INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS IN THREE DISTRICTS IN GHANA

Successes, Challenges, and Opportunities

MOMENTUM Country and Global Leadership

USAID FROM THE AMERICAN PEOPLE

MOMENTUM A Global Partnership for Health and Resilience

"I think the future of IMCI [integrated management of childhood illnesses] in Ghana is bright. It only has to be given some time so that it's rejuvenated." – Facility-level participant

"Because the chart booklets are being used and used well, proper diagnoses are made and proper treatment is given, and it makes recovery faster. Children go home, they become well, and they don't report back to the hospital." – 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: Kate Holt, MCSP

Suggested Citation

Integrated Management of Childhood Illness in Three Districts in Ghana: Successes, Challenges, and Opportunities. 2023. Washington, DC: USAID MOMENTUM.

TABLE OF CONTENTS

ABBREVIATIONS

CHPS Community Health Planning and Service

DHIMS district health information management system

DHMT district health management team

GHS Ghana Health Service

IMCI integrated management of childhood illness

ISS integrated supportive supervision

NGO nongovernmental organization

USAID U.S. Agency for International Development

WHO World Health Organization

***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 participant's level to preserve appropriate anonymity.

1. INTRODUCTION

1.1 OVERVIEW

This report is the result of a multi-level consultation with health workers, administrators, and leaders in the Ghana Health Service regarding the implementation of integrated management of childhood illness (IMCI). It is part of a three-country (Ghana, Malawi, and Sierra Leone) assessment of IMCI sponsored by the U.S. Agency for International Development (USAID's) MOMENTUM Country and Global Leadership project. After more than 25 years of IMCI protocol implementation, global adoption of the protocol is widespread, but successful implementation remains elusive. Previous studies have shown gaps between aspirational IMCI policies and effective IMCI service delivery at the primary health facility level and with provider activities. This consultation was intended to explore in detail the successes achieved and challenges faced in IMCI implementation in three countries, with the hope of illuminating a way forward for IMCI implementation globally.

Our team gathered perspectives on IMCI in Ghana, including success, challenges, and opportunities for the future, from national-level participants and district and facility officials in three districts where MOMENTUM has supported IMCI training and implementation. In this report, we seek to describe the current state of IMCI implementation in Ghana, with a detailed focus on the three MOMENTUM-supported districts, share participants' recommendations for improvements in both local and national implementation, and offer topics for discussion to spur further action.

1.2 METHODS AND PARTICIPANTS

Key informant interviews were conducted with 17 individual participants at the national level (n=2), the district level (n=6), and facility level (n=9) in three MOMENTUM-supported districts. The three districts were chosen because they are actively implementing IMCI in health facilities and had received district-level support for IMCI in the past year.

- District 1 is predominantly rural and sparsely populated; it has no district hospital of its own and has difficult road transport of more than 50km to the nearest referral hospitals.
- District 2 is a peri-urban district; many areas have good electricity and mobile phone network, though some peripheral facilities (e.g., at least seven Community Health Planning and Service (CHPS) zones) do not have such infrastructure.
- District 3 is more sparsely populated but still considered peri-urban and is closest to Accra with good internal road networks and electricity access.

Participants were selected purposively from within these districts to achieve broad representation of facility type, health worker cadre, and leadership positions. National and most district-level participants had not been trained on IMCI, but were responsible for implementation of child health programs. Most facility-level participants had received IMCI training within the four months prior to the interviews through MOMENTUM-supported training programs, though some (particularly physicians' assistants) reported pre-service training in IMCI as well. Facility-level participants included physician's assistants and community and public health nurses working at district hospitals, polyclinics, health centers, and CHPS facilities. District participants included three directors of health services, two district public health nurses, and a medical superintendent of a polyclinic. Two representatives of Ghana Health Service, working in the Family Health Division, also participated. Interviews were conducted virtually between 15 December 2022 and 5 January 2023. The median interview lasted 55 minutes. Verbal consent was obtained for all participants. Interviews were

conducted and transcribed in English and coded in Atlas.ti v9.1.2 using a codebook derived from key concepts from the interview guide and emergent codes from a review of interview transcripts. Primary analysis was conducted by an external consultant after discussion and key themes were reviewed with MOMENTUM team members.

