INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS IN MALAWI

Successes, Challenges, and Opportunities

MOMENTUM Country and Global Leadership

USAID FROM THE AMERICAN PEOPLE

MOMENTUM A Global Partnership for Health and Resilience

"We see this good impact whereby children, when they're sick, they're being assisted before they get the danger signs and are being referred to the district hospital. They're being assisted as soon as they're sick, so those complications are not there. The instability is also not there. So that's the great impact of IMCI [integrated management of childhood illness]." – *District-level participant*

MOMENTUM works alongside governments, local and international private and civil society organizations, and other stakeholders to accelerate improvements in maternal, newborn, and child health services. Building on existing evidence and experience implementing global health programs and interventions, we help foster new ideas, partnerships, and approaches and strengthen the resiliency of health systems.

This report is made possible by the generous support of the American people through the U.S. Agency for International Development (USAID) under the terms of the Cooperative Agreement #7200AA20CA00002, led by Jhpiego and partners. The contents are the responsibility of MOMENTUM Country and Global Leadership and do not necessarily reflect the views of USAID or the United States Government.

Cover photo: Esther Mbabazi/Save the Children

Suggested Citation

Thorp, Marguerite, MD, MPA/ID, 2023. *Integrated Management of Childhood Illness in Malawi: Successes, Challenges, and Opportunities*. Washington, DC: USAID MOMENTUM.

TABLE OF CONTENTS

ABBREVIATIONS

DHMT district health management team

DHO district health office

DHSS Director for Health and Social Services

HSA health surveillance assistant

iCCM integrated community case management

IMCI integrated management of childhood illness

MOH Ministry of Health

***Note**:* this document contains direct quotes from interview participants. Where appropriate, we have designated the "level" of the participant quoted: (N) for national level, (D) for district level, and (F) for facility level. In some cases, where topics may be particularly sensitive, we have not specified the participants' level to preserve appropriate anonymity.

1. INTRODUCTION

This report is the result of a multi-level consultation with health workers, administrators, and leaders in Malawi regarding the implementation of integrated management of childhood illness (IMCI). It is part of a three-country assessment of IMCI sponsored by the U.S. Agency for International Development's MOMENTUM Country and Global Leadership project. Our team gathered diverse perspectives on IMCI in Malawi, including successes, challenges, and opportunities for the future. In this report, we seek to describe the current state of IMCI implementation in Malawi, share participants' recommendations for improvements, and offer topics for discussion to spur further action.

1.1 METHODS AND PARTICIPANTS

Interviews were conducted by two interviewers (one MOMENTUM staff member and one consultant) with 18 individual participants at the facility level (n=9), district level (n=7), and national level (n=2). The interview guide included sections on management and coordination of IMCI activities at the national, district, facility, and community level; the process of adapting IMCI guidelines; training and supervision; adherence to guidelines; and availability of supplies. Interviews were conducted virtually, in English, between 20 July and 4 August 2022. The median interview lasted 53 minutes. Verbal consent was obtained for all participants. All facility-level participants had received IMCI training. Of seven district respondents, two were IMCI trainers and one had received IMCI training in medical school, while others had not undergone IMCI-specific training. The two national respondents had not undergone IMCI-specific training, but had been working in child health at the district or national level for a combined total of 40 years. Facility-level participants included clinical officers, medical assistants, medical technicians, nurses, and nurse-midwives. Several facility-level participants were also facility in-charges. District participants included IMCI coordinators, who were either clinicians or environmental health officers by training, and district health and social services coordinators who led their district health management teams. Two representatives of the IMCI unit of the Ministry of Health also participated.

1.2 OVERALL SUCCESSES, CHALLENGES, AND RECOMMENDATIONS

FACILITATORS AND STRENGTHS

Participants at all levels emphasized the successes achieved by Malawi's IMCI program. It is implemented nationally and has support at the ministry level, with a full-time program manager and several support staff. Several participants pointed to the dramatic decline in under-5 mortality in Malawi, which was cut in half over a period of 15 years. They attributed this transformation in part to IMCI. When describing IMCI's strengths in Malawi, almost all participants emphasized the community level. IMCI at the community level depends on health surveillance assistants (HSAs), who are community-based health workers provided with training and supplies to deliver basic health care services at village clinics. HSAs are a unique cadre of community health workers with 12 weeks of post-secondary training. They work in village clinics with target catchment areas of 1,000 people. All active HSAs managing village clinics are trained in IMCI and expected to be the front-line providers seeing children from 2–59 months of age (sick infants less than 2 months of age are referred directly to health facilities). HSAs are affiliated with a particular health facility. Senior HSAs, based at facilities, are responsible for supervising HSAs at their village clinics and compiling their monthly reports. Thanks to IMCI service provision by HSAs, caregivers can access services more easily and travel shorter distances, children are helped earlier in the course of illness, and higher-level facilities are less congested than they were in years past.

"There was a great improvement in terms of reduction in number of children dying and reduction in number of children being admitted to the hospital [and] severe cases admitted in the hospital.… We received the cases, but not in a severe state. Why? Because they have already received a pre-referral treatment right there at the community." (D)

Decentralization was indeed an important theme in this study. Participants described the decentralization of *care* to village clinics, but it was also evident from the interviews that Malawi has achieved a remarkable degree of decentralized *decision-making* in IMCI. Officials at all levels described an expectation that their direct reports think critically about IMCI data and attempt to solve challenges on their own before escalating to higher levels. For example, district health managers expected the district IMCI focal person to propose solutions rather than only identifying problems, and facility staff expected senior HSAs to thoughtfully analyze data submitted by village clinic HSAs. Though some participants felt that their staff did not always meet this challenge, the expectation is proof that Malawi's IMCI program is attempting to decentralize decision-making and promote leadership in a meaningful way.

Regarding the protocol itself, participants at all levels agreed that IMCI was effective. They praised IMCI for being thorough, comprehensive, and systematic, and they described how IMCI training had changed some of their practice habits, ensuring that they did not miss danger signs and comorbidities that affected under-5 children.

