MOMENTUM

INTEGRATED HEALTH RESILIENCE

Technical Brief

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IMPROVING THE MANAGEMENT OF CHILDHOOD ILLNESS BY ADAPTING TRAINING MATERIALS AND DIGITAL HEALTH TOOLS

MOMENTUM Integrated Health Resilience Experience in Northern Mali

According to the World Health Organization (WHO), over 80% of deaths of children under 5 are the result of neonatal conditions and/or infectious diseases, which are often compounded by acute malnutrition (WHO, n.d). However, with the use of effective health interventions, these circumstances

can be prevented. To enhance access to and quality of services for infants and children at primary health facilities, WHO and UNICEF developed the Integrated Management of Childhood Illness (IMCI) Strategy, designed to elevate capabilities of healthcare workers, strengthen the health system response, and improve individual and community-based practices. IMCI adopts a comprehensive approach that prioritizes the overall health and well-being of the child, aiming to prevent avoidable causes of mortality, reduce instances of illness and disability, and advance the development of children below age five. This technical brief details the efforts and strategies employed by MOMENTUM Integrated Health Resilience in Northern Mali to improve the management of childhood illness through the adaptation of training materials and the utilization of digital health tools.

BACKGROUND

In Mali, infant mortality is estimated at 54 per 1,000 live births, meaning that approximately one child in 20 dies before reaching their first birthday (Institut National de la Statistique, 2019). In 2018, child mortality was estimated at 101 per 1,000 live births, which corresponds to one death for every ten children under 5 (Institut National de la Statistique, 2019). The National Child Survival Strategy, adopted in 2007, highlights priority activities the government of Mali has decided to focus on to help reduce under five mortality, which includes IMCI (USAID, 2013). Strengthening the implementation of IMCI is one of the strategies recommended to improve the quality of care and services offered to children under 5 and help reduce infant and child mortality. Therefore, as part of MOMENTUM's efforts to improve quality of care, the project put significant focus on IMCI implementation, including digitizing this process in project-supported regions in Northern Mali. This digitization was achieved through a partnership between MOMENTUM and the Swiss nongovernmental organization (NGO) *Terre des hommes* (Tdh). Indeed, Tdh has been piloting an electronic consultation register for sick children under 5 years in line with IMCI content in the health districts of Macina and Markala (Ségou region) in central Mali since 2016. To streamline efforts to digitize IMCI implementation, MOMENTUM opted to utilize Thd's tool, with slight adaptations to address contextual factors, as opposed to creating a new tool from scratch. MIHR partnered with TdH to organize a workshop for integrating PSBI into the existing digital tool. Throughout the workshop, technical support for customizing the PSBI section was provided by the Tdh team. Tdh also facilitated the training of trainers.

Operationalizing digital tools with the IMCI framework enhances the capacity of healthcare providers to accurately and effectively diagnose and treat children under 5, leading to improved quality of care. Additionally, digital IMCI systems can help streamline clinical processes, enable better tracking and monitoring of sick children, and facilitate the collection and analysis of child health data.

OBJECTIVES

MOMENTUM aims to achieve the following objectives related to improving the management of childhood illness:

- Adapt and adopt shortened IMCI course from 12 to 6 days,

- Integrate the management of potentially serious bacterial infections in young infants (PBSI) into IMCI guidelines,
- Digitize the integrated PBSI/IMCI framework,
- Train providers in MOMENTUM-supported health facilities on the shortened IMCI course, and
- Train MOMENTUM-supported health facilities on the digital PBSI/IMCI tool.

METHODOLOGY

COLLABORATION WITH PARTNERS

MOMENTUM has established partnerships with key stakeholders under the direction of the General Directorate of Health and Public Hygiene (DGSH), which falls under MHSD, and organized participatory workshops bringing together experts in IMCI, representatives from various NGOs, and technical representatives from the national health department. This close collaboration ensured active engagement of stakeholders throughout implementation. A crucial step in the process was validating the digitized IMCI tool, carried out in close collaboration with Tdh. This validation process involved a series of rigorous steps to ensure that the tool was tailored to the specific needs of the local context and compliant with national health policies and guidelines. Experts from different departments of the MHSD, particularly in maternal and child health, nutrition, and malaria control practice areas were involved in this process to ensure the tool's relevance and quality. The tool validation was conducted through in-depth consultations with the key stakeholders mentioned, field testing sessions, and iterative revisions of the tool based on feedback. This process helped identify and address any potential flaws or gaps in the tool, ensuring its reliability and validity for effective use by MOMENTUM.

ADAPTING THE IMCI COURSE

Currently, the updated 6-day IMCI course is used in most countries globally. Mali is one of the few countries that still uses the 12-day IMCI version, the training of which is costly and time consuming. In 2023, MOMENTUM facilitated the adaptation of the standard IMCI course from 12 to 6 days in Mali, making it more practical, sustainable, and affordable. Adaptation workshops included the development of a simplified module for IMCI participants, reducing the volume of training materials for easier understanding and application. MOMENTUM facilitated the implementation of the digital IMCI tool by providing tablets, rechargeable via solar power, to health facility managers. One noteworthy feature of the tool is the offline functionality of the tablets, allowing facility managers to fully utilize the tool even in areas with limited or no internet connectivity. The providers can then synchronize data once they have access to the internet.