1.3 OVERALL SUCCESSES, CHALLENGES, AND RECOMMENDATIONS

FACILITATORS AND STRENGTHS

Though IMCI was introduced in Ghana in 1999, participants agreed that IMCI as a stand-alone program had been largely dormant for the past 10–15 years. There have been no nationwide training efforts, no IMCI-specific focal people at any level of the health system, and no large-scale partner support for IMCI for many years. IMCI is only being actively implemented in 11 of Ghana's 216 districts and only with partner support. Aside from active IMCI implementation, IMCI content has been integrated into other child health programming in Ghana, such as integrated supportive supervision checklists and malaria treatment protocols; however, participants in this study did not cite these activities as IMCI-aligned, consistent with a general emphasis on child health as opposed to IMCI as its own program. As a result, the strengths of the IMCI program in Ghana cited by participants were centered on the protocol itself and on the potential for IMCI to contribute to child health outcomes. District- and facility-level participants were aware of IMCI primarily due to recent MOMENTUM activities in their districts, and their perspectives are likely not representative of the general workforce of the Ghana Health Service.

Many participants at all levels applauded the IMCI protocol for being comprehensive and allowing providers to be very thorough in their care for children. Several mentioned specifically that by including evaluations of a child's nutrition and immunization status, providers were able to provide higher quality care, and facility-level providers felt that they had observed better outcomes for the children who had visited their facility. They also felt that the IMCI chart booklet, a quick-reference guide to the IMCI protocol available to facility-level providers and usually distributed at IMCI trainings, was easy to use and was helpful in ensuring protocol adherence.

Regarding the potential of IMCI in Ghana, many providers emphasized that the protocol can empower providers at all levels of the health system, especially the peripheral or most rural facilities, to offer high-quality services to children. National and district-level participants were eager to include CHPS providers in IMCI training, feeling that IMCI would be particularly beneficial to the services offered at CHPS facilities. One CHPS provider described how the IMCI training they recently received through MOMENTUM had made them feel more confident that they could provide quality curative care for children, despite not being physicians:

"There are some things we were told before that, because of the certificate we are having, we are not supposed to do [for] children … but the training has come to give us an opportunity to also … clinical classify appropriately." (F)

"Before you were able to diagnose or classify certain conditions, then probably [the client needs] a medical doctor or the lab to confirm, but with [IMCI] … I'm able to do something that a doctor would have done." (F)

BARRIERS, CHALLENGES, AND RECOMMENDATIONS

National participants explained that they hoped to reinvigorate the IMCI program in Ghana; however participants at all levels cited a number of barriers to effective IMCI implementation that they had encountered in their MOMENTUM-supported districts and anticipated may be barriers at a national level.

Four overall themes were discussed by multiple participants: 1) policy restriction on CHPS activities, 2) partner priorities, 3) frequent stockouts, and 4) lack of referral transport. These are summarized very briefly below alongside key recommendations; greater detail is included in the body of the report in each respective section.

COMMUNITY LEVEL—policy restrictions on CHPS activities: CHPS facilities are the most peripheral facilities in the Ghana Health Service, usually staffed by nurses who primarily provide preventative services, including immunizations and well-child care. Participants shared that CHPS providers were generally not authorized to prescribe antibiotics and therefore were unable to effectively treat pneumonia, though their core nursing training should prepare them with adequate skills and they are able to provide curative treatments for malaria and diarrhea. **Key recommendations**: CHPS providers should be the primary target of IMCI training. However, before they can effectively implement IMCI, two issues must be explored: 1) insurance reimbursement for IMCI services at the CHPS level, 2) authorization of CHPS facilities to administer antibiotics, and 3) implications of these increased responsibilities for CHPS provider workloads, supply chain issues or stockouts at CHPS facilities, and potential reduced need for referral transportation. Please see section 2.1, Community Level, for further detail.

NATIONAL LEVEL—partners and partner priorities: Large-scale implementation of IMCI in Ghana will likely involve support from international funding and implementing partners, but several participants mentioned challenges working with partners who may bring their own geographic or programmatic priorities to bear on program design. **Key recommendations for partners:** Liaise with Ghana Health Service early and often when planning IMCI activities so that implementation can be aligned with national priorities and to achieve a greater degree of localization and country ownership. Key recommendation for government: Continue to emphasize 1) interrelatedness of levels of health system and 2) importance of geographic spread of IMCI. Please see section 2.3, National Level, for further detail.

