



To gather information on MCHIP's experience working to improve MNCH elements of national HMIS, MCHIP conducted a short survey of program staff using survey monkey and including coded and open-ended questions about the scope of country-led HMIS interventions, how the intervention was implemented and the results achieved.

MCHIP's monitoring and evaluation (M&E) team also conducted follow-up interviews with program staff and stakeholders in six countries—Democratic Republic of Congo, India, Nigeria, Mali, Mozambique, and Rwanda. This information was supplemented with information from MCHIP's Annual and Quarterly Reports.

HMIS Strengthening

Following the six components of the health information system as shown in the HMN Framework (Figure 1), below we provide examples of the types and breadth of support MCHIP has provided across 28 countries to strengthen HMIS. Financial, human, and material resources are the foundational inputs required for a strong and functional HMIS. Indicators, data sources, and data management are the processes leading to outputs such as information products and dissemination and use of data (see Figure 2).

Figure 2. Logic model for components of HMIS

HMIS RESOURCES

Strong HMIS systems require a constant flow of resources—human, financial, and material—to establish and maintain effective and efficient services. HMN's Framework describes these resources as ranging from legal and regulatory frameworks, leadership and coordination, financial and human resources, and logistical support to information and communications technology (ICT). HMIS are often inadequately resourced and financed at national and subnational levels in the countries where MCHIP works. Furthermore, when HMIS units are located outside of ministries of health, coordination can be cumbersome. To address this need, MCHIP has supported HMIS resources in numerous ways. Specifically, MCHIP has participated in five international task forces and five national-level working groups that have advanced the measurement of maternal and child health intervention coverage. Moreover, MCHIP has invested in strengthening national-level MNCH M&E in six countries through leadership, support for human resources, and financial support.

At the global level, MCHIP spearheads technical initiatives, captures important lessons from the diverse settings and technical areas within which the project works, and makes them available to the global health community through various fora including technical working groups (TWGs) and task forces. Through the global Integrated Community Case Management of Childhood Illness Task Force, the Interagency FP/HIV Integration Working Group, the Newborn Health Indicators Technical Working Group, the Child Health Epidemiology Reference Group, and the CORE Group, MCHIP has contributed to advancing state of the art measurement including indicator development, M&E guides or tools, and other related efforts. For example, MCHIP has contributed to global HMIS resources and child health monitoring through its role on the Integrated Community Case Management of Childhood Illness (iCCM) Task Force, which is composed of USAID, MCHIP, UNICEF, WHO, and Save the Children. An aspect of the Task Force has been the development of ***CCMCentral.com,*** which is a global center for resources that aims to provide examples of best practices and share tools related to iCCM. MCHIP has been integral in the development of suggested indicators for monitoring implementation of iCCM programs that are included on the website. The site also includes an illustrative results framework supported by a list of benchmarks (standards) across all program components including coordination and policy, costing and financing, human resources, supply chain management, service delivery, communication, supervision, and quality improvement and M&E. Each benchmark has an associated set of global and country-level core indicators suggested for monitoring iCCM, with related definitions, indicator type, data source, and frequency of data collection. Democratic Republic of Congo, Madagascar, and Senegal have uploaded monthly and quarterly M&E reporting form templates to the website in addition to

other resources for countries to use. The indicators will serve as guidance to countries implementing CCM programs. See indicators and other resources at www.CCMcentral.com.

As part of MCHIPs efforts to reduce maternal and newborn mortality in Africa, including Guinea, Liberia, Rwanda, South Sudan, and Zimbabwe, country teams support maternal health or safe motherhood working groups and task forces in these countries. For example, as part of the prevention of postpartum hemorrhage intervention in five countries, the MCHIP team has been involved in working with the Technical Advisory Groups (TAG) consisting of members from ministries of health and various technical partners. The TAG, supported by MCHIP, provides regular updates on the implementation of the intervention, including training, M&E of coverage of the intervention, supervision, and challenges.

At national and state government levels, MCHIP has worked to *strengthen HMIS coordination and leadership* through active participation in national M&E technical working groups and support to ministries of health to develop **national HMIS guidelines**. In Rwanda, MCHIP provided inputs into the *National Routine Data Quality Assessment Guidelines*. Similarly, in Mozambique, project staff contributed to preparation of data management guidelines (*Directrizes para Avaliação Rotineira da Qualidade dos Dados*). In addition to providing information explicitly on the quality of data, the guidelines facilitate assessment of M&E capacity, training needs, indicator definitions, the data collection and managment process, and links with national system. Implementation of national guidelines helps to ensure that data standards are harmonized across programs and that gaps are identified and monitored over time.

Support for *human and financial resources* through the secondment of staff or financial support for staff in countries is another mechanism of MCHIP's support. At national level, in Kenya, MCHIP supported M&E staff at the Division of Reproductive Health to develop a national M&E plan. In South Sudan, MCHIP supports an M&E Advisor who works at the national HIV/AIDS department. At the district level in Rwanda, MCHIP supported data managers at district hospitals offices to support the process of data collection, management, and reporting. MCHIP Rwanda provided financial support for computers, printers, and modems for district-level M&E staff. In both India and Northern Nigeria, MCHIP supported ministries to print and distribute maternal health registers. In the absence of national registers and forms, providers there rely on handwritten ledgers and often do not report to the HMIS on a routine basis, leading to under reporting.

Heightened global attention to MNCH measurement and accountability requires stronger and significant inputs into health management information system. National guidelines signal that governments support and value high-quality data and seek to foster strong HMIS. WHO, among other international agencies, recommends that M&E account for 10% of a program budget. As programs expand, it is critical to ensure that guidelines provide a foundation for *and* adequate human, financial, and material resources support to HMIS as a key component of health programs. Seconding staff, printing registers, and purchasing equipment provide an immediate but not long-term solution to critical financial shortages for HMIS. For sustainable solutions, MCHIP country teams must continue to advocate with host countries for national HMIS guidelines and the dedication of additional resources for HMIS.

INDICATORS

A core set of indicators that draw on those that are globally recommended and standardized and that are relevant and useful for decision-makers at each level of the health systems are a vital component of HMIS. Indicators produced by national HMIS include production and utilization of services, tracking of commodity and stock-out data, morbidity and mortality, and in some cases content and quality of care, which can be used for planning and management. Core health indicators and related data collection strategies must be linked to a broader national statistics strategy and reviewed frequently. To improve routine availability of data on content and quality

of MNCH care, MCHIP has provided global and country-level leadership to formulate, test, and integrate indicators on content and quality of maternal and child health care and has worked to integrate these indicators into national HMIS.

MCHIP was instrumental in forming, supporting, and co-leading a working group, in collaboration with WHO, to advance and achieve the WHO recommendation for a key routine HMIS indicator to capture provision of care to prevent ***postpartum hemorrhage (PPH)***—administration of a uterotonic in the third stage of labor. Given the response of countries to WHO recommendations, this was a critical step toward mainstreaming monitoring of PPH prevention efforts in a standardized way. Currently, the project is collaborating with ministries of health to incorporate the new WHO indicator: *Prophylactic Uterotonic Coverage Indicator: the number of women receiving prophylactic uterotonics during the third stage of labour divided by all women giving birth* into their routine HMIS systems. MCHIP has also worked closely with emergency obstetric and neonatal care (EmONC) clinical trainers to orient providers on M&E for labor and delivery (L&D), including PPH prevention, in clinical training activities.

Helping Babies Breathe (HBB) is an international Global Development Alliance that includes the Laerdal Foundation, American Academy of Pediatrics, USAID, MCHIP, and Save the Children. HBB emphasizes skilled attendance at birth, assessment of every newborn, thermal care, temperature support, stimulation to breathe, and assisted ventilation as needed, all within "The Golden Minute" after birth. MCHIP worked with the Alliance to develop the M&E section of the global HBB Implementation Guide including a list of recommended output and outcome indicators, one of which is *number and percent of babies not breathing at birth who were resuscitated successfully*.

MCHIP is supporting scale-up of the HBB approach in 28 countries, and as a part of this initiative is working to incorporate related output and outcome indicators into routine HMIS systems. To date, in Bangladesh, Malawi, Zambia, Zimbabwe, Colombia, and the Dominican Republic, MCHIP is working with in-country partners to include resuscitation indicators in their routine HMIS systems. Malawi has piloted a collection of the recommended indicators through a supplemental data register in the L&D ward. A similar activity in India, called NSSK, is being scaled up nationally with MCHIP support, including support for M&E. MCHIP will continue to support integrating these indicators as HBB is scaled up and out.

The Every Newborn Action Plan focuses on ensuring accountability for commitments to end preventable newborn deaths. A key aspect of this work is defining a core set of indicators and benchmarks for service delivery to strengthen newborn health information. MCHIP is actively engaged in the Newborn Indicators Interagency Technical Working Group, which developed guidance on routine newborn care indicators. MCHIP also contributed to the measurement section of the Every Newborn Action Plan. These inputs have been shared with UNICEF for incorporation into the Plan.

As new programs, such as cervical cancer prevention and screening, are created and institutionalized, MCHIP works closely with national partners to ensure that systems are in place to capture and report activities. For example, in collaboration with the Mozambican Ministry of Health, MCHIP tested and integrated indicators into the national HMIS following pilot-tests of new registers and data sources. New indicators included the number of first visual inspection with acetic acid (VIA) visits, number of subsequent VIA visits, and number of women treated with cryotherapy. To improve measurement of the content of newborn care, in Mozambique MCHIP aided the Ministry to pilot a new routine indicator on newborn skin-to-skin contact with the mother; this indicator is now included in the national HMIS (see Case Study 4 for more information).

In other countries, MCHIP has worked with national and subnational partners to revise and update indicators. For example, in the Zamfara and Katsina States of Nigeria, a review of the facility-based record keeping and reporting system for maternal and newborn health revealed that the system was inadequate to capture and report many essential indicators including those needed to measure attainment of MDGs 4 and 5. The National HMIS unit retained more than 90% of the indicators MCHIP and partners suggested in the national HMIS system that will be rolled out in the country soon.

Scaling up high-impact interventions without adequate measurement limits the extent of information that national governments have regarding the adequacy of the content and quality of MNCH outcomes. MCHIP's role in summarizing global experiences and advocacy for best practices has led to consensus on and promotion of indicators to monitor evidence-based MNCH interventions.

DATA SOURCES

The Health Metrics Network framework delineates two overarching categories of health information data sources: *population-based sources* (such as, censuses, civil registration, and household surveys) and institution-based *routine data sources* for example, individual records such as antenatal care (ANC) client cards; service records such as maternity registers; and resource records, such as commodity/stock cards). Institution-based routine health data sources generate data about services delivered, drugs and commodities stock and provision, information on the availability and quality of services, case reporting, and human, financial, and logistics information. Of primary interest to MCHIP are clinical and community service delivery data, which are recorded on individual client clinical records, summarized into cross-sectional or longitudinal registers that are used to generate monthly or quarterly summary reports, and aggregated into facility, subnational, and national data sets.

Throughout the life of the project, MCHIP has contributed to the introduction of institution-based data sources for new health programs such as cervical cancer in three countries. In Mali, MCHIP has worked with the Ministry to develop an M&E system for a new cadre of community health workers (see Case Study 1). MCHP has also collaborated with ministries in 14 countries to pilot initiatives aimed at providing clients with integrated MNCH services to address their urgent health needs. Finally, MCHIP has worked with ministries in four countries to enhance existing registers and data collection tools to enable the capture of key indicators and improve ability of these systems to generate date for decision-making.

