MCSP Mozambique Program Brief
Child Health

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Goal

The Maternal and Child Survival Program (MCSP) in Mozambique worked to improve the quality of essential child health (CH) services in Nampula and Sofala provinces and to influence the national policies and systems on which quality care depends. MCSP's work built on that of its precursor, the Maternal and Child Health Integrated Program (MCHIP), which focused on maternal and neonatal health. The United States Agency for International Development (USAID) added child health (CH) and immunization to MCSP's scope of work in recognition of the need for increased technical and financial support to ensure continuity of health care throughout the life cycle. MCSP focused on increasing the availability and quality of evidence-based CH interventions by building the capacity of managers and health care workers to deliver quality CH services and addressing multiple, longstanding problems with the collection, dissemination, and use of consistent CH data in the two provinces.

Integrated management of childhood illness (IMCI) formative supervision and mentoring at Marerre General Hospital in Nampula. Photo: Betuel Sigaúque/MCSP

Program Approaches, Interventions and Key Results

Mozambique's infant and under-5 mortality rates are estimated at 64 and 97 per 1,000 live births, respectively (DHS 2011). Of the of 85,397 hospital deaths reported between 2009 and 2013, 38% were children under 5 (SIS-ROH 2009-2011). Mozambique's very high child mortality rate, with the majority of deaths occurring after the newborn period and therefore readily preventable or treatable with proven, cost-effective primary health care interventions, reflects a critical gap in technical and financial support for CH programming. CH services are further hampered by the absence of data in the health management information system (HMIS) to help pinpoint deficiencies in pediatric care provided by primary and secondary level health facilities. MCSP used a number of interrelated approaches to address these challenges.

Assisted the MOH to develop and implement supportive national guidelines for child health

Through participation in the CH Technical Working Group (CHTWG), MCSP helped update national child health clinical guidelines for the sick (CCD) and well child (CCS), and developed new neonatal integrated management of childhood illness (IMCI) guidelines. MCSP also provided technical assistance to revise and finalize the MOH CH standards for promoting and monitoring quality improvement and advocated with the MOH and other health partners to include amoxicillin dispersible tablets (DT) for

children during forecasting and procurement exercises. As a result, as of the first quarter of 2018, amoxicillin DT are now available in the essential medicines kits for health facilities (HF) and for Mozambique's government-supported community health workers, the *Agentes Polivalentes Elementares, or APEs*.

Strengthened implementation of IMCI at HFs through training, supportive supervision and mentoring

To ensure strong implementation of the IMCI strategy, MCSP updated the skills of provincial trainers and worked with them to provide in-service and on-the-job IMCI training to health care providers. Following these trainings, MCSP also supported post-training supportive supervision visits to identify gaps in the quality of care trainees provided to children under 5. MCSP adapted a supervision tool, which was refined and approved through the National CHTWG, to guide these supportive supervision visits.

Figure 1. Sample dashboard of adherence (%) to IMCI protocols during supportive supervision visits in select HFs

Standard Number	# Health Staff Supervised at Health Facility for each Standard	# Children assessed for each standard	Health Facilities that received formative supervision and the Percentage Achieved per Standard								
			Mascarenhas	Munhava	Marrocanhe	Inhaminga	Nhamatanda	Metuchira	Mulima	Buzi	Ampara
1	10	36	97	0	94	100	100	100	100	100	100
2	10	36	100	75	100	100	100	100	69	94	75
3	10	36	100	100	100	100	100	96	100	100	100
4	10	36	95	100	75	96	100	100	100	100	92
5	10	36	100	100	100	100	100	100	97	100	100
6	10	36	94	100	100	94	100	100	100	100	100
7	10	36	100	100	100	100	100	100	100	100	100
8	10	36	100	88	100	100	100	100	98	100	100
9	10	36	100	100	100	100	100	100	60	53	100
10	10	36	100	0	100	100	100	100	80	42	75
11	10	36	100	50	100	93	100	100	23	100	96
12	10	36	100	75	100	100	100	100	75	25	100
13	10	36	100	75	100	75	100	100	100	100	100
14	10	36	100	100	100	100	100	100	100	100	100
15	10	36	100	50	100	100	100	100	100	100	100
16	10	36	96	50	62	94	100	88	100	100	100
Total			**99**	**73**	**96**	**97**	**100**	**99**	**88**	**88**	**96**