SERVICE PROVISION—referrals and lack of referral transport: In two of the three districts participating in this assessment, referral systems were reportedly compromised by the lack of availability of transport for sick children and their caregivers. **Key recommendations:** 1) Evaluate ambulance availability throughout Ghana, especially in very rural districts and consider the impact of CHPS authorization changes to ambulance demand. 2) Consider alternative models, including community-supported transport initiatives (after evaluation of why previous efforts have failed), facility-managed vehicles, and transport vouchers; and improving operations or increasing Ghana Health Service oversight of National Ambulance Service. Please see section 5.1, Referrals, for further detail.

SERVICE PROVISION—supplies and frequent stockouts: Participants at district and facility levels described widespread stockouts of medicines essential to IMCI service delivery. These stockouts led to unnecessary referrals, inappropriate out-of-pocket costs for caregivers, mistrust between caregivers and providers, and decreased morale for providers. **Key recommendations**: 1) Evaluate facility-level stockouts more rigorously to establish underlying cause(s), including regional medical stores challenges and National Health Insurance Scheme reimbursement delays and shortfalls. 2) Review contract framework that prevents emergency procurement of essential IMCI medicines. 3) Prepare for potential changes in CHPS activities with careful forecasting and supply chain modifications. Please see section 5.3, Supplies, for further detail.

Other opportunities: Participants identified several additional opportunities to create a strong IMCI program in Ghana that are not currently being realized, including aligning sick-child registers with IMCI protocols and establishing IMCI-focused leadership at the district level to ensure effective implementation.

2. MANAGEMENT AND COORDINATION

2.1 COMMUNITY LEVEL

The community-level foundation of Ghana's health system is in CHPS facilities, located in CHPS zones throughout Ghana. These facilities provide "basic health services," with an emphasis on preventative care. For children, this includes weight checks, malnutrition screening, and immunizations, which are often performed via outreach visits to communities, and, in some cases, only via outreach visits, as there may be no physical CHPS facility in some CHPS zones). Participants did not report any additional activities conducted by other community-level providers, such as would be included in integrated community case management (iCCM), though there may be iCCM- or iCCM-like activities occurring in other districts that were not included in this study.

CHPS facilities are staffed by trained nurses appointed as community health officers who have received three years of training on the "theory and practice of public health and other aspects of clinical care" (N). Curative care at CHPS facilities is currently very limited: antibiotics are not supposed to be prescribed or administered, even as pre-referral treatments prior to transfer to higher levels of care, and CHPS providers are generally only able to offer malaria treatment, oral rehydration salts, and zinc. Importantly, this means that the National Health Insurance Scheme does not reimburse for other curative care by CHPS providers.

"If there's a service that has to be provided at a district hospital, but that service is provided at a lower level, like the CHPS compound or a health center, health insurance will not reimburse because that service is not supposed to be done there. You are supposed to have referred the patient to the district hospital for the service to be provided. That is where we are having a challenge with IMCI because, at the lower level—at the CHPS compound, which is within the community, and at the health center level—if a child has to be referred for some of the conditions, we have to give pre-referral medication but they're not supposed to give antibiotics and some other medications." (N)

However, one district participant noted that reluctance to authorize antibiotic administration at CHPS facilities stemmed from other sources as well.

"In managing pneumonia, you could give a start dose of amoxicillin and send the child off to the next level for care—but some of the higher level, people like the pharmacists, [might] start complaining. 'Why will you give antibiotics? [What about] antimicrobial stewardship?' [I think they] were taking it a bit too far." (D)

Of note, national officials reported that their ambition is "to get all these [community health officers] also trained in IMCI, because they are the first point of contact for the community" (N). This vision was supported by district and facility respondents, several of whom reported that CHPS providers were capable of absorbing IMCI training and providing IMCI services; they also felt that this could have significant impact on child mortality in rural areas.

"My ideal vision would be that they are doing a lot already, and I think the training that they have is adequate, but they could be given a little bit more in the clinical aspects. Mostly what they do is preventive health. If they could do a little bit more of clinical care, it would help, and also if their numbers were increased." (D)

Key recommendation:

- CHPS providers should be the primary target of IMCI training. However, before they can effectively implement IMCI, three issues must be explored: 1) insurance reimbursement for IMCI services at the CHPS level, 2) authorization of CHPS facilities to administer antibiotics, and 3) implications of these increased responsibilities for CHPS provider's workloads and supply chain issues or stockouts at CHPS facilities.