Integration of new health program data into HMIS. MCHIP provided technical assistance to establish and scale up cervical cancer prevention programs in Guyana, Kenya, and Mozambique. As part of this work, MCHIP developed a register to track demographics and results of the single visit approach (SVA) to screening and managing cervical cancer and, where feasible, such as the case in Mozambique, integrated data elements with family planning (FP) recording and reporting tools. In Mozambique, from January to September 2012, MCHIP assisted the MOH to more than quadruple the number of health facilities offering integrated cervical cancer prevention (CECAP)/FP services from 17 to 75. MCHIP supported the Ministry of Health to ensure that each facility was provided with a register and that health care personnel were trained in documenting CECAP and using data for program and quality improvement. In Mali, MCHIP's support facilitated the introduction of community-based data into the national HMIS in Mali following introduction of a new cadre of community health workers into the health system (see Case Study 1).

Piloting tools for innovative programs. MCHIP is also involved in piloting and testing of new registers or incorporating innovative programs into existing systems. In India, the postpartum IUD (PPIUD) has been successfully introduced and scaled up in more than 20 states. A PPIUD

register and follow-up system was incorporated in the routine data collection system to monitor number of births, FP counseling and services, and PPIUD-related indicators including insertion type, follow-up, and complications. A similar system has been introduced into 10 health facilities in the Philippines. In support of PPH prevention pilot activities, data elements related to misoprostol distribution have been incorporated into ANC registers for Bangladesh, South Sudan, Liberia, and Guinea.

Malawi has a high tuberculosis (TB) burden and there is high TB/HIV co-infection. National guidelines promote universal testing for HIV in ANC, yet screening for TB among pregnant mothers is not routine and there is a risk of postnatal exposure of babies born to mothers with TB. Therefore, MCHIP tested the integration of TB with MNCH services in high TB incidence settings, with particular emphasis on intensified case finding. The pilot initiative of TB integration into focused antenatal care (FANC) began in six facilities in Karonga District, Malawi. A FANC/TB suspect register was developed by the MOH and partners and will be used in the pilot sites. The goal of the TB/FANC pilot program was to enhance active TB case finding among women accessing ANC services by 50% and improve maternal and neonatal health outcomes.

In Nepal, an MCHIP-funded study on the acceptability and preference for different forms of calcium supplements led to a decision by the MOH to implement a single district pilot-test of calcium supplementation for the prevention of pre-eclampsia, a leading cause of maternal death in Nepal. For the pilot, the team developed a facility-based register to track distribution of calcium to pregnant women. Community-based distribution of calcium was also tracked through a modified community-health volunteer register and reporting form. Female community health volunteers (FCHVs) track each pregnant woman in their catchment area. The register is pictorial in nature because most FCHVs are illiterate or semi-literate. At the end of the pregnancy and completion of the postnatal checkups, the form is "closed" and submitted to the supervisor, a health facility staff in their catchment area. The existing register has been revised and will be reprinted to include: 1) the number of bottles of calcium tablets received (0, 1, 2, or 3); and 2) the number of bottles of calcium tablets consumed (0, 1, 2, or 3).

Several countries supporting newborn care activities, including Dominican Republic, Rwanda, Nigeria, and Zimbabwe, introduced registers at kangaroo mother care (KMC) demonstration sites. These registers enable providers to monitor the number of newborns receiving KMC, the proportion of eligible newborns receiving KMC, and the number and proportion of deaths among KMC babies. Prior to the introduction of these registers, KMC units used ad hoc registers to record information about mothers and their low birth weight newborns. With these registers in place, facilities can now report on the number of low birth weight babies receiving KMC services into the HMIS.

In Liberia, MCHIP collaborated with the Liberian Ministry of Health and Social Welfare to implement a pilot initiative focused on integration of FP with immunization services in two counties—Bong and Lofa. In this pilot, monthly trends both for immunization (number of doses of DTP1 and DTP3 administered, which are standard EPI indicators) and for number of new contraceptive users were tracked and aggregated (to measure the effect of integration). A supplemental EPI/FP register was used for data collection during the pilot phase. This has given a broad index for assessing progress and pointing out where action is needed.

Strengthening existing data sources. MCHIP has also been engaged in revising existing facility- and community-based data sources to include new advances in MNCH and address gaps and facility data flow and use. For example, in Nigeria, MCHIP partnered with the Partnership for Reviving Routine Immunization in Northern Nigeria (PRRINN) program in two states (Zamfara and Katsina) and held a series of stakeholder meetings to discuss strengthening ANC and L&D registers, including adding indicators on reporting forms and establishing a routine process for

monthly data review. With the revised registers, it is now possible to capture indicators such as delivery with skilled birth attendants, use of active management of the third stage of labor, use of the partograph, essential newborn care, and the number of women receiving services for malaria in pregnancy. Job aids and training were provided to health facility staff in the antenatal care clinic and maternity to promote proper use of the tools. All implementing partners working in Nigeria now use the revised registers and reporting form including TSHIPS (Targeted States High Impact Project) in Bauchi and Sokoto States.

In 2013, MCHIP/Malawi has been engaged in the revision of facility-based tools such as the under-one register, child health passport, monthly reporting forms for performance and vaccine stocks, immunization tally sheets, temperature monitoring charts, health facility stock book, and vaccine arrival reports. MCHIP provided support to the Democratic Republic of Congo MOH to update national norms and standards related to maternal and newborn care. These updates were operationalized in tools such as the antenatal register, antenatal card, delivery register, integrated partograph, postnatal register, and register for the community health workers. MCHIP worked closely with other implementing partners to pre-test the data collection tools in three USAID-supported health zones as well as two maternal hospitals in Kinshasa. The tools were revised based on pre-test results in December 2010, and validated after a consensus-building workshop in January 2011. These tools are now being used in all health facilities. In Guinea, to improve data collection on FP and maternal and child health services, MCHIP developed improved data collection forms and trained 242 facility in-charge and community health supervisors (for new community and child health activities) to use the tools. In Zimbabwe, MCHIP provided technical and financial support to the Ministry of Health and Child Welfare (MOHCW) in its efforts to improve child health. In June 2012, the MOHCW officially launched a lifesaving vaccine (Pneumococcal Conjugate Vaccine 12, or PCV 12) as well as a Child Health Card (CHC). The updated CHC, used by health workers and caregivers for monitoring children's growth and other key health milestones, is more integrated and now includes Zimbabwe's new immunization schedule and contains updated information on infant and young child feeding practices, effective treatment of diarrhea, and new growth charts to monitor for conditions like childhood stunting. MCHIP provided substantial technical assistance for the review, revision, and field-testing of this tool.

Revision of recording and reporting tools can be a lengthy and iterative process including numerous stakeholder meetings to ensure adequate revisions and buy-in among key stakeholders. However, as evidence-based interventions are scaled up, revisions to HMIS are necessary to ensure that accurate data are available to assess the quality and coverage of interventions. In 17 countries in three regions and across the continuum of maternal, newborn and child health, MCHIP has contributed significantly to strengthening facility- and community-based reporting systems. During these endeavors, MCHIP teams remain mindful of the workload of overstretched health care workers and the sheer volume of indicators and the burden of reporting and strive to improve existing systems rather than introduce parallel systems.

Case Study 1: Introducing Community-Based Data into the National Health Management Information System in Mali

Since the fall of 2010, MCHIP has been working at the national, regional, and district levels in Mali to increase access to and availability of evidence-based MNCH/FP interventions at the community level. Community health services in Mali are currently delivered through a decentralized network of almost 900 primary health care clinics (Centres de Santé Communautaire, CSCOMs), which are owned and operated by community health management associations (ASACOs) that oversee the day-to-day management of the CSCOM and its links with the community. In recent years, the MOH, with support from various partners including MCHIP, has developed a new community health worker strategy to increase the utilization and coverage of evidence-based, high-impact maternal and child health services at the community level.
The national essential community package (SEC) is delivered by a new cadre of "salaried" community health workers (Agents de Santé Communautaire or ASC) to extend simple preventive and curative services into communities located greater than five kilometers distant from a CSCOM. This package addresses the treatment of uncomplicated malaria and acute respiratory infections (ARIs), referral and accompaniment of severe cases of malaria and ARI, treatment of diarrhea, diagnosis and management of malnutrition, essential newborn care, and provision of family planning. The family planning component includes encouraging newly delivered mothers to exclusively breastfeed, use the lactational amenorrhea method (LAM) and timely transition to other FP methods by providing community-based distribution of pills, condoms, and injectable contraception (Depo-Provera). The ASCs also provide behavior change communication (BCC) messaging to promote high-impact household practices, including use of skilled birth attendance, supervise relais (volunteer community health workers), and collect routine data. With the introduction of this new cadre of health workers providing services at the community level, a system and tools for the collection and reporting of routine data needed to be developed.

At the national level, MCHIP provides technical leadership among SEC implementing partners via the Focal Points Group to address issues such as training curriculum, supervision, and commodity availability to ensure effective and efficient implementation of the SEC strategy in communities. Beginning in 2011, the Government of Mali, in collaboration with the Focal Points Group, engaged in significant efforts for the development of standardized routine data collection at the community level. As Secretariat of the Focal Points Group, MCHIP facilitated the standardization of reporting protocols and tools, identification of an approach for data use for decision-making, and identification of community-based indicators for inclusion into the national HMIS. In 2012, the Government of Mali held a national workshop to validate the reporting protocol, data collection tools, and indicators to be fed up to the national HMIS. Following are examples of community-based indicators now included in the national HMIS: *number of newborns who have received home-based postnatal care within 3 days of birth; and number of children under 5 seeking treatment at CSComs who were referred by ASCs.* After validation of the indicators, MCHIP has been supporting the rollout of this reporting system and tools in the seven districts where MCHIP directly supports the implementation of the SEC. At the regional and district levels, MCHIP conducts trainings for ASCs, their supervisors, and staff at the district and regional directorates of health on the newly validated reporting protocol and tools. Recent data quality checks have identified the need for refresher trainings and skills-building in record-keeping and data use. MCHIP is currently providing refresher trainings and skills-building sessions for the 426 ASCs and their supervisors in MCHIP districts.

Mali is now one of the few countries in the developing world that is systematically collecting health data at the community-level. While it is an impressive accomplishment, there are still challenges from which lessons can be learned. These challenges include:

- The sheer number of data collection tools/registers to be completed by the CHW;
- Delay in data submission from community health workers to the community health centers, which leads to lack of inclusion in quarterly reports sent to the district level;
- Lack of analysis and use of data at the district, community health center, and community health worker levels.

DATA MANAGEMENT

Data management procedures and guidelines are crucial in ensuring that information systems produce the desired results. According to HMN, "data management is important to get best collection and includes supporting storage, quality-assurance, processing and compilation." MCHIP has made contributions to data management, data quality assessments, and strengthening of data flow and aggregation for both facility and community-based programs in seven countries, and built the capacity of health care workers to use HMIS tools correctly and consistently in seven countries.

"Before the project intervention commenced in 2006, most of us including the record officers have never attended any training on record keeping. It was through the MCHIP that we were trained on the importance of record keeping and introduced to quality of good data."

- Nurse, Gezawa General Hospital, Kano State, Nigeria

In many countries, health care workers are not adequately trained in M&E or do not receive training on newly rolled out tools in a timely manner. In Ghana, MCHIP learned through its assessment of pre-service midwifery education that data on FP methods accepted by clients during ANC, L&D, and the immediate postpartum period are not systematically captured in the facility registers. MCHIP has incorporated information on using the client record and registers to improve tracking of FP results and cultivate use of data for program monitoring into the training of midwifery tutors, preceptors, and students. MCHIP Nigeria staff provided health care workers and State MOH officials training on record keeping, introduced job aids to facilitate accurate reporting, coordinated monthly data collation meetings, and monitoring data quality. As a result of this training, providers are now able to report correctly on indicators, corrected under reporting on some interventions, and facilitated the use of data for program improvement.