"[Before IMCI] we were just asking about the presenting complaint. For example, if a child has come with a cough, we were just focusing on the cough only. But with this IMCI, we were taught how to assess, how to diagnose, even to prescribe the treatment." (D)

BARRIERS, CHALLENGES, AND RECOMMENDATIONS

Few providers explicitly identified weaknesses with the IMCI protocol itself, but their concerns deserve special attention, given the implications for the national program. Though many providers praised IMCI's comprehensiveness, one reported that their colleagues view IMCI as "time-consuming" *(F).* One district official described a fundamental conflict between the diagnostic reasoning in IMCI and what is taught in clinical training: "[IMCI] will classify as 'very severe disease,' whereas books will say, 'this is severe sepsis or severe malaria'" *(D)*, suggesting that the protocol may be more naturally suited to peripheral levels of care and may be met with some resistance or be seen as less effective among more highly trained providers at better equipped facilities. One provider echoed this district official, expressing concern that IMCI "cover[s] maybe the first five conditions that kills in children" *(F)*, but does not address many of the other challenges encountered in service provision; the provider specifically identified trauma and the lack of preparation they felt in caring for traumatic injuries in children.

At a system level, participants expressed a wide range of challenges facing the IMCI program. The common thread underlying most of the challenges and recommendations cited by participants was *resource limitation*, both human resources and financial. Many participants identified it directly, but even where it went unsaid, it explains nearly all of the concerns outlined by this study's participants. Increasing resources for IMCI implementation in Malawi will be essential to achieve IMCI's full potential. We have attempted to highlight the areas that participants felt were most in need of increased investment. Where possible, we also describe low-cost or cost-neutral changes in management, communication, or organization that may address some participants' concerns. (Note: the order of concerns listed here reflects relative ranking in importance according to participants, though it may not match the order in the body of the report.)

SUPPLIES: The challenge cited most often at all levels, and cited as the most important problem most often, was the availability of supplies and commodities. Participants focused on different kinds of supplies. Most emphasized drug stock-outs, especially of antibiotics, but many also mentioned lack of durable equipment and lack of printed materials. There was strong consensus that a weak supply chain and insufficient resources for procurement limited the efficacy of the IMCI program at all levels. **Key recommendation: (1) continue decentralization of drug procurement to the district level and allow district health officers (DHOs) to procure from private providers alongside Central Medical Stores to avoid stock-outs; (2) closely monitor and support the transition to cStock to ensure drug supply at village clinics.**

TRAINING: At the district and facility level, participants recommended more IMCI training, both for facility staff and HSAs. In the few facilities where outpatient departments were segregated by age, having more IMCI-trained providers would allow this workload to be divided. At facilities where all providers see children, more IMCI-trained providers would improve the overall standard of care. **Key recommendation: (1) increase the target of IMCI-trained health workers from two per facility to four per facility; (2) recruit partner support to expand facility IMCI training and guideline distribution; (3) consider abbreviated or on-the-job trainings for facility providers who were exposed to IMCI in their pre-service curricula.**

SUPERVISION: Several district- and facility-level participants also were concerned about the lack of supportive supervision, which serves both to gather data about IMCI implementation and to provide mentorship for providers. District officials pointed out that understanding the state of the IMCI program was difficult without adequate supervision to gather data. Facility providers desired to receive more supervision themselves and to be able to conduct more supervision of the HSAs in their catchment area. **Key recommendations: recruit partner support to provide quarterly supervision at all health facilities and monthly supervisions of all village clinics.**

PARTNER SUPPORT: National and district officials identified involving more implementing partners as potential solutions to many of Malawi's IMCI challenges. They hoped to identify new partners or re-engage previous ones to support drug and equipment purchasing, training, supervision, and review meetings. Of note, however, two participants identified partner involvement as a key challenge facing the IMCI program in Malawi, especially lack of coordination and partner-driven (rather than country-driven) funding choices. **Key recommendation: advocate for partners interested in supporting IMCI nationally, rather than exclusively district-by-district, or consider pooled funding mechanisms to improve national coverage of training and supervision programs.**

PROVIDER WORKLOAD: Several district officials described HSAs as "overburdened," struggling to manage the demands of multiple programs. Though they also hoped to hire more HSAs and open more village clinics, each HSA may still face excessive, competing priorities. Facility providers also described tremendous workload, especially during rainy season, and felt that training more facility providers (especially nurses) in IMCI may reduce their burden. **Key recommendation: (1) launch review of provider workload at facilities throughout Malawi, especially the impact of village clinic stock-outs on facility workload; (2) advocate for expansion of health workforce.**

OTHER CONCERNS: Several other concerns were described as very important by a smaller number of participants. These include the importance of IMCI review meetings, inadequate housing for HSAs, and lack of ambulances for referrals.

2. MANAGEMENT AND COORDINATION

2.1 INTEGRATED COMMUNITY CASE MANAGEMENT OR COMMUNITY IMCI

Integrated community case management (iCCM), often referred to in Malawi as "community IMCI," has been a central focus of the country's IMCI program. National participants saw community IMCI as "a child" or "a subset" of IMCI, but district- and facility-level participants clearly viewed community IMCI as the core of the program, frequently referring to community IMCI activities before, and to the exclusion of, facility activities. Generally, participants implied that community IMCI was more successfully implemented than facility IMCI in Malawi. One district participant was explicit:

"I think for community IMNCI in [my district], I would say we are on track, but there's need to do more with facility IMCI. Because even as much as the focus has been on training for the HSAs, I think we need to move to the clinicians and the nurses." (D)

Many participants attributed the success of the overall IMCI program to the community activities at village clinics: *"there has been a reduction of under-five mortality rate, and I attribute this to these community [IMCI] interventions" (D)*. Participants cited three key strengths: village clinics allow children to be seen early in the course of illness, allowing for **earlier intervention** and expanding access to rural communities; they lead to **facility decongestion** by treating mild cases and providing pre-referral treatment for sick children with danger signs; and they enable close **follow-up** of children seen in the facility.