Legend: *GREEN = Good performance (>=80%); Yellow = Moderate Performance (51% – 79%); RED = Poor Performance (<=50%)*

The specific gaps identified during supportive supervision visits were used to develop tailored training, mentoring and coaching opportunities for health care workers.
In cases where the gaps were related to health system barriers (e.g., stockouts of essential child health commodities, lack of ARI timers for measuring a child's respiratory rate, etc.), findings were used for advocacy and communication purposes at the appropriate level of the health system.

MCSP and the Provincial Health Directorate (DPS) conducted capacity building activities for health providers jointly to ensure government ownership and the continuation of activities after the end of MCSP. Figure 1 provides an illustrative sample of the dashboard used to monitor improvements in post-training scores from IMCI supportive supervision visits between January-March 2018 in Sofala. This type of dashboard was developed and used in data and training reviews at various levels (i.e., province, district HF).

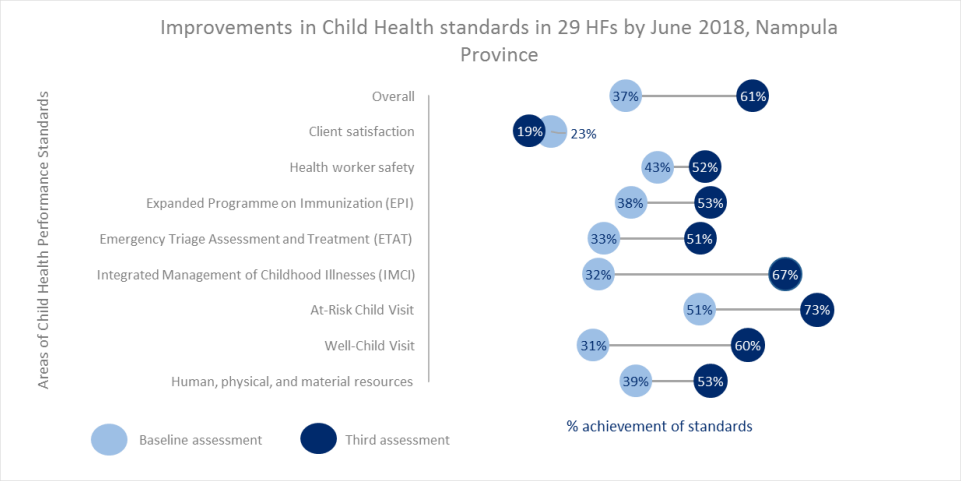
Improved child health service delivery and quality

MCSP supported the DPS and district health directorates (SDSMAS) in Nampula and Sofala to introduce performance and quality improvement tools for care of children, using the Standards-Based Management and Recognition (SBM-R) approach. Although SBM-R has been used widely in infection prevention and in maternal and newborn health and family planning quality improvement efforts in Mozambique, this was the first time that it had been applied to child health services more generally. The SBM-R approach

allows health professionals to regularly measure and improve the quality of services by assessing adherence to performance standards, identifying gaps, developing and carrying out action plans to improve performance, and receiving recognition for their progress.