In Rwanda, Guinea, Liberia, Mozambique, and India, MCHIP worked with MOHs in developing Routine Data Quality Assessment (RDQA) guidelines, training providers and program managers in RDQA methods, and conducting data quality assessments using the RDQA tool developed by MEASURE Evaluation. Results of RDQA are used as a basis for M&E capacity-building action plans for health care providers and district managers. Further, RDQA findings contribute to improvement of data accuracy, completeness, and management. (See Case Study 2 for more information on Rwanda DQA experience.)

Case Study 2: Assessing MNCH Data Quality in Rwanda

In support of the Ministry of Health strategy to improve data quality, MCHIP Rwanda provided technical and financial support to the Ministry to review HMIS indicators, identify and address data management and quality gaps, and monitor improvement over time. To this end, in 2011 MCHIP initiated a joint RDQA assessment involving FP/reproductive health and HMIS working groups in 13 districts. The team randomly selected 46 health facilities to assess the quality of eight reportable indicators: four facility and four community indicators.

The results of the RDQA document high levels of discrepancy between source documents (registers) and data recorded in monthly summary forms for three of four facility-based indicators. For three indicators, the monthly reports significantly overestimated the data MCHIP recounted in the registers. Among community-based indicators, the consistency between source documents and monthly summary was accurate for three of four indicators assessed.

The RDQA assessment revealed gaps in registers and data management errors. Registers were incomplete, unavailable, or missing variables to adequately capture indicator data selected for RDQA. For example, types of FP methods are missing for FP methods distributed; iron folate was missing from ANC national registers but available in the hand-drafted register. Issues relating to data management include inaccurate summing, double counting, incomplete data, and use of estimates instead of actual counts for certain indicators. The information, education and communication (IEC)/BCC register was available only in 12 sites and of those, five were empty or incomplete.

The results from the RDQA assessment in Rwanda led the Ministry and its partners to identify clear definitions for poorly understood indicators and make revisions in the HMIS registers and reporting forms. Additionally, health facility staff received orientation on a data accuracy checklist to ensure that data quality is assessed on a continuous basis. The RDQA was repeated after six months and showed improvements in data accuracy, completeness, and management. In Rwanda, the RDQA tool has been adopted as a quarterly routine supervisory tool.

Incorporating HMIS strengthening activities into routine supportive supervision checklists and processes provides a key entry point for HMIS strengthening activities. Thanks to the breadth of MCHIP activities across numerous technical areas including MNCH, project teams are uniquely positioned to routinely assess recording and reporting strengths and weaknesses. Information on gaps can be used by national and international partners to advocate for capacity-building activities for facility, district, and regional teams. This is particularly important in settings where government policies mandate that health care providers be regularly moved between points of service within a facility or between facilities. Finally, the heightened attention to measurement and accountability at the country level provides a strong argument to incorporate data management processes and routine data quality assessments into national guidelines. Together, these strategies will foster improvements in data management,

which will ultimately lead to better quality of the data needed for program management, improvement, and evaluation.

Information products

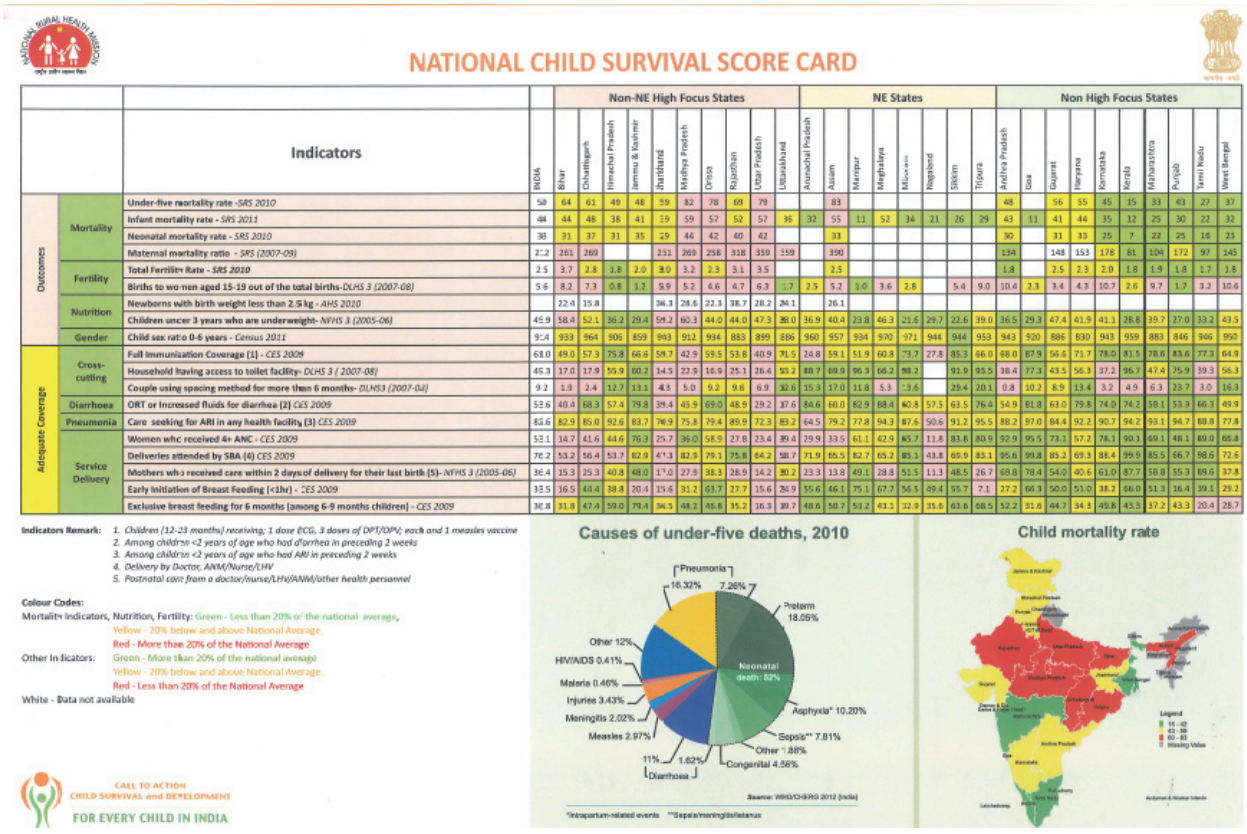
"The point of a health information system is not just to generate high-quality data and hope that it will be used, but to convert it into credible and compelling evidence that informs local health system decision-making. High-quality data stored in a well-structured repository is of little value if it cannot be accessed by users to generate information for decision-making."
- HMN Framework

Information products targeted toward the data use needs of service providers assist in data analysis and dissemination and facilitate decision-making. At the national level, information products such as annual reports and dashboards help program managers assess program coverage, quality, and gaps. At the facility and community levels, these products can be motivating for providers and contribute to improved service delivery outcomes. With MCHIP's technical assistance, innovative information products have been introduced in 12 countries, leading to routine use of data for program monitoring and planning.

In India, Kenya, Tanzania, and Zimbabwe, MCHIP's immunization team is providing technical assistance to national and subnational levels to improve data quality and data management to support Annual Immunization Program Reviews. Project staff work with health facility, district, regional, or national stakeholders to review and analyze immunization data, discuss and analyze findings, and use the coverage data to feed into subsequent years' planning. These data are also combined into annual coverage data that feed into joint reporting forms to WHO and UNICEF (*Immunization Summary, A Statistic Reference containing data through 2010.*) In Uganda, MCHIP supports data verification for the quarterly publication of the "EPI Newspaper pullout" showing all district performance in EPI based on data sent to the MOH through DHIS2. Prior to publication, data from MOH Resource Center-DHIS 2 have to be verified by a team of MOH staff going to selected districts to compare the data in the DHIS2 with what the district has; discrepancies are corrected and data harmonized. MCHIP supports the MOH Resource Center to conduct this process quarterly for EPI data. Once data are verified, MOH approves publication of these data.

The need for relevant, accurate, and timely data to facilitate improved operational planning and monitoring and evidence-based policy formulation is well-recognized. Dashboards provide visual display of key performance indicators, often on a single page that enable instantaneous and informed decisions. Online dashboards have an added advantage of showing real-time status and historical trends. Dashboards can also allow the user to focus on the meaning of data easily, thereby increasing use of data. In India, MCHIP supported the development of a scorecard and dashboard as part of the Promise Renewed Call to Action. The dashboard uses data from the HMIS Web Portal as reported by states (see Figure 3).

Figure 3. Example of India's National Child Survival Score Card



Many countries that MCHIP supports, including Ghana, Liberia, Kenya, Rwanda, Uganda, Zambia, and India, among others, use the open-source software DHIS2 as their primary HMIS. DHIS2 includes real-time dashboards to visualize data on a range of outputs and service delivery indicators. In 2008, the Government of India initiated DHIS2 as a web-based HMIS and presently all 35 states and union territories (642 districts) upload health related data. The HMIS-based dashboard monitoring system seeks to improve accountability in the public health system and catalyze states into using the HMIS data for improved decision-making. The dashboard is based on the principle of promoting data for decision-making and allows states and districts to be ranked based on the selected indicators. This comparative analysis of state and district performance in terms of service delivery "dashboard" indicators would be carried out on a quarterly and annual basis. MCHIP teams are involved in facilitating data entry, data verification, and the use of data in DHIS2 national systems.

User-friendly information products have improved data visualization and use of data. This has empowered health workers to know more about their services and how they are contributing to improved service delivery. Information products can convey quickly and concisely a sense of progress toward defined targets. Quick visualization of data can lead to quicker action, increased accountability, and revitalization of commitments to improve health outcomes. Scorecards at national, district, and program levels and other user-friendly information products will contribute to distilling key data from the HMIS (and other sources) to examine data quality issues, assess program performance, and inform program improvement.

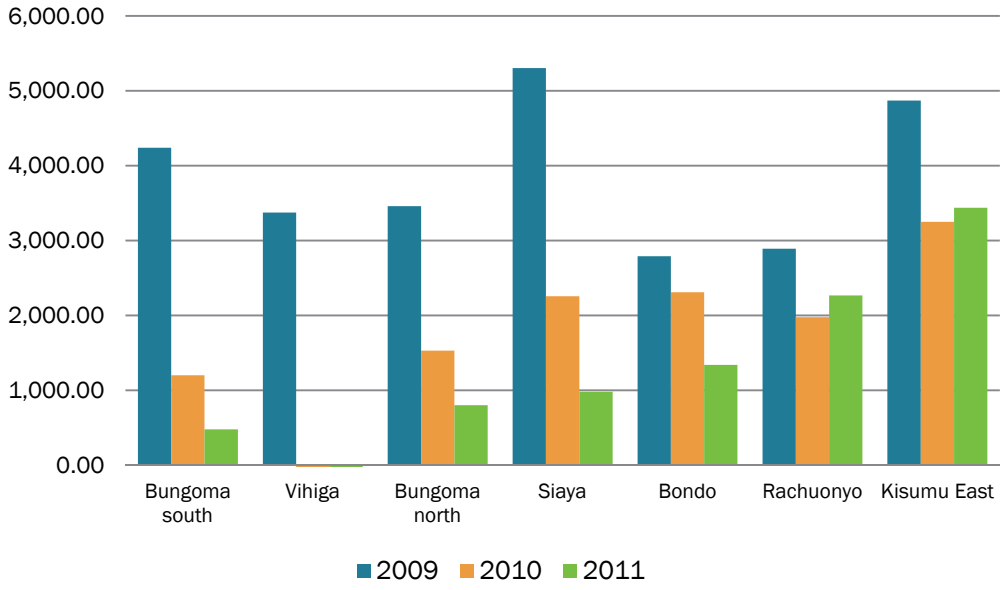
DISSEMINATION AND USE

Data generated by national HMIS are often under-utilized due to real or perceived problems of poor data quality and late submission. MCHIP strongly believes that comprehensive, rigorous, relevant, and timely data are essential for performance improvement and improve the overall

health of communities. The M&E team at MCHIP has worked with 11 national HMIS teams and partners to determine the most promising data dissemination and use tools and standards for their application in the country health system. These approaches have led to evidence-based supportive supervision, increased use of data for program planning and quality improvement, and ultimately to improvements in health outcomes.