Early intervention: *"IMCI is very important to the young ones, especially the under-five children, because they are given primary support right away from their villages." (F)*

Facility decongestion: *"At facility level, [IMCI] has reduced the workload whereby those children from hard-to-reach areas are treated there at the community by trained health surveillance assistants." (F)*

Follow-up: *"We ask the guardian, where exactly in the community are they coming from? We allocate an HSA for that community to follow up on that child... HSAs are going to their home and do follow-up and come up with feedback [for the facility]." (F)*

However, community IMCI in Malawi faces several challenges. Several participants described the high workload facing HSAs, as they are recruited to work on "most every program" *(D)*. Given this importance, the shortage of HSAs has notable impact. Most district-level participants described an inadequate number of HSAs; against the target of 1 HSA per 1,000 people, they said their districts had only reached 1 HSA per 1,600-2,000 people. One participant reported that over half of the trained HSAs in their district were not active at a village clinic due to scarce resources; only HSAs in high-priority, "hard-to-reach" areas were fully supported with village clinic infrastructure and supplies. One provider emphasized the centrality of HSAs to the whole of the IMCI program:

"If we don't have enough number of HSAs, especially trained HSAs, it means there's nothing that we are doing." (F)

Several district participants were concerned about the lack of appropriate housing available in HSA's target communities. As a result, HSAs face long commutes and often reduce the days of service at their respective village clinics.

"Our understanding is that a child should be seen within the first 24 hours when they get sick. If this particular HSA doesn't live in the catchment area... then a child gets sick today, which is on a Monday, it becomes a challenge now for this child to sustain the pain until Wednesday comes when that particular HSA will come." (D)

Finally, participants noted that HSAs are only as useful as the supplies available to them. For example, because they are often out of amoxicillin, HSAs' ability to reduce the number of patients at health facilities goes unrealized: they are forced to refer any child with pneumonia to a facility, and they may be unable to provide pre-referral treatment for children with severe pneumonia.

2.2 DISTRICT LEVEL

DISTRICT HEALTH MANAGEMENT TEAM STRUCTURE

Participants agreed that each district in Malawi has an active, highly functional district health management team (DHMT). The leader of the DHMT is the Director for Health and Social Services (DHSS), whose *"core duty is to ensure that all health-related activities are implemented within the district" (D).* A district medical officer, who reports to the DHSS, manages the IMCI coordinator.

DHSS participants and IMCI coordinators described the coordinator role similarly. In addition to ensuring that IMCI activities are implemented, coordinators serve as "a bridge" (D) between the DHMT and (1) the community and village clinics, (2) facilities, (3) partner organizations, and (4) the IMCI unit at the Ministry of Health (MOH). In line with the theme of decentralization, significant responsibility is devolved to IMCI coordinators. More than preparing reports, which are delivered to the district medical officer and DHSS, they are expected to identify challenges and suggest solutions facing IMCI implementation in their district. In addition to coordinating and liaising with active partners, they are also expected to identify potential partners to support activities that are otherwise unfunded by the MOH.

COORDINATION WITH OTHER PROGRAMS

In addition to IMCI coordinators, several disease-specific coordinators are members of the DHMT, including those for nutrition, acute respiratory infections, malaria, and diarrhea. District-level participants described strong, effective coordination between these programs and IMCI. They felt that guidelines were well-aligned, activities were well-coordinated, and reporting was as streamlined as possible; no participants complained of duplication or overlap between various district-level programs.

"There is good coordination, starting from ministry level, and the coordinators down here, the directors on the council, down to the community level, where also at the village clinics with HSAs on the ground." (D)

"We work as a team—that's what we do." (D)

FUNDING

At the district level, there is no IMCI-specific funding. IMCI coordinators participate in a district planning process, in which they propose intended IMCI-related activities, such as trainings and supervisions, to draft a district implementation plan. This plan is submitted to the district council, which incorporates it into a district development plan, which is then submitted to Parliament. Ultimately, the funds allocated by Parliament tend to fall far short of what is requested by the districts, but the district implementation plan is useful for sharing with partners who may be able to support IMCI-related activities. As one participant described, "we send [the district implementation plan] to our partners for them to come in and **shop the activities**." *(D)*

"Every year we meet and then we budget how much we're going to spend on each and every program in the health sector. But the budget, most of times, is not enough for us to do everything in the district, and for some of the activities we rely on partners." (D)

"Much of our funding from government is more administrative; but for the programs, we usually depend much on the partners. When the partner who supports such programs is not in that particular district, the program suffers." (D)

PARTNERS

Many district-level participants described the importance of *"selling" (D)* IMCI activities to partners. These contributions were essential to core IMCI activities such as training and supervision.

"If a program doesn't have a partner to come in and sponsor, it means that that particular activity will suffer; a year will pass without that activity being implemented." (D)

In addition to training and supervision, several participants described the importance of partners support for a stable supply of medications and other commodities.

"In the past, we had Save the Children, then things were just okay. And we were doing fine…. Then we could do the supervisions, we could do the review meetings, we could do the refresher trainings for the IMCI-trained personnel. We could have all the commodities throughout the year." (D)

Almost universally, participants hoped for greater partner support for IMCI in their district and nationally; some even made explicit requests that this report be used to elicit greater partner support. On occasion, however, some participants expressed concern for this reliance on nongovernmental organizations.

"If you leave 80% to the stakeholders or to the partners, when they leave, we suffer. It has to be the opposite way—the government has to be [accountable] to its program. Because these programs are not the partners'. These are our programs. These are our strategies. These are our interventions. So, we really need to be serious on this. We've been talking about this in several meetings. And we talk about this issue that the government will be like, 'Yeah, we're going to do this, we're going to do this,' and then they promise right there in the meeting, but once we come back to our programs, there's nothing that they're doing."(D)

2.3 NATIONAL LEVEL

ORGANIZATION AND REACH

In Malawi's MOH, the Preventive Health Directorate (one of approximately eight directorates) houses the IMCI unit. As discussed in section 1.2, the IMCI unit is responsible for both facility IMCI and community IMCI, but the scale and scope of community IMCI is currently much greater, with more robust reporting systems, mentorship structures, and training coverage. Both facility and community IMCI are implemented nationally, but rates of facility implementation vary depending on partner support.