Topics for further study:

- What are the main barriers to reimbursing for curative care at the CHPS level?
- What are the main barriers to allowing antibiotic administration at the CHPS level?
- How can these barriers be overcome?
- Are safeguards necessary to prevent over-prescribing of antibiotics at CHPS facilities?
- Are nutritional services being provided adequately at CHPS facilities?
- Are further steps necessary to ensure supply of nutritional commodities, availability of referrals, and insurance reimbursement for nutritional activities at CHPS facilities?

2.2 DISTRICT LEVEL

DISTRICT HEALTH MANAGEMENT TEAM STRUCTURE

Each of Ghana's 261 districts has an active district health management team (DHMT). Participants described a variety of roles of the DHMT, including ensuring logistics and supplies availability, conducting supervision, writing reports, managing human resources, and liaising between facilities in the district and regional or national authorities. Generally, the DHMT was not organized around disease-specific priorities, but rather around functional expertise; DHMT members have primary designations such as health promotion officer, health information officer, or accounts officer. Any disease-specific role tends to be a secondary assignment, as one district official described:

"When it comes to specific programs like funded programs, you'll find that the district public health nurse is also the district HIV focal person. The district health information officer is also the district malaria coordinator. We call them coordinators. They look at these other vertical programs on top of their core duties." (D)

None of the participating districts reported having an IMCI coordinator as part of their DHMT, though some did report having a child health coordinator or a reproductive and child health coordinator. When asked about the lack of an IMCI-specific coordinator, two participants were unsure whether that specific assignment would improve program implementation or not:

"This interview has opened my eyes to assign somebody to that role…. [But] somehow, the work gets done. Though we don't have a focal person, the work gets done." (D)

"We don't really have a focal person, a specific person for IMCI. We try as much as possible not to assign people to [program-]specific roles because when the person is not there, nothing happens…. In the absence of that person, you don't find activities being carried out well." (D)

FUNDING

There is no IMCI-specific funding at the district level in Ghana, though one district participant reported a budget line for reproductive and child health that included "trainings, supervision, logistics, and monitoring" (D). DHMTs and facilities have separate funding streams, with facilities receiving funds directly from the National Health Insurance Scheme, separate from the DHMT funding that supports district-wide activities.

"We have facility-based budgets and DHMT budgets. The DHMT budget will look at [DHMT] salaries, monitoring, trainings … and personnel development." (D)

One district participant reported that the funds available for general priorities for children under 5 were adequate for many activities, but another felt that IMCI-specific funding would have a positive impact on health outcomes. They expressed concern about inequitable funding levels, both along rural-urban lines and because facility managers facing many competing priorities may not focus on under-5 health. When asked what they would recommend improving IMCI implementation in their district, this respondent replied:

"I would have specific funding earmarked for IMNCI because once there's funding the objective set, then you would find that the managers will step up and ensure that the work is done. Then I would also make sure that I push the resources to the areas that needed it the most, the rural areas, the deprived communities where we don't have the doctors, where it's difficult to reach the central level or to assess a health facility." (D)

PARTNERS

District participants agreed that aside from MOMENTUM, there were no other partners currently supporting IMCI as a specific program in their district, though there were other partners addressing other issues that overlapped with IMCI, such as immunizations and water and sanitation. For example, one participant cited that Management Sciences for Health was partnering with their DHMT on integrated supportive supervision visits, which overlaps with IMCI but is not exclusively intended to support IMCI. Another district participant described a large IMCI training campaign led by UNICEF in 2006, but the effort had not been repeated. District participants were generally open to greater partner involvement to support IMCI implementation, though they emphasized the importance of aligning goals and joint planning to ensure success.

"[MOMENTUM has] actually been very helpful. Through MOMENTUM, our district has seen a lot of changes in logistics [and closing the] knowledge gap. We've actually benefited a lot from MOMENTUM, so we hope that they continue to partner." (D)

Other opportunities:

- As Ghana's IMCI program is revitalized, consider the role of district child health coordinators or officers and whether their responsibilities or authority needs to be expanded to achieve IMCI goals.

Topics for further study:

- What are the current responsibilities of district child health coordinators? Are these adequate to ensure effective IMCI implementation, including nutrition services?
- Do all districts have active child health coordinators? What is needed to ensure that each district has appropriate support for IMCI/child health?
- Are private facilities—where an important portion of health care is sought in Ghana—implementing IMCI successfully? How can service provision at private facilities be improved and aligned with IMCI guidelines?