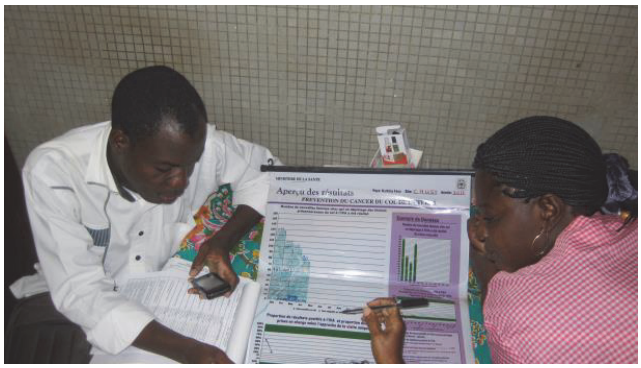
Within immunization programs, MCHIP has implemented tools such as Regular Appraisal of Performance of Immunization in District (RAPID) and Reaching Every District (RED) in various countries including, India, Kyrgyzstan, Senegal, Tajikistan, Tanzania, Timor-Leste, and Ukraine. These tools help facilitate planning and data use and at the same time help in strengthening routine immunization services. In India, use of the RAPID tool led to an increase of 15.2 percentage points in fully immunized children, and Oral Polio Vaccine-0 (OPV-0) and Bacille de Calmette et Guérin (BCG) coverage increased from 36 to 86% and 32 to 66% in focus districts of Jharkhand and Uttar Pradesh respectively from January 2011 to January 2012. (See Case Study 3 for using data RAPID in India.)

Figure 4. Numbers of unvaccinated children based on measles vaccination coverage, Kenya



RED is a strategy of building district capacity to address common obstacles to increasing immunization coverage, with a focus on planning and monitoring and using HMIS data. Developing a district micro-plan is the key product of the RED strategy. It is based on local situation analysis involving every health facility and community the facility serves. There are five main components of RED: 1) planning for outreach services; 2) on-site training and problem solving through supportive supervision; 3) involving the community with the planning and delivery of the service; 4) monitoring and use of data for action; and, 5) planning and management of resources. The approach focuses on monitoring and use of HMIS data for action, implying not only timely collection of data at district level, but the use of data to solve problems. The use of simple tools such as wall charts that display access and utilization are very useful to guide action according to monthly progress. RED utilizes HMIS data on coverage of vaccines and combines it with other information, including logistics, supply, and surveillance, for planning and helping to improve the immunization system. In Kenya, this approach has led to impressive reductions in the number of unvaccinated children in four of seven districts between 2009 and 2011 (see Figure 4).

In Guyana, MCHIP introduced a results poster to help track program achievements against targets for key utilization and performance indicators at cervical cancer screening and treatment (CECAP) service delivery sites. MCHIP worked with the Georgetown Public Hospital Corporation and the (MOH and achieved nearly national coverage with cervical cancer screening services for HIV-positive women supporting 18 service delivery sites in nine of the 10 regions of the country and screening 95% of the women enrolled in HIV care and treatment. Over the 42-month period, 85% of the women screened for cervical cancer and found to have precancerous lesions and be eligible for cryotherapy treatment received it on the same day as the screening.

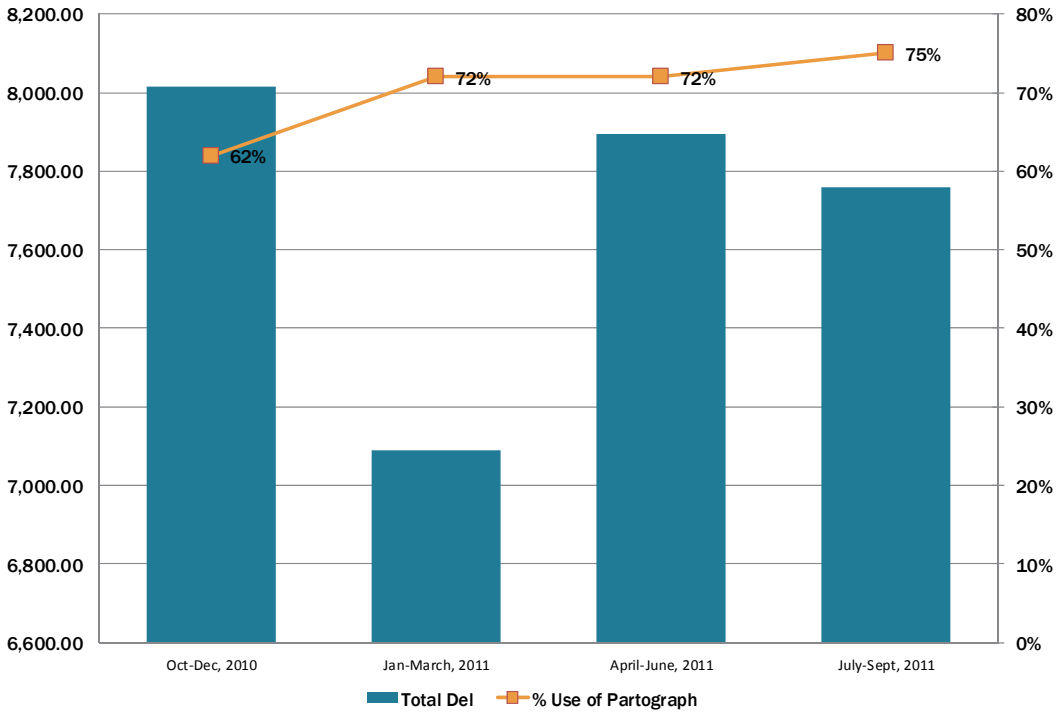


Health care providers in Guyana using the CECAP Result Posters to monitor trends in service provision

A poster summarizing the results of CECAP service delivery was introduced in each facility. The poster was mounted on the wall and visually displayed the key indicators of the project including the number of new cervical cancer screenings per month, precancerous lesion detection rate, single visit approach rate, and achievement of performance standards related to provider performance, data management, and equipment and supplies. Providers expressed pride in the achievements displayed on the charts. The posters also helped providers visualize their targets and achievement against the targets, which were charted over time. Medical extension nurses (Medex), who supported the sites with technical assistance (TA), found the posters a useful management tool to identify where to provide more intensive TA, especially related to the elements that affected a site's capacity to provide screening and treatment on the same day. If the rate dropped, the Medex was able to identify gaps in availability of providers for screening and treatment, additional training needs, stock-outs of supplies or equipment, or malfunctioning treatment equipment. Use of the posters was maintained in approximately 80% of facilities on a monthly basis. *Most important, an increase in the SVA rate was noted after the poster was introduced.* Furthermore, CECAP work was supported by performance monitoring using dashboards of key indicators that included automatically generated tables and graphs in Excel spreadsheets. Medex, the key provider of TA, would review these dashboards to further prioritize sites needing additional support and to direct recognition of achievements.

MCHIP has supported national MOHs to incorporate data review and use into planning at various levels of the health system. MCHIP supports annual technical meetings, summits, and annual program review in Mozambique utilizing data provided by the HMIS as part of the national support to strengthening health systems. (See Case Study 4 for details how data use in an integral aspect of the Mozambique success story.) Similarly, in Nigeria, MCHIP supports data review meetings on a monthly basis at health facility level. The meetings provide the opportunity for staff to finalize available data, review performance, and plan for next steps. For example, one of the gaps noted during the meetings was inconsistent use of the partograph to monitor labor. Several strategies were identified to increase partograph use, including building skills and capacity of providers to use the partograph; provision of the partograph to hospitals through production of maternal and newborn record booklets, and supportive supervision and orientation to data for decision-making. As a result, partograph use increased by 13%—from 62% in October 2010 to 75% in September 2011 (see Figure 5). These meetings have also resulted in increased timeliness of health facility reporting to state HMIS; up from 65% in 2008 to 71% in 2011.

Figure 5. Proportion of deliveries in which partograph was used in MCHIP-supported general hospitals in Kano, Nigeria (FY11)



In Timor-Leste, MCHIP has introduced the "my village is my home" tool for routine monitoring. The tool is used at the community level and tracks the name of every child in the village and the date when vaccine was provided. During outreach sessions, the tool helps health facility staff to monitor and identify which child has not received the vaccine on time. The tool also helps the community keep track of the vaccination status of children in their community.

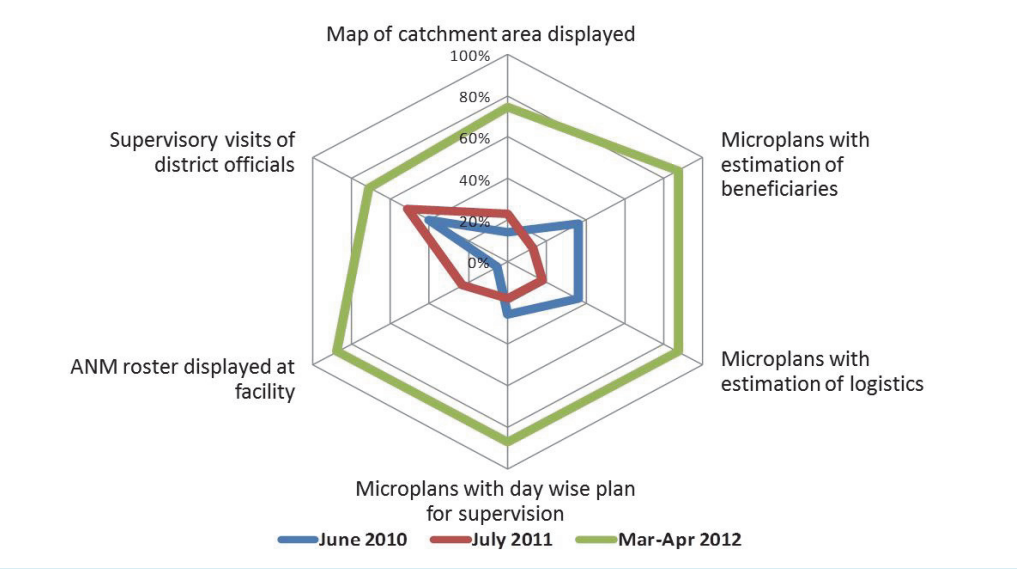
The use of data to inform program planning, evaluation, and program improvement is the ultimate goal of a well-functioning HMIS system. MCHIP has developed or scaled up innovative approaches for increasing the use of data for decision-making across the continuum of the project management cycle. The examples above show that MCHIP has successfully incorporated numerous strategies to improve the use of data. From simple tools for health care providers (such as results posters) to more sophisticated tools for supervisors (such as RED and RAPID) to dedicated meetings to review data on a routine basis, MCHIP has assisted 11 countries to explore unique approaches to using data, improve the quality of services provided to clients, and expand coverage of key intervention.

Case Study 3: Immunization Performance Improvement through Data Use and Supervision in India

In collaboration with the Ministry of Health & Family Welfare, India, MCHIP is strengthening supportive supervision for its Universal Immunization Program. As part of this work, MCHIP adopted the tool RAPID, or Regular Appraisal of Performance of Immunization in District (RAPID) developed by BASICS. RAPID is a unique approach to assist staff in analyzing and reviewing data at the source. During supportive supervision visits to health facilities, data from registers and records are abstracted and entered into a pre-programmed Excel spreadsheet. This tool automatically calculates levels of DPT3 and DPT1 immunizations and drop-out rates and summarizes other aspects of program performance. Using RAPID, integrated with TA, has been essential to improving performance in India.