FUNDING

As a specific unit in the MOH, IMCI does receive a budget line, but it is intended for costs of central administration such as stationery, office equipment, and fuel for national staff. One participant estimated that approximately 24 million kwacha (approximately US$23,000) was available each year and that the amount increased by approximately 10% per year, primarily to respond to inflation. National and district

participants agreed that national IMCI funding was inadequate and left significant gaps in possible activities, especially training and supervision. Medicines and equipment are procured separately, not through an IMCI-specific program.

PARTNERS

Partners are essential to the performance of Malawi's IMCI program. Participants at all levels suggested that increased support from partners would help solve some of the challenges facing the IMCI program. Key funders included the Global Fund for AIDS, TB, and Malaria; USAID funded projects; Last Mile Health; and UNICEF at the national level, with a long list of other partners operating in specific districts. As discussed throughout this report, several activities, including data review meetings, supervision visits, trainings, and medication supplies, were more frequent and effective when partners were involved.

"Coming to the resource requirement, we're still looking for partners to assist. That will help us in increasing the capacity of people who will be giving the service in the country." (N)

However, participants identified several challenges in working with partner organizations. They noted that partners tend to choose program areas and even districts to fund without regard to what was needed in the eyes of MOH officials.

"You have a partner, and he says, 'Oh, we want to support, we have resources, we want to go to district Y.' That is a problem, because that is a prescription…. It is possible that the district Y has already adequate partners." (N)

They also noted that vertical, disease- or condition-specific programming from partners compounded problems with integration and coordination. This was exacerbated by the lack of information provided to the IMCI unit about precisely what activities were funded and where.

"In UNICEF [for example], they have health and nutrition section, then under health and nutrition, they have nutrition as a separate vertical resource, and then the newborn or sick young infant, with community health also separate, and EPI is also sitting somewhere under the same child health…. It is the fragmentation at the source which is making us fail to utilize or benefit from the very same [integration] message that we are advocating. Yeah, let's do integration. Let's harmonize implementation. Let's do joint planning. But there is no pooled funding from the donor perspective. That is a big problem." (N)

One participant pointed to Cashgate, a high-profile graft scandal in 2013, as an explanation for some of the challenges with coordinating partners' activities. Since that breach of trust, they suggested, partners had demonstrated a preference for funding delivery systems and implementation rather than central support for MOH activities.

"From that point, there has been a different approach. Donors would not want to take money and leave it with the ministry at headquarters, they want to be on the ground and implement the issues." (N)

COORDINATION

National participants listed a variety of programs and units elsewhere in the MOH with whom they coordinate closely, including the childhood immunizations (EPI), nutrition, malaria, respiratory infections, and diarrhea control. IMCI unit staff and officials from these other programs and units coordinate both informally and through formal technical working group meetings. Each program or unit is responsible for producing treatment guidelines, but they consult with other appropriate programs and units to ensure guidelines are

aligned. They are also responsible for monitoring data and performance indicators associated with their disease area; data reporting is streamlined through DHIS-2. National participants expressed satisfaction with the degree of coordination between the IMCI unit and other pertinent officials in the ministry.

ADAPTATION OF IMCI GUIDELINES

Participants described a clear, organized plan for IMCI guideline adaptation, starting with a technical working group meeting to authorize a guidelines revision. With authorization, the IMCI unit holds an adaptation workshop in which technical experts and IMCI unit staff review the content, modify existing guidelines, pre-test, and finalize new guidelines. Thereafter, the unit conducts a training of trainers. This process is relatively streamlined and timely and was conducted promptly for 2014 (including possible serious bacterial infection guidelines) and 2019 (including pneumonia definitions) updates, but dissemination was then a significant challenge. Participants described scarce resources for printing, for supervision visits to distribute printed materials, and for training sessions to ensure adoption of new guidelines. One facility-level participant reported that they were still using Malawi's 2015 IMCI guidelines because they had not received training or printed materials for more recent updates.

2.4 DATA AND HEALTH INFORMATION SYSTEMS

DATA FLOW AND REPORTS

There are two reporting systems for IMCI-related data in Malawi: one for HSAs and village clinics and another for facility-based service provision. HSAs use a dedicated IMCI register to record each child they evaluate. At the end of the month, they prepare a report based on this register using Form 1A. They send Form 1A to the senior HSA at their associated health facility, who then compiles all of these forms into Form 1B, which is submitted to the district and uploaded into DHIS-2.

Facility reporting, on the other hand, is not aligned with IMCI diagnoses or terminology. Providers at health centers use a sick child register to record each encounter, and data clerks at each facility compile monthly reports summarizing this data for submission to the district and upload into DHIS-2 using form HMIS-15. Several participants confirmed that, though they would be happy to use them, there are no IMCI reporting forms available at their facilities.

"Mostly we ask [the district IMCI coordinator] to bring us IMCI reporting forms, but he said 'in our DHO, we don't have, just wait.' So we wait so many months, but we don't have it…. We just write in our daily register." (F)

MEETINGS AND IMPACT OF DATA

Regular meetings to discuss IMCI data are rare in Malawi. National participants reported annual stakeholder meetings with occasional quarterly meetings. District participants shared that IMCI review meetings (with HSAs and senior HSAs, not with facility providers) were only possible when sponsored by partners. Facilities did reliably hold general staff meetings every month, and IMCI-related topics may be discussed there; but, those meetings were designed to cover all topics facing the facility and so IMCI topics were only rarely featured. Despite this lack of formal discussions, participants described a notable degree of decentralization in decision-making regarding IMCI data. Several explained that IMCI coordinators, facility staff, and even HSAs were expected to make decisions in response to their own data.