2.3 NATIONAL LEVEL

ORGANIZATION, REACH, AND FUNDING

IMCI activities in Ghana are overseen by the Newborn and Child Health Program, which is housed in the Family Health Division. The division is part of the Ghana Health Service, an agency of Ghana's Ministry of Health and responsible for provision of health services at public facilities and public health activities throughout the country.

National and district participants explained that IMCI is not being comprehensively implemented across Ghana and only 11 of Ghana's 261 districts have active IMCI programs, all due to district-specific partner support from MOMENTUM (seven districts) and World Health Organization (WHO)/UNICEF (four districts). There is no national funding dedicated to IMCI. However, national leaders were hopeful that IMCI implementation would expand in the coming years and had included training of trainers in their plans, though they expect that these activities will require external partner support. They related plans to continue to advocate for child health and IMCI programming.

"This [goal] of getting enough health workers trained in IMCI across the country cannot rest solely on the support of partners and NGOs [nongovernmental organizations]. No, that won't happen. We need to get government of Ghana involvement. We keep making the case and, hopefully, we'll get somewhere. But currently, the situation is that we don't have adequate governmental support." (N)

Other structures exist to support child health in Ghana, including a National Child Health Committee with its Newborn Subcommittee, a working group that includes representatives from other ministries to address children's issues broadly. The group generally meets once or twice per year but has not met for the last two years due to lack of dedicated funding (though the Newborn Subcommittee has resources to meet provided by UNICEF).

PARTNERS

In 2006–2007, WHO and UNICEF supported a large IMCI campaign in Ghana with widespread trainings and supervision. Since that program ended, participants reported that there have been no partners supporting IMCI implementation at a national level until MOMENTUM's recent participation. There may have occasionally been "pockets of training" (N) supported by NGOs working in districts, but no nationally comprehensive efforts. Participants acknowledged that without a national program, partner support is essential to train providers in IMCI. However, they described difficulties in working with funding partners, including partners' preconceived intentions for where and what level of the health system they want to support, despite these ideas not matching national priorities.

"We do get funding, usually from USAID and sometimes from other NGOs, but it is not comprehensive … say a region has 15 or 16 districts, the NGO will come in and decide that they are working in only three out of the 16 districts. Some of them even decide that they want to work only at district hospital level … and leave [out] the lower levels as well as the higher levels. We've tried to guide them, to let them understand that that kind of approach is not effective. It is wasteful because … the levels are interrelated, so it doesn't help to achieve our objectives." (N)

National participants reported that their preference would be to conduct trainings on a regional basis, to "saturate the system," rather than in isolated "pockets" (N).

COORDINATION

The Public Health Division, another division aside from the Family Health Division where the Newborn and Child Health Program sits, is home to several disease-specific programs including those focused on malaria, tuberculosis, HIV, yaws, neglected tropical diseases, and others. National participants reported that the primary venue for collaboration with these programs was on revising IMCI guidelines and documentation.

ADAPTATION OF IMCI GUIDELINES

National participants reported that Ghana's IMCI guidelines were last revised in early 2021, primarily to include oxygen therapy and dispersible amoxicillin for treatment of severe pneumonia as well as new guidelines for managing sick children under 2 months of age, though they "took advantage" of that revision process to update sections on malaria, HIV, tuberculosis, and nutrition. The time between the release of new global recommendations and the finalization of Ghana guidelines was approximately two years, as it had been for the last revision in 2014–2016.

Participants reported that expertise and funding were two barriers to more rapid adaptation:

"We've had very good facilitators in-country who are all based in IMCI, so they lead the process. Unfortunately, most of them are retired … and going into the future, we are not likely to be able to get them to do this work because it's a very intensive exercise. That's one of the reasons that we are trying to build up capacity in IMCI." (N)

"The issue of funding is also a challenge because the adaptation process is expensive…. The material goes through a number of reviews, et cetera, and you have to now get the final documents and print them for training. We do the pilot to be sure the content is valid. When it is finally approved, you have to print copies for trainings, both for facilitators and for the trainees. These are all very expensive." (N)

Key recommendation:

- For partners: liaise with Ghana Health Service *early* and *often* when planning IMCI training activities so that implementation can be aligned with national priorities and to achieve a greater degree of localization and country ownership.
- For the government: continue to emphasize 1) interrelatedness of levels of health system and 2) importance of geographic spread of IMCI, especially when planning trainings to achieve greater national coverage and system "saturation."