Results demonstrate the effectiveness of this approach: there was an increase of 15.2 percentage points in Fully Immunized Children (MCHIP CES, 2010 and 2011, Jharkhand), and OPV-0 and BCG coverage increased from 36 to 86% and 32 to 66% in focus districts of Jharkhand and Uttar Pradesh, respectively, between January 2011 and January 2012 (HMIS, Government of India). These results have led to the government's decision to expand the use of RAPID within all districts in Jharkhand. In Uttar Pradesh, RAPID is being implemented in 32 of 75 districts by the government with UNICEF support, with plans for further scale-up in additional districts. In an effort to achieve scale-up of RAPID at the national level, MCHIP has shared this approach with the national level, and the Government of India has approved the state's plan to conduct supportive supervision, using RAPID, on a regular basis along with the budget to conduct such visits.

Figure 6. Snapshot of result from RAPID tool



Case Study 4: Putting In All Together: MCHIP Helps Strengthen Mozambique's National Health Information System to Monitor the Quality of Maternal and Newborn Health and Cervical Cancer Prevention

When MCHIP began working in Mozambique in 2009 on maternal and newborn health (MNH) and cervical cancer prevention (CECAP), there was a paucity of data on the quality of MNH care available through HMIS and no routine data on cervical cancer prevention. With the Director of Health Information position vacant for more than a year and no one working in the Department of Monitoring & Evaluation, the Government turned to USAID and the Centers for Disease Control and Prevention (CDC) and their implementing partners to assist in the process of strengthening HMIS to reflect new advances in service delivery and quality improvement approaches. As a part of this effort, MCHIP supports three Ministry of Health M&E staff.

In close collaboration with technical teams, the head of the non-communicable diseases unit and the FP department (CECAP), the Department of MCH, and Department of Health Information, within the Directorate of Planning and Cooperation, MCHIP designed and tested numerous ***indicators and data sources***. Initially, as part of the Model Maternities Initiative in 34 high-volume health facilities, MCHIP worked with the MOH to establish a temporary system to track ***six key MNH indicators.*** The MNH indicators and data sources were included in the updated maternity register, integrating what was previously five separate registers into one, which summarized L&D, the prevention of mother-to-child transmission of HIV), sexually transmitted infections, and newborn health. The ***three CECAP indicators*** were created and data elements were integrated with family planning data collection tools, including the woman's health passport, family planning register, and facility monthly summary report, in addition to a daily summary form to track CECAP services. Detailed instructions and definitions were also prepared as a part of the tools. MCHIP also worked closely with CDC to support the MOH in updating the HMIS, including joint site visits to review the results of the initial temporary data collection period, joint meetings to review and integrate indicators, and numerous meetings to finalize the registers and plans for reproduction. The process of designing the tools and forms took about 18 months for MNH, given the scope, while the design of the forms and reports for the CECAP indicators took about 5 months.

Table 1. Indicators integrated into the HMIS with MCHIP support

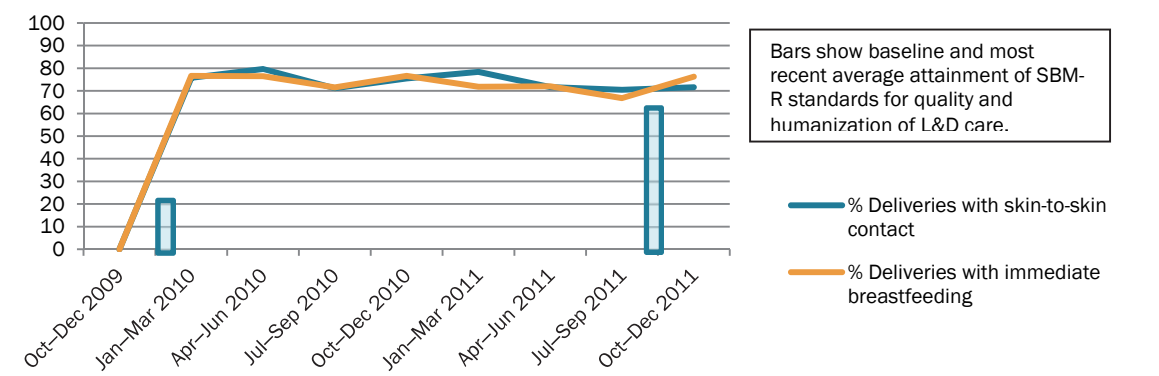
CECAP	MNH
▪ Number of first VIA visits ▪ Number of subsequent VIA visits ▪ Number of women treated with cryotherapy (same day and postponed)	▪ Number of births with use of AMTSL ▪ Number of births in which woman had a companion at birth ▪ Number of cases of severe pre-eclampsia/eclampsia with magnesium sulfate use ▪ Number of births with partograph completely filled out ▪ Number of deliveries with skin-to-skin contact ▪ Number of deliveries with immediate breastfeeding

After designing, testing, and revising the tools in health facilities, all tools and instructions were submitted to the Department of Health Information and Director of Planning and Cooperation for review and approval. Once approved, MCHIP sponsored printing and distribution of the new tools along with training stakeholders on the use of the tools and ***data management procedures***. The MOH rolled out the revised MNH M&E systems nationally in January 2012.

In November 2012, MCHIP conducted a rapid assessment of the use of the new MNH and CECAP tools. This assessment highlighted gaps in the flow of data as well as some new required updates to the data elements collected. As a result, MCHIP has worked with the MOH to make the necessary revisions to the tools and will continue to provide technical assistance and supervision to health facility staff to use the new tools correctly.

The MOH and MCHIP are ***using data*** from the eight MNH indicators to correlate quality improvement processes with health outcomes as part of the Model Maternities Initiative. Data trends are analyzed together with results of Standards-Based Management and Recognition (SBM-R®) applications to show progress in quality of care. For example, Figure 7 shows the baseline and follow-up SBM-R results and indicators for newborn care (skin-to-skin contact and immediate breastfeeding), which have demonstrated large, rapid, and sustained gains. HMIS data are analyzed quarterly and compared to the latest SBM-R achievements. MCHIP and other implementing partners are working with the MOH to continue to strengthen quality improvement processes and help to establish a national quality standards database to strengthen national quality monitoring.

Figure 7: Evolution of key newborn care indicators, Quarter 4 2009–Quarter 4 2011



MCHIP/Mozambique's HMIS strengthening accomplishments were achieved through close collaboration and constant communication with the MOH and other partners. This approach helped ensure that tools were designed in a way that balanced the information needs with usability by the health providers. It was fortunate that this work dovetailed with the MOH's plans to update the HMIS, which reaped benefits to improve the availability of data on content and quality of MNH and CECAP services.

Conclusions, Recommendations, Future Directions

As part of it its efforts to improve the quality of MNCH care in low-income countries, MCHIP has taken specific steps to improve the monitoring of MNCH services through strengthening routine HMIS. These efforts have led to better M&E, higher-quality data, and informed decision-making in 28 countries across MNCH interventions. Ongoing efforts to improve HMIS will increase country and global access to information-rich systems to support MNCH program strengthening.

During health sector planning at national and subnational levels, close attention and advocacy are needed to ensure that adequate financial resources—10% of the total budget—are dedicated to supporting HMIS. These resources are crucial to ensuring that requisite tools, such as clinical records, registers, summary reports, and job aids, are available to frontline health workers so that complete data can be summarized at higher levels. Institutionalizing HMIS strengthening with national data management and data quality guidelines formalizes commitment to HMIS and health system strengthening.

While there have been advances in standardizing indicators monitored through HMIS, emphasis should increasingly be placed on data on quality and content of care in addition to production and utilization of data. Efforts to reach consensus on a minimum set of indicators, particularly for maternal health, should be continued and expanded to ensure that at least minimal data on quality of care are monitored through HMIS for all high-priority MNCH service delivery. A minimum data set will require a critical examination of not only what is missing but also what is currently in HMIS that is duplicative, obsolete, or is not being effectively captured.

Where needed, training and technical assistance should be deployed to improve competency in documentation of health services, analysis, data use, data quality improvement, and reporting. Incorporating HMIS strengthening activities into routine supportive supervision checklists and processes provides a key entry point for HMIS strengthening activities by highlighting the importance of good quality data needed for program management improvement and by identifying where additional capacity-building efforts are needed. HMIS strengthening should also leverage existing efforts to improve efficiency and reach of routine data collection, analysis and reporting systems through mHealth and information and communications technology (ICT).

Coordination between technical/ clinical teams, the M&E unit, and HMIS actors plays a critical role in ensuring successful integration of key indicators of content and quality of care. Explicit objectives related to HMIS strengthening and capacity building must be included in plans to focus attention on the importance of HMIS in a way that is fully integrated into programs from the outset.

As the MDG final evaluation nears, it is important to acknowledge the role of surveys to measure changes over time but also recognize that routine HMIS provide more frequent measurement to inform efforts for improving care and health outcomes. Successful integration of key indicators of MNCH quality and content of care depends on local ownership, processes that are driven by key actors in the local context, and champions who can lead the effort and persist in the face of challenges and multiple competing priorities. Continued and improved use of ICT to strengthen data availability, quality, analysis, and use plays a critical role in maximizing the potential of HMIS. HMIS continue to be a key data source, available in shorter intervals than other data sources such as surveys, to provide important information about health system management.

References

Boerma JT and Stansfield SK. 2007. Health statistics now: Are we making the right investments? *Lancet* 369: 779–786.

Necochea E and Bossemeyer D. 2005. *Standards-Based Management and Recognition: A Field Guide.* Baltimore, Maryland: Jhpiego Corporation: Baltimore, MD.

MEASURE Evaluation SPECIAL REPORT. 2012. *Improving Data Use in Decision Making: An Intervention to Strengthen Health Systems.* MEASURE Evaluation: Chapel Hill, NC.

MEASURE Evaluation. 2012. *Data Demand and Use: An Introduction to Concepts and Tools.* MEASURE Evaluation: Chapel Hill, NC.

MEASURE Evaluation. 2009. *PRISM: Performance of Routine Information System Management.* MEASURE Evaluation: Chapel Hill, NC.

World Health Organization/Health Metrics Network. 2008. *Framework and Standards for Country Health Information Systems*, 2nd Edition. World Health Organization: Geneva.

MEASURE Evaluation SPECIAL REPORT. 2012. *How Can Routine Health Information Systems Improve Health Systems Functioning in Low-Resource Settings: Assessing the Evidence Base.* MEASURE Evaluation: Chapel Hill, NC.