"[In] the reports that [the IMCI coordinator] usually submits [to the DHSS], he generally talks about the objective of the program, the program indicators, how are we doing, the strengths of the program, [and] what have been the challenges? And then possible solutions and recommendations. I usually ask him to write the possible solutions and recommendations, so that it should not only come from me [as DHSS], but he should make suggestions and then recommendation." (D)

And indeed, many IMCI coordinators and facility staff reported taking responsibility in this manner, by reviewing their own data and making local decisions about their response.

"Myself, as a coordinator, I am supposed to analyze [the data] before I send it. For example, an HSA has given me the number of children that he has seen over [the report period]; if he has seen 20 cases, and out of these 20 cases he referred 10 because they were totally out of stock [of essential medicines], I need to understand that question, what is happening with this HSA?" (D)

Even at the facility level, multiple participants at different facilities reported local decision-making and planning regarding their facilities' data.

"We do evaluate the reports to see what cases we see frequently. For example, if it is malaria, we have to find measures on how we can address the community, maybe the use of insecticide-treated mosquito nets." (F)

Key recommendation:

- Identify partners able to support IMCI in a nationally comprehensive way, rather than exclusively district-by-district, **or consider pooled funding mechanisms to improve national coverage of training and supervision programs.**

Topics for further study:

- Do other programs in Malawi (like IMCI) receive national support from partners?
- What would an ideal relationship between the IMCI unit and a partner look like? How would responsibilities be divided?
- How would centralizing or pooling support affect district-level activities?

3. TRAINING

TRAINING COVERAGE

IMCI is a core element of HSA training in Malawi, and most district officials reported that all HSAs in active village clinics were trained in IMCI. Facility providers, however, are much less likely to be trained in IMCI. District officials confirmed that at least one (and usually two) providers in every facility were up-to-date in IMCI training, but facilities almost never had more than two providers trained; as a result, one participant estimated that only 6% to 7% of facility providers in their district had received full IMCI training. Because outpatient departments are rarely segregated by age and because the untrained personnel include providers on wards at inpatient facilities (particularly rural hospitals), this means a large number of sick children in Malawi are seen by providers without IMCI training. Instead, facility providers tend to rely on training from their degree and certificate programs, which in recent years is more likely to include some exposure to IMCI.

"I think for community IMCI in my district, I would say we are on track, but there's need to do more with facility IMCI. Because even as much as the focus has been on training for the HSAs, to some extent, I think we need to move [training] even to the clinicians and the nurses at the community level." (D)

Trainings do not receive government support, according to several participants, but tended to be funded by partners. Most recently, a series of trainings funded by the Global Fund has helped districts achieve the goal of one to two trained providers per facility. This recent push for training was evident among our participants: six of the nine facility participants reported being trained in 2022; for four of them, it was their first IMCI training.

TRAINING QUALITY

Most participants generally approved of the content, structure, and quality of IMCI trainings in Malawi, which adhere to a national standard set by the IMCI unit at the MOH. The only areas for improvement reported consistently among participants was that the training should be longer; though most providers had trained for four or five days, they recommended the training be extended to seven or 10 days, with more time spent on the practical components.

"I myself, even my field team, we have been trained for about a week…. The facilitators were saying, this is 4 days' training, but it's not enough. It was supposed to be two weeks." (F)

One participant referred to the training as "a starter pack" (F) for managing sick children, acknowledging that children presented with a wider range of illnesses than IMCI had covered. Another participant reported that the training was good, but his ability to implement it was limited by his lack of equipment and medication supplies.

"I was imparted much knowledge in as far as IMCI is concerned…. The IMCI training was very much significant. However, based on the protocol, we are unable to reach to its peak. Why? Because there are these stock-outs of other medications." (F)

Key recommendation:

- Increase the target of IMCI-trained providers from two per facility to four per facility.
- Recruit partner support to expand IMCI training and guideline distribution.
- Consider an abbreviated or on-the-job training program for facility providers who were exposed to IMCI in their pre-service curricula (but may not be confident with the protocol), which could reduce resources required for expanding IMCI training.

Topics for further study:

- How is IMCI addressed in medical and nursing schools and certificate programs? Is this coverage adequate for new graduates, or are there ways to offer abbreviated, less resource-intensive trainings for providers who have some exposure?
- Is it reasonable to expect IMCI-trained staff to share their knowledge with others at their facilities if they have a hard copy of guidelines available?
- Is there cooperation between private clinics and district officials in the provision of IMCI services at district level? How is data from private clinics reported within MOH? Are there any mechanisms available to establish this reporting?

4. SUPERVISION AND MENTORSHIP

SUPERVISORS

Facility providers in Malawi receive supervision and mentorship visits from district and national supervisors. These supervisors are IMCI-trained clinicians specifically designated as supervisors. From the district level, the group usually includes the district IMCI coordinator. Participants generally agreed that supervision from each team is supposed to occur quarterly, but facility-level participants reported widely varying intervals—some said they received supervision as often quarterly but most reported once or twice per year.

"To say frankly, the supervision [team], they come not frequently." (F)

Supervision and mentorship for HSAs is expected to occur monthly from the senior HSA at the associated health facility and quarterly from district teams, though most participants reported that actual frequencies fell well short of this goal due to resource constraints.

"[Supervision is] supposed to be regular, but due to resources, some of the organized trips fail, because we don't have fuel or people are engaged in [other activities]. We're supposed to go there at least once a month to see what is actually happening… [but] in reality, they don't happen every month. Maybe every two months." (D)

ACTIVITIES INCLUDED

Participants agreed on standard activities included in each supervision and mentorship visit, including:

OBSERVATION: all participants reported that the supervision they received and provided included observed clinical encounters. Along with the feedback that followed; this tended to be participants' favorite aspect of supervision.

EQUIPMENT AND STOCK REVIEW: all participants agreed that supervision visits included a review of equipment availability and medication supplies, though it was not always a standardized or checklist-driven review. Two participants at different facilities noted that the supervisors had promised to address shortages (a broken thermometer and stocked out drugs), but to their knowledge, no action had been taken after the supervision visit.