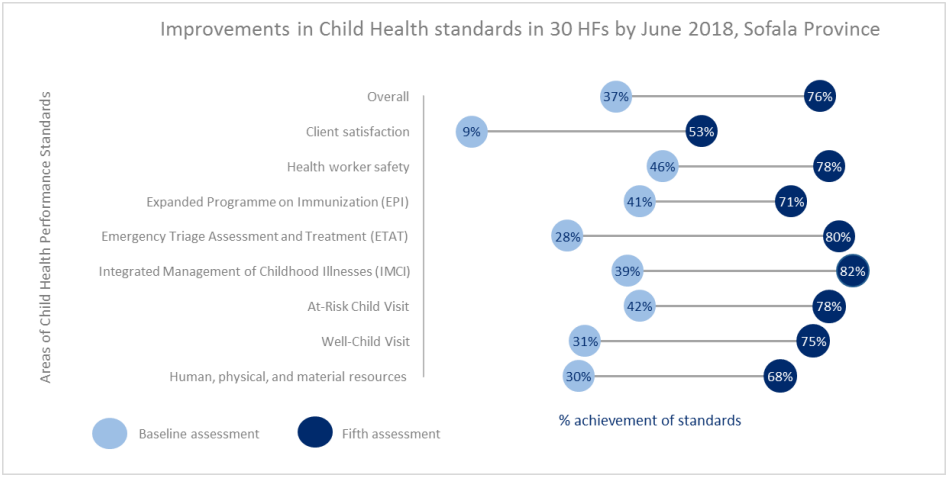
MCSP supported the DPS, SDSMAS and health workers in each MCSP-supported HF to conduct a baseline SBM-R assessment and quarterly internal assessments during which an action plan was developed to overcome identified barriers to quality. Depending on the particular HF's needs, the actions proposed included: on-the-job training, supportive supervision, mentoring, distribution of IEC materials, distribution and reinforcing proper use of key commodities such as zinc sulfate for treating and preventing acute diarrheal illness, among others.

Figure 2.



Figures 2 and 3 show improvements in child health standards in Nampula and Sofala from the baseline HF assessments conducted in the last quarter of 2016 to June 2018. Despite numerous identified challenges—including high staff turnover and low motivation, inadequate physical space and infrastructure for consultations, and shortages of materials and equipment—significant improvements on all standards were seen in Sofala and on all but two standards in Nampula[1].

Figure 3.



Finally, as part of the quality improvement process, MCSP trained a group of health professionals to conduct external evaluations of HFs using the MOH CH standards to evaluate IMCI implementation and the availability of key CH commodities. When a facility achieved 80% of standards on an external evaluation, they received recognition for exemplary IMCI performance, including a certificate valid for six months that was signed by the Director of Provincial Health and the MCSP Chief of Party. A total of 20 HFs (8 in Nampula and 12 in Sofala) received recognition between May 2016 and September 2018.

[1] Nampula's client satisfaction scores dropped when HFs discontinued use of client comment boxes that fell apart because of poor structural integrity with no immediate replacement options. Health worker safety scores remained low in Nampula because of ongoing commodity shortages (gloves, sharps containers, etc.).

Supported CH routine data collection and its availability in the Health Management Information System (HMIS)

Mozambique's MOH suffers from a lack of routine data for planning, monitoring and reporting on CH services. At the national level, MCSP played an important role in helping the Ministry address this problem by defining and validating the CH indicators that are now part of the national HMIS (SIS-MA/DHIS2) and by providing technical assistance for the design and testing of a new suite of child health registers and HF-to-district reporting formats. This new set of tools makes it possible to aggregate, enter, and analyze meaningful CH data from the electronic SIS-MA/DHIS2 platform for the first time. Furthermore, the new child health registers were designed not only to generate data, but to serve as job aids that prompt health providers to follow and record the steps of the IMCI protocol. MCSP piloted the new CH registers and reports in 2017 in 27 HFs (14 in Nampula and 13 Sofala) with very positive results. They were subsequently approved by the MOH in November 2017, and MCSP is currently working with the MOH and UNICEF to prepare for national introduction in December 2018. Simultaneously, MCSP worked with the MOH to develop a pediatric inpatient register and Kangaroo Mother Care book that will be introduced in 2019.