Topics for further study:

- How can the Ghana Health Service incentivize or encourage partners to train at 1) all levels and 2) wider geographic range?
- Should the Ghana Health Service limit, restrict, or decline to support partner activities if they are not aligned with national priorities?
- How can Ghana Health Service leadership take greater responsibility for IMCI implementation and leverage domestic resources and leadership for better child health? outcomes?

2.4 DATA AND HEALTH INFORMATION SYSTEMS

REGISTERS

Currently there are no standard sick-child registers that align with IMCI guidelines, especially with regards to diagnosis or classification. Facility participants reported improvising by creating their own registers copied onto blank paper from the IMCI registers they studied during their recent trainings. They also described some duplication in registers; for example, a child requiring oral rehydration salts would be recorded in both a general register and in an oral rehydration therapy register, and a child with malaria or malnutrition would be recorded both in a general register and a condition-specific register. However, national participants reported that updated, harmonized IMCI register forms and reporting processes are currently in development. Once they are completed and printed, national participants were confident they will be promptly disseminated to facilities.

DATA FLOW AND REPORTS

Facilities generally submit monthly reports to their subdistrict or directly to the district; reports include case totals for specific diagnoses, as well as weight checks and immunizations given by CHPS facilities. DHMTs have a member assigned to health informatics who reviews the reports for consistency and uploads them into the district health information management system (DHIMS). Reports from DHIMS can be reviewed at any level. In accordance with the lack of IMCI registers, most participants did not fill out any IMCI-specific reports; under-5 data was captured in the general monthly morbidity and mortality report uploaded to DHIMS.

DATA REVIEW MEETINGS AND IMPACT OF DATA

Though participants described few to no IMCI-specific data review meetings, they did endorse monthly to quarterly general review meetings at the district and facility level where under-5 data or cases may be discussed without an IMCI-specific focus. At the facility level, these meetings may include discussions of individual patient cases and poor outcomes or performance indicators, such as immunization rates or top causes of mortality:

"At least every month, we have two meetings with the nurses in the ward, and then the nurses at the OPD [outpatient department]. We will look at the cases that we are able to manage successfully and [those] we are not … able to manage. We would account for what are the reasons and what can we do better so that so we can improve upon the care that we give to the children?…. We review data. We look at the admission and discharge attendance book. We look at how many children have we lost, what were the reasons? How many children that are not improving well, what can we do better? If we see that we are actually making progress, we will applaud ourselves." (F)

"When we have a mortality and morbidity meeting, we are looking at the [causes], the increasing top 10, then why that increase? Is it with the season? Is it a message that is not getting to their community or to a particular referral center or a CHPS compound? We try to figure out the problem, then we sort it." (F)

At the district level, participants described regular or semi-regular meetings to discuss district performance indicators, especially immunization rates.

"Recent, we discussed about our neonatal [mortality rates]. That's when we're thinking that we need to do something different. We presented it and we discussed with them as to how to solve that problem because it's worrying. We're anticipating a reduction…. Another issue too was our low [immunizations]. We discussed and

then we agreed on doing mop-up…. When we see that there are low [immunization] rates, then we involve [the subdistrict staff]. We all review it together with the staff, then we now propose areas as to how to solve it and we came out with doing mop-up…. We're getting a good number of figures." (D)

National participants reported that there were no IMCI-specific meetings, either, but that under-5 data was discussed "comprehensively" in meetings to review newborn and child health data. Though national participants expressed some interest in IMCI-specific review meetings, they also expressed skepticism that narrowing the focus would improve outcomes relative to the current, more comprehensive model.

Other opportunities:

- Carefully monitor the dissemination of new IMCI registers and reporting processes, especially in many districts without IMCI-trained providers, and opportunities to align IMCI reporting with DHIMS.
- Leverage the existing data review meetings to ensure monitoring of IMCI-specific data without duplicating meetings or detracting from current processes.

Topics for further study:

- Will providers be able to utilize IMCI registers and reporting forms without completing IMCI training? Should the IMCI register/report forms be rolled out before or alongside national IMCI training campaigns?
- Can or should data review meetings be standardized across facilities and districts? How can partners and national planners ensure that IMCI data is covered without duplicating or distracting from effective, current data review processes?
- What role could digitization play in improving IMCI data management?