FEEDBACK: participants described feedback very positively, and universally agreed that they liked to know where they had fallen short and how they could improve their care.

Some participants reported that their supervisions included review of data and charts, especially when conducting supervision for HSAs, but this was less common at facilities, often because facilities lacked IMCI-specific recording forms.

REPORTS

Supervisors at all levels are expected to prepare reports after their visits. Reports on HSA supervision are shared with facility and district staff; reports on facility supervision are shared with members of the DHMT and, if conducted by the national supervision teams, with the IMCI unit in the MOH. If a partner funded the supervision campaign, which one participant estimated is the case for 80% of supervisions, the reports are also shared with the partner. As with other reports and data reviews, decision-making on these reports is expected to take place at all levels, including where the data was generated. Several facility participants reported discussing the supervision report, which was prepared about their own facility, during general staff meetings to plan how they can improve on gaps that were identified during the supervision.

"We had a supervision on ART [antiretroviral therapy] and there were some gaps. We called each other, and we sat down and discussed about the gaps that were noted and how we can plan to move forward and to [improve upon] those gaps." (D)

STRENGTHS AND WEAKNESSES OF SUPERVISION

As described above, participants valued most the observation and feedback cycle of supervision and mentorship visits. They expressed eagerness to improve upon their own clinical practice and provide higher-quality services to sick children. Several facility-level participants expressed a desire to conduct more supervision of HSAs in their catchment area, and nearly all district-level participants wanted to increase the frequency of supervisions in their districts.

However, it should be noted that increasing supervision frequency was rarely listed first when participants described their desired improvements for IMCI implementation; typically, it fell behind their recommendations for improved drug and equipment supply and training more facility providers. Though our interviews did not explore this issue in particular, this may be due to a perception among providers that, in the setting of extreme workload—they see 100 or more patients per day—supervision slows down their work. One participant described this explicitly:

"When the supervisors come, they come to a facility where most of the patients are gathered there. And you stop everything, and you talk only about the sick children for supervision's sake. It is very uncomfortable, more especially to other patients." (F)

Key recommendation:

- Recruit partner support to achieve quarterly supervision at all health facilities and monthly supervisions of all village clinics.

Topics for further study:

- Of the many partner-supported supervision campaigns in the past, which have been most successful and why?
- How can supervisions be organized to minimally disrupt facility activities?
- Supervisions often detect missing or broken equipment or stockouts; how can these be addressed more promptly?
- Is supervision considered as mentorship? How can mentorship be strengthened at both facility and community levels to make it sustainable?

5. SERVICE PROVISION

5.1 ADHERENCE

SELF-REPORTED ADHERENCE

Facility-level participants were asked the question, "What do you do when a sick child comes to your facility?" Their answers included a wide array of IMCI-associated tasks, including reviewing referral slips from HSAs at village clinics, careful history-taking from caregivers, physical examination, summary assessments, choosing treatments, counseling caregivers, and planning follow-up. Of note, several providers described the importance of triage at their facilities. Due to tremendously high workload (see below), they stressed that triage, often conducted by nurses or HSAs helping to register patients, is especially important to identify critically ill children.

"First of all, we triage the sick children. Those who are very sick are treated fast. Those who are sick, they are put on urgent; they are treated after the emergency ones have been treated. And those who are sick but they are not showing any danger signs, they are not showing any symptoms that tell you to treat that baby or that child fast, we put them on green; those are treated later, after the emergencies and the urgent ones are treated." (F)

When asked about how they counsel patients, most providers reported explaining how to administer medications, danger signs that necessitate prompt return, and routine follow-up plans. When probed, several providers listed a wide array of other potential counseling topics, including malaria prevention with bed nets and cutting tall grasses, cholera symptoms and prevention, and feeding guidelines.

"We do advise them on what to do and then we do advise them on when to come back for follow-up, if the child is not improving, or the child does develop the general danger signs. Or if everything is normal, we do give a date for them to come back for assessment again, follow-up visit." (F)

Participants agreed unanimously that they counsel caregivers on follow-up. They generally ask caregivers to return to the facility after 72 hours, even if the child has improved, though many participants acknowledged that caregivers often do not return if their child is well. Providers affirmed that HSAs are very helpful in facilitating follow-up; for particular children whose condition worries the providers, HSAs are able to trace the child in the community thanks to good communication between facilities and HSAs.

ADHERENCE FACILITATORS

Most participants at the national and district level believed that adherence to IMCI protocols was good at the community and facility level among personnel who had been trained. They cited the simplicity of the guidelines and recent training campaigns as facilitators to adherence.

"Yes, most of them, they follow the guidelines. There are no problems in following the guidelines, they usually follow. Once they're trained, they make sure that they follow. And recently we had trainings, iCCM trainings, and we went round to see what they are doing and it seems they're following the guidelines." (D)

Facility-level participants reported high levels of confidence in the IMCI guidelines. Aside from trainings and the ease of using the IMCI chart booklet, the most frequent explanation for their confidence was repetition.

"[Repetition] gives you confidence as well, because as time goes you can't fail when you see a sick child. At times, you may get to understand all the things in the guidelines, so you just check now and then. IMCI also adds a lot of memory because you're able to understand how you can assess the young infants." (F)

ADHERENCE BARRIERS

Two district officials reported concerns with the levels of adherence to IMCI at facilities, and they both blamed high workload. Facility-level participants described extremely high numbers of patients that they saw each day: of the nine facility participants, the median reported number of children seen per day was more than 50, and three participants reported sometimes seeing more than 100 children per day.