Annex A. Mozambique FP Register

FAMILY PLANNING REGISTER

LIVRO DE REGISTOS DA CONSULTA DE PLANEAMENTO FAMILIAR MOD - SIS - B05 ANO_____

	Nº de ordem mensal	Data da consulta (Dia/Mês)	Nome da/o Utente	Sexo		Idade	Faixa etária *(Marque X apenas para as 1ª consultas de sexo feminino)*			Tipo de consulta *(Marque X)*		Exame clínico					Resultado do despiste do cancro do colo (VIA) P = Positivo; N = Negativo; Nf = Não fez 1=1ª VIA ; 2=VIA seguinte;	Crioterapia (marque com F e/ou A)	Sífilis				
												Exame dos genitais *(Marque X o que aplica)*			Outras patologias (quais)	Exame da mama P = Positivo; N = Negativo; Nf = Não fez 1=tratado ; 2=referido;			Resultado do teste no PF	Se positivo			
				Feminino	Masculino		≤ de 19 anos	de 20 a 24 anos	≥ 25 anos	Primeira CPF	Consulta seguinte	Leucorreia	Úlcera Genital	Corrimento uretral						1ª dose	2ª dose	3ª dose	Parceiro inicia tratamento na CPF
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																			P N Nf				
2																			P N Nf				
3																			P N Nf				
4																			P N Nf				
5																			P N Nf				
6																			P N Nf				
7																			P N Nf				
8																			P N Nf				
9																			P N Nf				
10																			P N Nf				
11																			P N Nf				
12																			P N Nf				
13																			P N Nf				
14																			P N Nf				
15																			P N Nf				

	Nº de ordem mensal	Data da consulta (Dia/Mês)	Nome da/o Utente	Sexo		Idade	Faixa etária *(Marque X apenas para as 1ª consultas de sexo feminino)*			Tipo de consulta *(Marque X)*		Exame clínico					Resultado do despiste do cancro do colo (VIA) P = Positivo; N = Negativo; Nf = Não fez 1=1ª VIA ; 2=VIA seguinte;	Crioterapia (marque com F e/ou A)	Sífilis				
												Exame dos genitais *(Marque X o que aplica)*			Outras patologias (quais)	Exame da mama P = Positivo; N = Negativo; Nf = Não fez 1=tratado ; 2=referido;			Resultado do teste no PF	Se positivo			
				Feminino	Masculino		≤ de 19 anos	de 20 a 24 anos	≥ 25 anos	Primeira CPF	Consulta seguinte	Leucorreia	Úlcera Genital	Corrimento uretral						1ª dose	2ª dose	3ª dose	Parceiro inicia tratamento na CPF
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
16																			P N Nf				
17																			P N Nf				
18																			P N Nf				
19																			P N Nf				
20																			P N Nf				
21																			P N Nf				
22																			P N Nf				
23																			P N Nf				
24																			P N Nf				
25																			P N Nf				
																P1 P2 N	P1 N1 P2 N2	F A AF	P Testadas				

[1] marcar apenas no dia em que o resultado CD4 e/ou estagiamento é entregue a mulher na CPN

LIVRO DE REGISTOS DA CONSULTA DE PLANEAMENTO FAMILIAR MOD - SIS - B05 ANO_____

	HIV										Pílula						Injectável		DIU			Número de Preservativos distribuídos			Transferência							Observações	Assinatura
	Seroestado HIV á entrada No PF			Resultado do teste no PF				Código do PTV	CD4<350 ou estadio III ou IV	Iniciou o TARV	Utente		Número de ciclos distribuídos					Utente		Utente														
	Positivo	Negativo	Desconhecido	Positivo	Negativo	Indeterminado	Não fez				Nova no método	Continua o método	Lofemenal	Microlut	Microgynon	Outra (qual)	Nova no método	Continua o método	Nova no metodo	Continua o método	Nº de DIU Inseridos	Feminino	Masculino		Lesões extensas do colo (> 75%)	Suspeita de cancro do colo	Laqueação tubária	Vasectomia	Serviço de TARV/TIO	Outro motivo		
	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
1																																
2																																
3																																
4																																
5																																
6																																
7																																
8																																

	HIV										Pílula						Injectável		DIU			Número de Preservativos distribuídos			Transferência								
	Seroestado HIV á entrada No PF			Resultado do teste no PF				Código do PTV	CD4<350 ou estadio III ou IV	Iníciou o TARV	Utente		Número de ciclos distribuídos				Utente	Utente						Lesões extensas do colo (> 75%)	Suspeita de cancro do colo	Laqueação tubária	Vasectomia	Serviço de TARV/TIO	Outro motivo	Observações	Assinatura
	Positivo	Negativo	Desconhecido	Positivo	Negativo	Indeterminado	Não fez				Nova no método	Continua o método	Lofemenal	Microlut	Microgynon	Outra (qual)	Nova no método	Continua o método	Nova no metodo	Continua o método	Nº de DIU Inseridos	Feminino	Masculino									
	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
9																																
10																																
11																																
12																																
13																																
14																																
16																																
17																																
18																																
19																																

	HIV										Pílula						Injectável		DIU			Número de Preservativos distribuídos			Transferência								
	Seroestado HIV á entrada No PF			Resultado do teste no PF				Código do PTV	CD4<350 ou estadio III ou IV	Iníciou o TARV	Utente		Número de ciclos distribuídos				Utente		Utente													Observações	Assinatura
	Positivo	Negativo	Desconhecido	Positivo	Negativo	Indeterminado	Não fez				Nova no método	Continua o método	Lofemenal	Microlut	Microgynon	Outra (qual)	Nova no método	Continua o método	Nova no metodo	Continua o método	Nº de DIU Inseridos	Feminino	Masculino		Lesões extensas do colo (> 75%)	Suspeita de cancro do colo	Laqueação tubária	Vasectomia	Serviço de TARV/TIO	Outro motivo		
	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
20																																
21																																
22																																
23																																
24																																
25																																
				P	Testadas																											

SUMMARY INDICATORS FOR FAMILY PLANNING VISITS

RESUMO Indicadores da CONSULTA DE PLANEAMENTO FAMILIAR

A lista dos indicadores apresentada não é exaustiva, mas representa os principais Indicadores de avaliação das actividades na consulta de Planeamento Familiar. A lista completa dos indicadores, bem como as notas tecnicas dos mesmos, podem ser encontrados no guião "MEMÓRIA DESCRITIVA SOBRE A DEFINIÇÃO/REVISÃO DE INSTRUMENTOS E FLUXOS DE INFORMAÇÃO DOS SERVIÇOS DE SAÚDE DA MULHER E DA CRIANÇA", Novembro 2010

Nº	NOME DO INDICADOR	Fórmula de Cálculo (numerador / denominador)	Observações
1	**Percentagem de US que oferecem serviços FP**	Nº de US com Planeamento Familiar x 100 / Nº total de unidades sanitárias existentes	numerador = Nº de US que oferecem o mínimo 3 métodos modernos (injectaveis, Pílulas, DIU)
2	**% de novas utentes em métodos modernos de Planeamento Familiar**	Nº de novas utentes num determinado período que aceitam pela 1ª vez o uso de qualquer método moderno de contracepção X 100 / MIF estimadas para esse mesmo período	Mulheres em idade Fértil (MIF) = 19.9% da população
3	**Percentagem de utentes HIV-positivas que iniciam PF**	Nº de Utentes HIV+ que iniciam PF X 100 / Nº estimado de mulheres HIV+ em idade fértil	
4	**Percentagem de utentes elegíveis e testadas para HIV no PF**	Nº de Utentes testadas para HIV na CPF X 100 / Nº de Utentes com estado HIV desconhecido a entrada no PF	
5	**Percentagem de mulheres elegíveis que iniciaram TARV na CPF**	Total de mulheres que iniciaram o TARV durante a CPF X 100 / Nº de mulheres com CD4 <350 ou OMS III ou IV	

Nº	NOME DO INDICADOR	Fórmula de Cálculo (numerador / denominador)	Observações
6	**Percentagem de mulheres testadas para sífilis na CPF**	Nº de mulheres com teste sífilis positivo na CPF X 100 / Nº de mulheres testadas para sífilis na CPF	
7	**Percentagem de mulheres com teste sífilis positivo que receberam tratamento**	Nº de mulheres com teste sífilis positivo que receberam **3 doses** de tratamento para sífilis na **CPF** X 100 / Nº de grávidas com teste sífilis positivo na CPF	
8	**Percentagem de mulheres rastreadas com resultado de VIA positivo (1as VIA)**	Nº de 1as VIA Positivas X 100 / Nº de 1as VIA testadas	
9	**Percentagem de mulheres rastreadas com VIA que foram transferidas**	Nº de utentes com VIA positivas referenciadas X 100 / Nº total de VIA testadas positivas	**Nº de utentes com VIA positivas referenciadas** = Nº de 1as VIA Positivas Referenciadas + Nº de 2as VIA Positivas Referenciadas. **Nº total de VIA testadas positivas**=Nº de 1as VIA Positivas + Nº de 2as VIA Positivas
10	**Percentagem de mulheres que foram transferidas por apresentarem lesões extensas do colo**	Nº de utentes transferidas por lesões extensas do colo (> 75%) X 100 / Nº total de VIA testadas positivas	
11	**Percentagem de mulheres que foram transferidas por suspeita de cancro do colo**	Nº de utentes transferidas por suspeita de cancro do colo X 100 / Nº total de VIA testadas positivas	

Nº	NOME DO INDICADOR	Fórmula de Cálculo (numerador / denominador)	Observações
12	**Percentagem de mulheres com resultado de VIA positivo que receberam imediatamente crioterapia**	Nº Crioterapias feitas no mesmo dia ("F") X 100 / Nº de 1as VIA Positivas	Crioterapia imediatamente é definido como aquele procedimento executado no mesmo dia que foi feito VIA
13	**Percentagem de mulheres com VIA positivo cuja crioterapia foi adiada**	Nº Crioterapias adiadas ("A") X 100 / Nº de 1as VIA Positivas	
14	**Percentagem de crioterapia adiadas executadas (trimestre)**	Nº Crioterapias adiadas e feitas depois ("AF") X 100 / Nº Crioterapias adiadas ("A")	Este indicadore deve ser medido no periodo de pelo menos 3 meses

INSTRUCTIONS FOR COMPLETING THE FAMILY PLANNING VISITS REGISTER

Nº	Titulo	Descrição/Explicação	Nº	Titulo	Descrição/Explicação
1	**Número de ordem mensal**	É o número sequencial mensal atribuído a toda a mulher que dá entrada e é registada no livro do PF. No início de cada mês a contagem deve ser reiniciada	**HIV**		
			24–26	Seroestado HIV á entrada no PF	A utente sabe qual é o seu seroestado na 1ª CPF. ela já fez teste noutro lugar e não na CPF? Estas perguntas são só aplicáveis as primeiras CPF. Marque com X resposta correspondente:
2	**Data da consulta (D/M)**	Escreva a data em que se realiza a consulta segundo o formato Dia/Mês			
				Positivo	Se fez o teste e o resultado é positivo
3	Escreva o **nome completo** da/o utente			·Negativo	Se fez o teste e o resultado é negativo e não é elegível a retestagem na CPF
4-5	**Sexo**	Marque com X de acordo com a resposta			
6	**Idade**	Escreva a idade da/o utente		Desconhecido	Se nunca fez o teste ou se fez e obteve resultado negativo mas é elegível a retestagem nesta unidade sanitária (de acordo com a data do último teste ou quando se desconfia da qualidade do teste feito)
7–9	**Faixa etária**	Marque com X a coluna correspondente a faixa etária da utente. Marque apenas para primeiras consultas de planeamento familiar das utentes do sexo feminino.			
			27–30	Resultado do teste HIV na CPF	Se fez o teste HIV na CPF, indique o resultado nesta coluna. O Total é a soma de P+N+I
10–11	**Tipo de consulta**	Responda de acordo com a pergunta marcando com X no local apropriado			
			31	**Código de PTV**	É o mesmo nº de registo no Livro de consultas pré-natais e que vem escrito na Ficha pré-natal.
Exame clínico					
12–14	Exames dos genitais	Responda de acordo com a pergunta marcando com X o que foi observado na coluna apropriada	32	CD4<350; ou estadio III ou IV	Marque com X no dia em que se determina a condição pela primeira vez na consulta mediante CD4 ou estadiamento OMS
			33	Iniciou o TARV	Marque com x se a utente iniciou o TARV
				Pílula	
15	Outras patologias	Escrever outras patologias/diagnósticos se houver se não tiverem sido listados nas colunas anteriores	34–35	Nova Utente no Metódo/ Continua no Metódo	Marque com X se a utente recebe pela primeira vez a pilula ou se é utente que vem para continuar com o método
			36–39	Número de ciclos distribuídos	Escreva o número de ciclos distribuidos nesta consulta no local apropriado. Se outra, escreva o nome e o número de ciclos distribuídos
16	Exame da mama	Escreve a letra (P se positivo, N se negativo, Nf se Não Feito) e, se for positivo, o número correspondente (1 para tratado ou 2 para referido)		**Injectável**	
			40–41	Nova Utente no Metódo/ Continua no Metódo	Marque com X se a utente faz pela primeira vez o método ou se é utente que vem para continuar com o método