Health professionals from the Dondo health center receiving a certificate from DPS in recognition of their performance. Photo: Dionisio Neves/MCSP

The development and nationwide rollout of the new child health registers and reports is an important MCSP Mozambique legacy. Not only will they guide providers in their work, they will also make routine CH data available to managers for program planning, monitoring and evaluation of their efforts. As an example, before the introduction of the CH registers and reports, basic information on the number of pneumonia cases seen and their management was not available in any form at the health facility level in Mozambique. After MCSP introduced and tested the new CH registers and reports with the Nampula and Sofala DPS, pneumonia case management with recommended antibiotics (essential for reducing child mortality) was tracked for the first time and findings were used to guide supportive supervision and reinforce the skills and practices of health providers. The average proportion of children with pneumonia treated with amoxicillin at MCSP-supported HFs in Nampula and Sofala between October 2017, when the registers were introduced, and August 2018, exceeded 96%. The Nampula and Sofala DPS and SDSMAS are committed to sustaining this high level of CH provider performance, and they now have important new tools that will help them do just that.

Facilitated Child Death Audits

In collaboration with local pediatricians, MCSP supported the implementation of quarterly child death audits. The MOH has long instructed health facilities to conduct child death audits. To date, although HFs have conducted regular Maternal and Perinatal Death Surveillance and Response (MPDSR) activities, child death audits have not been prioritized. MCSP developed standardized tools for conducting child death audits with an emphasis on HFs with a high mortality rate for children under 5. Five HFs in Nampula with the highest child mortality rates were selected and with the support of MCSP officers, deaths were reviewed by age group (0-28 days, 29 days-11 months, and 12-59 months) and the causes of death were documented based on information in hospital records. MCSP trained professionals at the HF to convene management and other key facility staff to discuss the main causes of deaths in the last quarter, the associated constraints or challenges, and potential solutions for preventing similar deaths, which were documented in HF action plans. Child death audits in the selected facilities were conducted monthly starting March 2018. Preliminary analyses reveal that implementation of the HF action plans from the child death audits are resulting in a reduction in institutional mortality rates.

Recommendations

- **Maintain quality:** With MCSP's support, Mozambique made significant progress scaling up evidence-based interventions for child health. The country now has the difficult task of ensuring continuity and sustainability of the progress made. The MOH, DPS, SDSMAS, and Health Units should continue implementing the activities supported by MCSP, particularly those of highest impact such as evaluating HF performance against CH standards and recognizing healthcare workers and facilities for excellence. To improve the quality of care provided, MCSP also recommends scaling up child death audits, using the standardized tools developed by MCSP.

- **Expand efforts to routinely conduct IMCI supportive supervision and document findings to foster a culture of learning:** The successfully piloted IMCI supportive supervision tool developed by MCSP and adapted and endorsed by the national CHTWG should be scaled up to the rest of the country with support from technical partners, leveraging the lessons learned by MCSP. Newly available routine CH data from the country's HMIS can be triangulated with the process data from supportive supervision efforts to get a more in depth understanding of the successes and bottlenecks at the health facility level. The MOH and partners must work to foster a culture of data use at all levels of the health system. A wealth of important data can be obtained from supportive supervision visits, but this requires defining metrics and monitoring instruments at the outset.

- **Scale up all CH data collection efforts:** MCSP recommends that the process to scale up the CH registers nationwide be accelerated by the MOH, and mechanisms put into place to minimize register stockouts and to support the correct completion of the tools (e.g. improved quantification, dedicated funding for reproduction, training of health care workers to use the registers, etc.). In addition, all key stakeholders should continue to advocate that the child health data collected not only by HFs but also by community health workers (APEs) be included on the DHIS2 platform.

- **Prevent stockouts of essential medicines:** There must be more focus on finding sustainable solutions to ensure that essential child health drugs and commodities are always available at all sites providing child health services. Stock control of essential medicines for CH should be carried out regularly at all levels to avoid situations such as unnecessary stockpiling, purchasing formulations that are not suitable for children, and expiration of medications.

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