"I think the issue is with the human resource staffing levels, you'll find that maybe an HSA wants to start a clinic in the morning, like around nine. He's got a queue for mothers with their children. He is alone, he has to document, he also has to work, you find that sometimes they will do end up doing shortcuts. Sometimes they might not even follow the protocol." (D)

"What can I say? It's a poor country, frankly talking. We have a problem in terms of motivation of the health workers. Since it's a calling, still we serve the patients—but motivation is a big problem here in Malawi. Because you don't have time to rest… even weekends, others are relaxing in their homes, but we have no option, when the kids come to our facility. Though it is weekend, whatever, we still go and assist them. For example, in my facility, I am only one clinician." (F) [sees 80–100 sick children per day]

Workload is also a challenge at the community level, though rather than facing high numbers of sick children, HSAs are instead faced with many competing program priorities. Several district officials noted that because HSAs are relied upon for all community health programs, they have difficulties achieving all the goals set for them.

"HSAs, most of times they are overwhelmed. There is a lot of work that these cadres do. Because they are needed for most every program… We have given them a lot of work and a lot of responsibilities." (D)

"When there's nutrition, a donor comes through and they'll use an HSA. When we're doing reproductive health issues, especially community-based maternal care, they're using HSAs. Almost every program that's coming through, they use an HSA. So an HSA has been a busy person, to an extent that they would choose to say, 'Well, for now, because there's funding in IMCI, I would want to do much of IMCI initiatives.' There is more funding to nutrition programs, they will get busy with that program…. They have been highly relied on—over-relied on." (D)

Aside from workload, reasons cited for low adherence included lack of equipment, chart booklets, job aids, and drug supplies.

"If resources are available, it is simple to implement this. But it can be difficult to implement if we don't have the resources…. We can train each and every health worker. But if we don't have the resources, we are doing nothing." (F)

Key recommendation:

- Launch review of provider workload at facilities throughout Malawi, especially the impact of village clinic stockouts on facility workload.
- Advocate for expansion of the health workforce.

Topics for further study:

- What (or who) are the main barriers to expanding Malawi's health workforce? Are there enough graduates but not enough postings, or unfilled postings due to few applicants, or unfilled postings due to hiring delays, etc.?
- Can partner support be leveraged in a sustainable way to expand the workforce?

5.2 REFERRALS

Participants at all levels reported a clear understanding of how the referral system is intended to work. If an HSA encounters a patient with danger signs or any condition that cannot be treated at home, they are expected to refer to the nearest health facility; participants reported that they typically fill out referral slips and will give pre-referral treatment if they have the appropriate medications. There is no transportation offered to caregivers between village clinics and health centers.

"There are other conditions that we give pre-referral treatment, others we don't because of knowledge and skills. For example, if we talk of anemia… here in Malawi, most of the causes of anemia could be malaria, so the HSA or the community health worker is trained to give pre-referral treatment for severe malaria." (D)

"I do receive referrals from the community with well-written documents." (F)

Patients at the health facility with danger signs or other conditions that cannot safely be treated at the health center are referred to the district hospital. They are also expected to receive pre-referral treatment, which participants reported doing consistently so long as supplies were in stock. Most facility-level participants agreed that there is no standardized referral form from health centers to district hospitals; providers either improvise a form on plain paper or write details of the treatment in a patient's health passport.

There were disagreements among participants about the availability of ambulance transport from health centers to district hospitals. A small number of participants, mostly district officials, reported that ambulances are available for transporting referred patients most of the time. Nearly all facility-level participants, however, said ambulances were not available for under-5 children. They may be available for pregnant women, but due to fuel shortages, vehicle repairs, and high demand, sick children's guardians were instead expected to find their own transportation.

"When a referral is made here—and that's across the country, with this crisis that we have—referrals, which are mostly maternity referrals alone, they're the ones that are being considered [for ambulances]. But when it comes to IMCI, the under-5s getting sick and being referred, it's every man or every caregiver for himself. The providers will simply guide them, 'this particular child will need urgent attention to the district, so would you simply find means to reach the district?' They'll have to do it on their own." (D)

"Mostly, those that are referred, they do use their own means of transport. Because if you call the DHO, mostly they say that there is no fuel for the ambulance to come and take the patient. So [caregivers] do use the motorbike to go to the tarmac road; from there, they board a minibus to the district hospital." (F)

5.3 SUPPLIES

ORDERING

Participants reported receiving supplies through two primary channels: (1) the distribution system of the MOH and Central Medical Stores, and (2) partner-supported programs. Several participants described abundant supply of malaria medications due to the support of the Global Fund for AIDS, TB, and Malaria, in contrast to core IMCI medications such as dispersible amoxicillin, which was persistently out of stock.

For medications, purchasing decisions at Central Medical Stores are partly informed by the pharmaceutical team at the MOH, who prepares a quantification based on requests from the IMCI team. These stocks are then distributed for the districts, who take primary responsibility for ordering supplies from the district's

facilities. Central Medical Stores typically delivers drug supplies to facilities, though delivery of emergency supplies in response to impending or actual stock-outs are the responsibility of the DHO.

"We make an order [from Central Medical Stores], and we want these drugs and medical supplies. They get the order, but what they deliver to us is around 30% to 40% [of what we ordered]." (D)

Malawi has made two significant innovations to its commodity ordering system in recent years. First, the "cStock" system has been rolled out for HSAs, allowing them to electronically record their stock levels and needs. Several participants were optimistic that this would facilitate better commodity flow. Second, decentralization has allowed greater local control of procurement. Currently, districts manage 10% of their annual supplies budget, allowing them to make purchasing decisions for their district, though the decisions must be authorized by the MOH. District participants were unanimously enthusiastic about decentralization and were eager to see increases in the proportion of the budget administered locally.

STOCK-OUTS

District- and facility-level participants described the absence of essential equipment, medications, and printed materials at facilities. Though weighing scales were usually available, working thermometers were often unavailable and pulse oximeters were only available at district hospitals. Some medications were typically available, including oral rehydration salts, injectable gentamicin, and malaria treatment; but, participants described persistent shortages of oral antibiotics, especially amoxicillin. Many knew that recent IMCI guidelines recommend treating pneumonia with dispersible amoxicillin, but they reported having none for up to two years. Amoxicillin syrup was only intermittently available. Two participants explained that their facilities receive shipments every two to three months, but the amoxicillin lasts only two to three weeks. Zinc is often unavailable as well; one participant reported a recent five-month stock-out. Printed materials are frequently unavailable at facilities, including IMCI chart booklets, recording forms, and job aids.