Nº	Titulo	Descrição/Explicação	Nº	Titulo	Descrição/Explicação
17	**Resultado do despiste do cancro do colo do útero:**			**DIU**	
	Marque o resultado do despiste do cancro do colo do útero, escrevendo a letra (P se positivo, N se negativo, Nf se Não Feito) e o número corespondente (1 para 1º VIA ou 2 para VIA seguinte)		42–44	Nova Utente no Metódo/ Continua no Metódo/ Nº de DIU Inseridos	Marque com X se a utente faz pela primeira vez o método ou se é utente que vem para continuar com o método
			45–46	**Preservativos distribuidos**	Escreva a quantidade de preservativos distribuídos por tipo (Feminino/ Masculino)
18	Crioterapia	Marque com "**F**" se feita no mesmo dia da consulta ou com "**A**" se foi adiada. Se a utente volta para fazer uma crioterapia adiada, acrescentar "**F**" após o "**A**" ("**AF**")	47	**Outros métodos**	Marque com X se outro método de planeamento familiar foi feito
Sífilis			48–53	**Transferências**	Marque com X se foi feita a transferência e de acordo com o motivo da transferência. Se for outro motivo, especificar na coluna das "Observações"
19	Resultado do teste no PF	Marque com uma bolinha as letras P se positivo, N se negativo e Nf se não fez.			
20–22	Tratamento da sífilis	Marque X na coluna apropriada	54	**Observações**	Escreva quaisquer observações que tiver
23	Parceiro tratado no PF	Marque com X se o parceiro iniciou o tratamento na CPF ou se foi referido para tratamento noutro sector da US e há certeza que fez o tratamento. Não se devem marcar os casos de receitas aviadas para entrega ao parceiro em casa.	55	**Assinatura**	Tem de ser legível

Para completar corretamente o livro de registo, por favor, respeite as seguintes recomendações:

1) Se a(s) informação(ões) solicitada(s) não é(são) disponível(is), por favor não deixar a(s) célula(s) vazia(s) e preencher a(s) célula(s) com uma linha horizontal, como segue:

2) CALCULAR OS TOTAIS NO FINAL DA PÁGINA QUANDO A PAGINA FOR COMPLETAMENTE PREENCHIDA

3) NO FINAL DO MÊS (EX. JANEIRO), SE A PÁGINA NÃO FOR COMPLETAMENTE PREENCHIDA: I) CALCULAR OS TOTAIS NO FINAL DA PÁGINA; II) TRACE UMA LINHA DIAGONAL EM BAIXO DA ÚLTIMA LINHA PREENCHIDA; III) UTILIZE UMA NOVA PÁGINA DO LIVRO DE REGISTO PARA O PRIMEIRO DIA DO MÊS SEGUINTE (EX. FEVEREIRO)

Annex B. Nigeria M&E Job Aid

FORM	DEFINITION	PURPOSE	DATA ITEMS	FREQUENCY OF USE	USERS
EmONC & FP Service Monthly Summary Form	This is a reporting form. The form provides an overview of the number of people receiving different services from the facilities & community outreach on a month	A summary form to provide data on number of people receiving EmONC and FP services on monthly basis	Number of ANC visit Number of Deliveries Number of PNC visit Number of people counseled Number of FP clients served, etc.	Monthly	In-charge of health facility or the representative of the health facility

How to fill the EmONC and Family Planning Service Monthly Summary Form

Steps	Actions	Note
1	**Name of Health Facility:** Write the Name of the Health Facility	
2	**LGA:** Write the Local Government Area the Health Facility is located	
3	**State:** Indicate the State in which the LGA is located	
4	**Month:** Write the Month you are reporting	
5	**Prepared by:** Name of the In-charge or the person preparing the report	Trained Staff
6	**Signature:** Append your signature after filling the form	
Completing the Clinical Activities (Antenatal Care Section) To fill the Antenatal Care section of this form, refer to the Daily ANC Register for the Health Facility		
7	To determine the number for **Client Seen in Health Facility** for First ANC Visit, Return ANC Visit, take the Daily ANC Register for the Health Facility. Count the number of cases in the Daily ANC Register for the month. For each case record the number counted in the specific Column: Number Seen in the Health Facility. Do the same for other items including Number of women receiving 1st Dose of TT, 2nd Dose of TT, 1st Dose of IPT, etc. **To determine the number of women that have attended at least 4 ANC visits, refer to the ANC card to see the number of times.**	It is possible for a pregnant woman to start ANC visits in another facility. So, ask, especially for new attendees in your facilities if visits have been made to other facilities during the pregnancy before coming here.

FORM	DEFINITION	PURPOSE	DATA ITEMS	FREQUENCY OF USE	USERS
EmONC & FP Service Monthly Summary Form	This is a reporting form. The form provides an overview of the number of people receiving different services from the facilities & community outreach on a month	A summary form to provide data on number of people receiving EmONC and FP services on monthly basis	Number of ANC visit Number of Deliveries Number of PNC visit Number of people counseled Number of FP clients served, etc.	Monthly	In-charge of health facility or the representative of the health facility
Completing the Clinical Activities (Deliveries Section) To fill the Deliveries section of this form, refer to the Daily Labour and Delivery Register for the Health Facility.					
8	To determine number of Clients who delivered in the Health Facility for Spontaneous vaginal deliveries, Deliveries by caesarean section, Assisted deliveries by vacuum extraction, deliveries by forceps, etc. refer to the Health Facility Daily Labour and Delivery Register. Count the number of cases for the reporting month under each item and record this under column: ▪ Do the same thing for other services included under the deliveries section of this form				
9	Number of Deliveries by Skilled Birth Attendants: To determine number of deliveries by SBAs refer to the column (8) on who take delivery in the labour. Count the number of delivery ticked as conducted by SBA. A skilled birth attendant could be a nurse, midwife or medical Doctor. Delivery by CHEWs should not be included in the total count.				
10	Number of women receiving AMTSL: Refer to the labour and delivery register and for the reporting month count the number of vaginal deliveries only for which AMTSL was applied.				
11	Number of labour/deliveries monitored by Partograph: Count the total number of deliveries for which partograph was used to monitor labour by referring to the labour and delivery register and enter the number counted for the month.				
12	Number of Live birth: Calculate the total number of live births in the reporting month by subtracting number of stillbirths from all deliveries in the month. For example, if 35 deliveries were taken in the month and 5 were stillbirth, Number of live birth will be 35-5, which will give 30.				
Completing the Postnatal Care Section To fill these section of the form refer to the Daily General Out-Patient Register for Health Facilities.					
13	Number of Postnatal visits with 3 days of delivery: To determine the number of postnatal visits with 3 days of delivery refer to the Daily General out-patient record register and the total deliveries for hospitals. Count the number of visits recorded in the General Out-patient register that falls with 3 days of delivery and recors that for the reporting month. **For General Hospital Only**: Add the total number in the reporting month derive from the General outpatient register that falls with 3 days of delivery to the total deliveries in the hospital.				Hospitals are to add all total deliveries in a month to the number of visits within 3 days of delivery recorded in the General out-patient register. This is so because women who deliver in hospitals are not immediately discharge after deliveries. They are always under observation for at least 4 hours.

FORM	DEFINITION	PURPOSE	DATA ITEMS	FREQUENCY OF USE	USERS
EmONC & FP Service Monthly Summary Form	This is a reporting form. The form provides an overview of the number of people receiving different services from the facilities & community outreach on a month	A summary form to provide data on number of people receiving EmONC and FP services on monthly basis	Number of ANC visit Number of Deliveries Number of PNC visit Number of people counseled Number of FP clients served, etc.	Monthly	In-charge of health facility or the representative of the health facility
Completing the Counseling Section To fill this section of the form refers to the Daily Group Health Education Form. This counseling is referring to the group health sessions held with pregnant women during ANC. Refer to the Daily Group Health Education Form to get the number of people reached on specific Topics identified for the month					
14	**Family Planning Counseling** Number of women counseled on Family Planning: Use the FP register to determine the number. Count the total number of women counseled on FP in the month. This will include those counseled as new and revisits clients who received a method and those that were just counseled without receiving a method. Number of men counseled on Family Planning: Use the FP register to determine the number. Count the total number of men counseled on FP in the month. This will include those counseled as new and revisits clients who received male condom and those that were just counseled without receiving condom. Number of women individually counseled on LAM: Refer to the labour and delivery register to determine the number of women that gave births and were counseled on LAM. Check the column and count the number of those counseled on LAM after delivery. Number of women individually counseled on LAM and Accepted: Refer to the labour and delivery register to determine the number of women that gave births and were counseled on LAM accepted to practice the method. Check the column and count the number of those who accepted LAM after counseling on LAM. Number of People counseled on Family Planning: Add the total number of women counseled to the total number of women and enter the sum.				If a woman comes together with the husband you will enter them on separate rows to show that they were counseled together by indicating their names. The total number of those who accepted could be the same as the number of those counseled or less.
Completing the Complications Managed Section Refer to the column on type of complications managed in the labour and delivery register to determine this. Count the number of each complication. Refer to the Daily Labour and Delivery Register for the Health Facility to determine the number of specific complications managed and enter the total in the respective column					
15	**Complications Managed Section** To determine number of Ecliptic cases, Haemorrhage, etc. managed, refer to the Daily Labour and Delivery Register for Health Facility Count the number of each case under each item and record under this column				

FORM	DEFINITION	PURPOSE	DATA ITEMS	FREQUENCY OF USE	USERS
EmONC & FP Service Monthly Summary Form	This is a reporting form. The form provides an overview of the number of people receiving different services from the facilities & community outreach on a month	A summary form to provide data on number of people receiving EmONC and FP services on monthly basis	Number of ANC visit Number of Deliveries Number of PNC visit Number of people counseled Number of FP clients served, etc.	Monthly	In-charge of health facility or the representative of the health facility
Completing the Family Planning Activities Section Refer to the Daily Family Planning Register to fill this section.					
16	**Number of Clients seen in Health Facility for Each Method:** Refer to the Daily Family Planning Register. Count the number of clients served for each method in the month. Write the number as counted against each method under the column: Number of clients seen by Facility.				
17	**Number of clients seen in other units:** This is peculiar to Hospitals where FP services are being provided in other units apart from the FP unit. Write the number of clients served for each type of method in this column.				
18	**Quantity of Commodities Dispensed:** Refer to the columns on Quantity for each method in the Daily Family Planning Register for both Health Facility and those dispensed from other units to determine the Quantity of each method dispensed during the reporting period. Count the Quantity of each method dispensed and record this in the Column against each methods.				
19	**Total Column:** Add Columns A+B for each item listed to get the Total Quantity Dispensed for each method				
Completing the Commodities Status Section: Refer to the Quantity of Commodities Dispensed Section					
20	**Quantity Issued in the Month:** You can determine this by referring to the Total Quantity Dispensed Column for each method. Transfer the number to each method. Record the quantity of each method you dispensed for the whole month on the column Quantity dispensed				
21	**Quantity Received**: Record the quantity of each method received from the store/purchased in the month in this column.				
22	**Stock at Hand:** Subtract the Quantity Dispensed for each method from the quantity Received to get the Stock at Hand for each methods				Stock at hand at the end of a reporting month will represent the beginning balance for subsequent month.