TRAINING OF TRAINERS AND USERS

MOMENTUM co-funded training workshops for trainers on the digital IMCI tool in collaboration with Tdh, with its staff participating alongside representatives from the DGSHP, districts, and regions. This created a skilled group of trainers who could effectively disseminate knowledge and skills to other healthcare providers using the tool. Subsequent training workshops for healthcare providers in Gao and Timbuktu focused on practical use of the tool, its benefits, and how to integrate it into daily medical practice.

RESULTS

PSBI INTEGRATED AND SHORTENED IMCI COURSE

In June 2022, MOMENTUM brought together Mali's National Officer of Reproductive Health (ONASR) and other technical departments of the MHSD to revise the national guidelines on the management of newborn diseases to ensure the integration of the new WHO 2019 guidelines, which integrates PBSI into IMNCI (World Health Organization, 2019).

Following the PSBI integration, MOMENTUM, in collaboration with the ONASR, organized a national workshop in April 2023 to adapt the 12-day IMCI training modules to 6 days. The shortened IMCI course ultimately reduces both the training time and costs associated with the original 12-day training. It allows for an increased number of providers to be trained, and reduces investment needed in post-training follow-up and supportive supervision. The workshop brought together 15 participants (six women and nine men) from various institutions, including ONASR, Department of Nutrition and Food Safety, Malian Association of Pediatrics (AMAPED), National Institute of Health Sciences Training (INFSS), MOMENTUM, TdH, and hospital pediatricians from Timbuktu and Gao. During this workshop, participants were trained in the one-module IMCI training, instead of the seven-module version previously used (120 pages versus 500 pages). Following the validation of the 6-day IMCI course, training for healthcare providers was conducted in Gao and Timbuktu in June and July 2023, respectively. The training brought together 29 participants (20 men and 9 women) and covered both theoretical and in-clinic practical sessions.

IMPROVEMENT AND VALIDATION OF EXISTING DIGITAL IMCI TOOL

To support continual improvement of the new digital IMCI tool, MOMENTUM co-funded a digitization workshop with Tdh, organized by the MHSD in August 2023. This workshop focused on integrating the integrated management of acute malnutrition (IMAM) with IMCI, with the goal of correcting compliance issues with the latest version of the IMCI-IMAM protocols. MOMENTUM also ensured that PSBI was also integrated into the tool. The workshop brought together technical representatives of the ministry's departments in charge of maternal and child health, reproductive health, nutrition, malaria control, immunization, health information systems, telehealth and health informatics, and their partner NGOs (World Vision International, Action Contre la Faim (ACF), in addition to MOMENTUM and Tdh. Major challenges included insufficient state leadership and lack of coordination between the MOH and other partners.

TRAINING OF TRAINERS AND USERS ON THE DIGITAL IMCI TOOL

MOMENTUM and Tdh co-funded a training workshop organized by the MHSD for trainers of the digital IMCI tool, which brought together key players from both the national and regional levels and technical and financial partners. MOMENTUM's objective was to ensure that trainers from the northern regions (Gao and Timbuktu) would master the practical use of the tool so that they could help introduce innovations in healthcare delivery using this digital tool.

Following the training of trainers, MOMENTUM organized a training workshop to empower healthcare providers with a comprehensive understanding of the digital IMCI tool, leveraging the technical expertise provided by Tdh. The specific objectives were to bring healthcare providers in gaining an in-depth understanding of the tool's functionality and its potential benefits, and to equip them with the mastery needed to efficiently utilize it in their daily practices. This initiative aimed to enhance healthcare delivery by ensuring that providers could harness the full potential of the digital tool to improve the overall management of childhood illnesses. Forty-one healthcare providers (12 women and 29 men) from 38 Centres de Sante Communautaire (CSComs, Community Health Center) and two Centres de Sante de Référence (CSRefs, Referral Health Centers) were trained on the tool.

CHALLENGES

Improving the IMCI strategy in fragile settings faces numerous challenges. In northern Mali, the challenges mainly pertained to integrating the management of PSBI in young infants, shortening the IMCI training course, and ensuring post-training follow-up, in addition to challenges around digitization as noted below.

Adapting training materials to include management of PSBI within the IMCI framework required additional technical development and validation. Reducing the IMCI course from 12 to 6 days posed the challenge of condensing essential content without compromising the quality of training or the competencies of healthcare workers and reaching a consensus with stakeholders. The reduction in training duration emphasizes the need for robust post-training support and follow-up to ensure healthcare workers can apply their learning effectively in practice.