"Most of the time, we are running out of antibiotics like amoxicillin… Maybe sometimes we do [without] for three months." (D)

CONSEQUENCES OF STOCK-OUTS

Participants at all levels described consequences of equipment, medication, and printed materials shortages. Lack of equipment led to poor diagnostic accuracy.

"It's one of the challenges when you go to a village clinic or the health center. The in-charge there does not have what is required to make a diagnosis of pneumonia, for instance; they don't have the diagnostic tools, they don't have the pulse oximeters, they don't have a thermometer. So clinically, it becomes a challenge." (D)

Due to the persistent shortage of amoxicillin, several participants reported using cotrimoxazole to treat pneumonia instead, because it is more readily available (likely in part due to its role in HIV treatment programs, which receive partner support for commodities). Several noted that stock-outs lead to unnecessary referrals, including from village clinics to health centers and from health centers to district hospitals, leading to congestion. When children are sick enough to require referral, they may be referred without pre-referral treatment.

"That's why we have a lot of children coming to the health facility, because there is always stock-out of this amoxicillin." (F)

The lack of printed materials, including registers, chart booklets, and referral slips, resulted in substandard documentation. Though IMCI recording forms were readily available for HSAs, they were usually absent at facilities; one participant reported that he rationed forms only for very sick patients; many reported only recording diagnoses in patients' health passports, rather than in facility documentation.

EXPLANATIONS FOR STOCK-OUTS

RESOURCE AVAILABILITY: participants at all levels described lack of general funding as the underlying cause for stock-outs. They frequently identified that partner-supported programs may have abundant supplies, but that MOH resources were scarce.

"We need to increase the drug budget, because the stock-outs are really perpetual." (D)

PLANNING AND DECISION-MAKING: several district-level participants suggested that stock-outs may be related to poor planning and decision-making at Central Medical Stores or the MOH.

"For myself, I don't get it… Central Medical Stores, because they supply it, they know [amoxicillin] is a fast-moving commodity. And not only that, I think they understand that in Malawi, these are the common conditions and we treat them with A-B-C, so let us have large stocks of such commodities. But it's not like that… I don't understand why. I find it hard to understand."

"Procurement prioritization is not good."

RECOMMENDATIONS TO REDUCE STOCK-OUTS

District-level participants had several recommended solutions to the challenge of supply shortages and drug stock-outs. Half of them advocated enthusiastically for further decentralization of procurement, feeling that district staff could better allocate resources to the needs of their district.

"The decentralization is supposed to be 100%. [Funds are] supposed to be controlled by the [district] council, not central government." (D)

Two participants described the benefit of competition in procurement that will or should accompany decentralization, suggesting that opening procurement channels to suppliers besides Central Medical Stores may introduce beneficial competition and increased drug availability.

"Central Medical Stores… has failed us because there is no competition. It's just one entity. When it doesn't have a product, it doesn't have; no one is going to fight it. Why don't they bring competition into the system? If we can bring many players on the market… if there is competition, you get shaken up. When you don't have amoxicillin, you know that your [competitor] is going to have amoxicillin supply." (D)

Participants were split on the role of partners and donors in alleviating equipment and drug shortages. Most hoped that a donor might take responsibility for IMCI-related supplies, noting that when organizations had done so previously, stock-outs were rare. However, two participants noted that temporary funding from partners inevitably led to stock-outs during the adjustment period after support ended; therefore, they felt that the government should take more complete responsibility for procurement.

"We still need [a partner] who would just come and take on a good bunch of what we do in IMCI, like procurement, provision of medicines and supplies, some logistical arrangements like stationery, or providing resources for supervision, mentoring, and so on." (N)

"Then once the partner has gone, [drugs are] a very big challenge. So we have to look for another donor. That means this period that are looking for another donor, then we have a problem of out of stock of other commodities." (D)

Several national and district-level participants reported that they had been making efforts to improve the flow of commodities, especially at Central Medical Stores. Though they had not yet seen the fruits of their labor, most were optimistic that cStock, ongoing decentralization, and the advocacy efforts put in place would lead to improvements, at least in drug supply.

Key recommendation:

- Continue decentralization of drug procurement to the district level and allow DHOs to procure from private providers alongside Central Medical Stores to avoid stockouts;
- Closely monitor and support the transition to cStock to ensure drug supply at village clinics.

Topics for further study:

- What additional support do DHMTs need to make use of decentralized procurement funds?
- Will IMCI benefit enough from decentralized procurement or are additional interventions needed?
- What criteria can be used to define IMCI and ICCM functionality at district level, i.e., what standard measure should be put in place to identify a functional district IMCI or ICCM-based services classified as IMCI friendly?

6. CONCLUSION

Malawi's IMCI program has demonstrated remarkable decentralization: service provision is conducted at the community level and decision-making and planning is decentralized to district levels. However, resource constraints continue to impede full implementation of IMCI, leading to frequent stock-outs of essential medicines, inadequate numbers of trained providers, excessive workload, and infrequent supportive supervision. These problems were felt most acutely at health facilities; while community-based HSA were thought to be the backbone of IMCI service provision, facility providers tended to feel overworked, undertrained, undersupplied, and as a result, unable to live up to their potential as IMCI service providers. This report has highlighted a number of recommendations improving IMCI implementation in Malawi, many of them highlighting key areas needing increased investment.

The authors of this report would like to extend their gratitude to the officials and providers in Malawi who participated in data collection. Their insights and candid feedback were extremely valuable in understanding the strengths and challenges of Malawi's IMCI program. Their commitment to improving the health and welfare of children in Malawi is both evident and admirable.

www.usaidmomentum.org

@USAID_MOMENTUM
@USAIDMOMENTUM
@USAID MOMENTUM