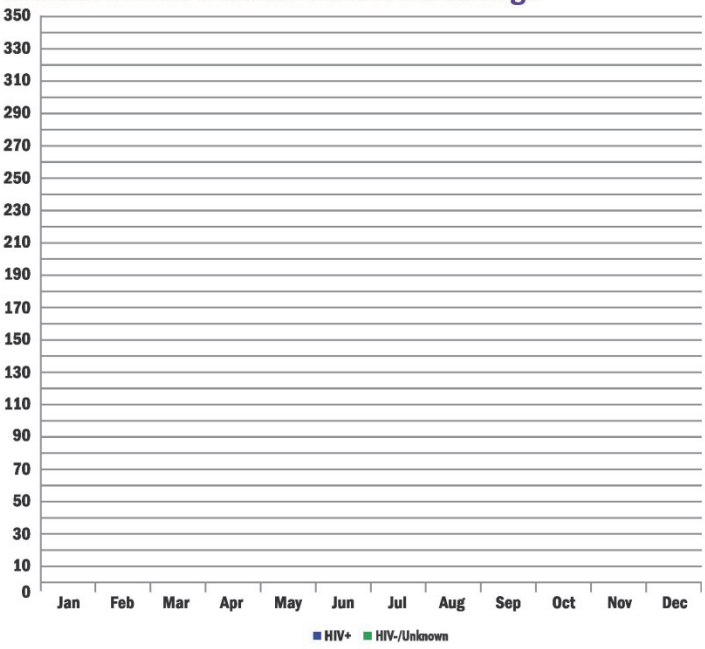
Annex C. CECAP Results Poster

Results at a Glance

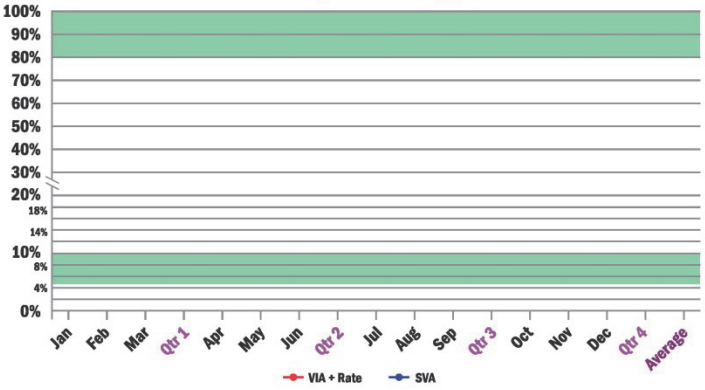
Country: Guyana **Site:**_____ **Year:**____

The Cervical Cancer Prevention and Treatment Programme

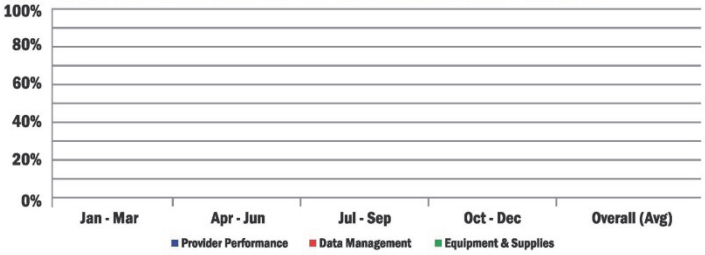
Number of New Cervical Cancer Screenings



VIA Positive Rate and Single Visit Approach Rate



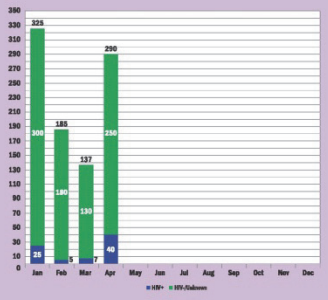
Percent Achievement of Performance Standards



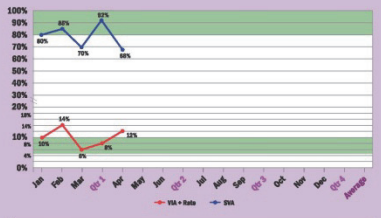
Sample Data

Number of New Cervical Cancer Screenings

(Monthly Summary Form: Indicator #4)



VIA Positive Rate and SVA Rate



VIA Positive Rate and SVA Rate: Calculations

VIA Positive Rate

$$\frac{\text{Total \# of new women with VIA positive result (Ind. \# 5)}}{\text{Total \# of new women screened (Ind. \#4)}} \times 100$$

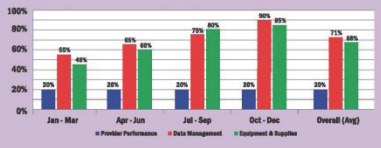
Example: 4 new VIA+ women / (40 total women screened) X 100 = 10 %

SVA Rate for New Patients

$$\frac{\text{Total \# of VIA+ women receiving immediate cryotherapy (Ind. \#11)}}{\text{Total \# immediate cryotherapy (Ind. \#11) + Total \# postponed cryotherapy (Ind.\# 12)}} \times 100$$

Example: 3 women received immediate cryo / (3 women immediate cryo + 1 woman postponed cryo) X 100 = 75%

Percent Achievement of Performance Standards

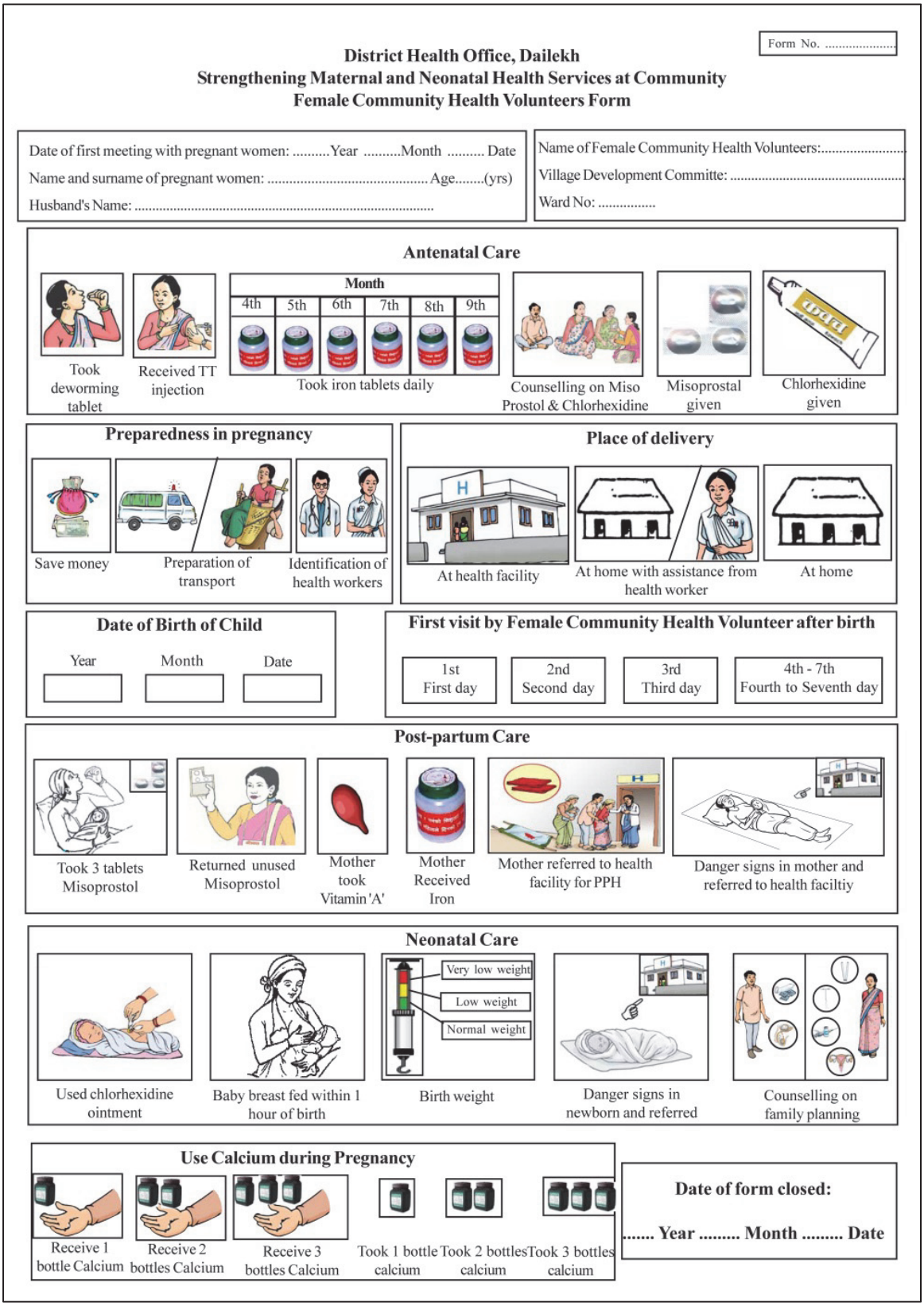


USAID FROM THE AMERICAN PEOPLE

MCHIP Maternal and Child Health Integrated Program

Jhpiego — an affiliate of Johns Hopkins University

Annex D. Nepal ANC and FCHV Calcium Registers



Form No. .....

District Health Office, Dailekh
Strengthening Maternal and Neonatal Health Services at Community
Female Community Health Volunteers Form

Date of first meeting with pregnant women: .....Year .....Month ..... Date
Name and surname of pregnant women: ..... Age.....(yrs)
Husband's Name: .....

Name of Female Community Health Volunteers:.....
Village Development Committe: .....
Ward No: .....

Antenatal Care

Took deworming tablet
Received TT injection
Month: 4th 5th 6th 7th 8th 9th — Took iron tablets daily
Counselling on Miso Prostol & Chlorhexidine
Misoprostal given
Chlorhexidine given

Preparedness in pregnancy

Save money
Preparation of transport
Identification of health workers

Place of delivery

At health facility
At home with assistance from health worker
At home

Date of Birth of Child

Year | Month | Date

First visit by Female Community Health Volunteer after birth

1st First day | 2nd Second day | 3rd Third day | 4th - 7th Fourth to Seventh day

Post-partum Care

Took 3 tablets Misoprostol
Returned unused Misoprostol
Mother took Vitamin 'A'
Mother Received Iron
Mother referred to health facility for PPH
Danger signs in mother and referred to health faciltiy

Neonatal Care

Used chlorhexidine ointment
Baby breast fed within 1 hour of birth
Very low weight / Low weight / Normal weight — Birth weight
Danger signs in newborn and referred
Counselling on family planning

Use Calcium during Pregnancy

Receive 1 bottle Calcium
Receive 2 bottles Calcium
Receive 3 bottles Calcium
Took 1 bottle calcium
Took 2 bottles calcium
Took 3 bottles calcium

Date of form closed:

..... Year ..... Month ..... Date

District Health Office, Dailekh
CBMNH Service Strengthening

"USE OF CALCIUM TABLET DURING PREGNANCY TO PREVENT PRE-ECLAMPSIA/ECLAMPSIA"

Calcium Register

Health Facility Level

District _____ Health facility name _____ Month _____ Year _____

S.No.	DATE	Name of the pregnant woman	Address		Gestational Age (completed months)	ANC Visit at Calcium Distribution				Other ANC checkup	No. of distributed calcium bottles	If None given	
			Ward no	VDC		1st ANC checkup	2nd ANC checkup	3rd ANC checkup	4th ANC checkup			No stock	Refused
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
Total													

Prepared by _____ Signature _____ Date _____

Reviewed by _____ Signature _____ Date _____