The absence of reliable infrastructure like stable electricity, consistent internet access to synchronize data, and robust telecommunications networks is a major challenge to the effective use of digital tools for IMCI. The limited availability and affordability of essential digital devices such as smartphones, tablets, or computers also posed a significant barrier. Moreover, low digital literacy induces the need for specific training for the effective use of digital tools. Additionally, the sustainability and ongoing maintenance of the digital health system may pose challenges moving forward. These systems require regular technical support, updates, and investment in information technology (IT) resources.

LESSONS LEARNED

PROMOTING LEADERSHIP OF NATIONAL GOVERNING BODIES

At the inception of the activity, MOMENTUM advocated to ensure the leadership of MHSD and DGSH in this process. Their active leadership has emerged as an important lesson learned for MOMENTUM, as it underscores the importance of national-level involvement in guiding health initiatives, especially when multiple stakeholders are involved. Having buy-in and support from a national governing body at the forefront, stakeholders were able to align seamlessly with the country's health policies, strategic plans, and guidelines.

In complex health interventions that involve multiple partners, coordination can often be challenging. Having the DGSH as a central authority, effectively bridged the gap between the different organizations, harmonizing efforts and ensuring that all parties were working together towards a common goal. This was crucial in minimizing duplication of efforts, optimizing resource utilization, and fostering a collaborative environment.

LEVERAGING COLLABORATIVE WORKSHOPS FOR TOOL INTEGRATION

Through collaborative efforts involving MHSD, MOMENTUM, and Tdh, a significant milestone was achieved with the integration and validation of the digital IMCI tool. The digitalization workshop played a critical role in aligning the tool with the latest IMCI-IMAM protocols, including the management of PSBI. This process ensured that the tool was not only compliant with current national guidelines, but also tailored to the specific needs of the health districts in northern Mali. The involvement of various stakeholders, including technical representatives from different ministry departments and partner NGOs, ensured a comprehensive and consensus-driven approach to the tool's development, meeting the high standards required for effective deployment in healthcare settings.

READINESS OF TRAINERS AND USERS FOR ROLLOUT

The training of trainers was a crucial step in preparing for the tool’s rollout. A cohort (two from Gao and two from Timbuktu) of well-trained and capable trainers are now available, ensuring the readiness for the effective rollout of the tool in other regions beyond the areas of Tdh’s initial intervention. Additionally, ensuring readiness of healthcare providers is key for maintaining a smooth rollout period, and the workshops played an important role in preparing them in Gao and Timbuktu. The provision of solar powered tablets further increased the capacity of healthcare providers, as it allowed them to use the tool independently, regardless of electricity grid and internet availability.

NEXT STEPS

PARTNERSHIP WITH TDH FOR FINANCIAL COVERAGE OF THE TOOL’S IT RESOURCES

Moving forward, a critical next step to launch the use of the tool in additional MOMENTUM-supported areas involves solidifying the partnership between MOMENTUM and Tdh to ensure the financial

coverage of the tool's IT resources. This partnership is aimed at ensuring the sustainability of the digital IMCI platform, particularly focusing on covering the costs associated with platform subscriptions and server fees and ensuring the continuous operation and accessibility of the tool. Securing financial support for these fundamental resources is essential to prevent any interruption in service. The collaboration will also explore avenues for long-term financial sustainability, ensuring that the digital IMCI tool remains a viable and effective component of the healthcare system in northern Mali.

FOLLOW-UP AND SUPPORT TO IMPLEMENTING FACILITIES

The successful implementation of the digital IMCI tool in northern Mali requires ongoing follow-up and support to the healthcare facilities that will be using it. This step will focus on establishing a robust system for monitoring and providing technical support to the facilities in Gao and Timbuktu. The aim is to ensure that healthcare providers can effectively utilize the tool, address any technical issues promptly, and continually improve the system based on user feedback. MOMENTUM, in collaboration with Tdh and local health authorities, will integrate a support system in the regular monitoring and coaching visits, including regular check-ins and troubleshooting support to ensure the tool is being used optimally.

CONCLUSION

The collaborative efforts in the implementation of the digital IMCI tool in northern Mali between MOMENTUM, MHSD, and Tdh represents a significant milestone in enhancing child health in a region burdened by high child mortality. The successful integration and validation of the digital IMCI tool, along with the comprehensive training of trainers and healthcare providers, mark a key advancement in leveraging digital tools to improve healthcare delivery. The provision of tablets and selection of a tool with offline capabilities underscores the commitment to overcoming challenges inherent to fragile settings. This initiative not only aligns with Mali’s national health priorities but also helps set a precedent to implement similar interventions in fragile contexts moving forward. An important lesson from this initiative was the vital role of the DGSH, whose early involvement was key to its success. Championed by MOMENTUM, DGSH’s leadership ensured effective coordination among stakeholders, aligning the activity with national policies, and enhancing its sustainability and scalability. Looking ahead, the establishment of a sustainable financial model for the digital tool, in collaboration with Tdh, and the ongoing support for implementation, underscore the commitment to the project's long-term success.

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