3. TRAINING

3.1 TRAINING COVERAGE

National and district participants agreed that IMCI is not being comprehensively implemented across Ghana. Only 11 districts out of 261 have active IMCI programs, including recent IMCI trainings and IMCI-focused supervision and monitoring. Within the three districts that participated in this assessment, officials in two districts reported that at least one person at every facility in the district had been trained, while the third reported that only "pilot" facilities (e.g., two out of 10 health centers in the district) had staff that were up-to-date on IMCI training.

- District 1 – one person at every facility in district, but only 5% of all providers
- District 2 – only trained providers in pilot facilities (two out of 10 health centers and eight CHPS facilities)
- District 3 – one person at every facility, but only five or six facilities active; any other trained providers were trained more than five years ago

In light of the low coverage of providers' training, many facility-level participants had trained colleagues at their facilities shortly after they received official training in IMCI, though one participant noted that it was difficult to maintain motivation among providers who had not received formal training.

"It's a big challenge [to get] dedicated staff who are interested in IMCI [If they have not received IMCI training] … giving them that knowledge, so that if you're absent, they will also step in and attend to these children the way you should have attended to them." (F)

A few training institutions in Ghana include IMCI in their pre-service curriculum; physician's assistants, some public health nurses, and nurses receiving specialized training in pediatrics are exposed to IMCI prior to entering service.

3.2 TRAINING FUNDING

Since the first wave of UNICEF/WHO-supported trainings in 2006–2007, Ghana has not had a national IMCI training campaign. External partners may periodically offer to support trainings, but national participants explained that these are often done in a non-comprehensive way, either being geographically limited or targeted only at a certain level of the health system (such as a district hospital) without including higher and lower levels. In either case, national participants felt that partners often prioritized their own program goals over the recommendations of the ministry. District officials confirmed that IMCI training opportunities were often piecemeal or patchwork in nature, though one described a successful cooperation between his administration and MOMENTUM when selecting the few facilities that would be included.

3.3 TRAINING STRENGTHS AND WEAKNESSES

Facility-level participants were generally very positive about the quality of their recent IMCI training, noting specifically that "caring" trainers and the practical components of the training were especially helpful. However, participants were in nearly unanimous agreement that the one-week training was too short.

"It was a bit stressful…. The duration that we had to go through the whole materials and meet the dates for completion was a bit small, was just some few days and we had to stress ourselves so much." (F)

Participants at all levels agreed that IMCI training should be dramatically expanded. Because the current reach of IMCI is very limited, a major training campaign would be required to implement IMCI across all of Ghana. National participants reported that that is a key goal, and though it will require significant resources, they have already mapped training needs and are aware of the steps required (such as training facilitators in every region) to make the goal more feasible. Two facility-level participants said they would like to see more types and cadres of staff trained in IMCI, and one mentioned CHPS providers specifically. Some participants emphasized the importance of increasing refresher trainings as well.

Other opportunities:

- As planned by national officers, pursue goal of training throughout country, with particular focus on CHPS providers.
- Consider lengthening training, especially for providers with less experience or previous formal training.

Topics for further study:

- Is there any possibility of domestic resources for training? Or other creative opportunities for partner support at a national level? How can pre-service training be expanded beyond the few institutions that currently include it?
- What might an optimal training length be? How can GHS assess the cost/benefit trade off longer trainings?
- In a setting with relatively high digital access and literacy such as Ghana, can IMCI training (or parts of the IMCI training) be offered via distance learning? How could this reduce costs and improve efficacy of IMCI training?

4. SUPERVISION AND MENTORSHIP

4.1 SUPERVISORS

Facility providers in Ghana receive regular integrated supportive supervision (ISS) visits from members of the DHMT. These are planned quarterly and usually occur three times per year. Though IMCI activities are incorporated into the ISS checklist nationally under a broader child health section, district and facility participants were not aware of IMCI's integration into ISS. IMCI-specific supervision visits have been conducted by MOMENTUM staff in MOMENTUM-supported districts since the recent wave of IMCI trainings—one or two visits were conducted in 2022; participants were very positive about these visits. There are other program-specific supervisions supported by the DHMT, such as for immunizations, malaria, TB, and HIV.

ISS visits to health centers and polyclinics include observing clinical activities, reviewing registers, discussing cases, and reviewing stock levels and equipment availability and functionality. Several participants reported that there was a feedback session after each supervision visit to discuss and "review gaps" as a group.

Supervision visits to CHPS facilities included a detailed review of public health activities, especially immunizations.

"How many [children] got BCG? Why did that number not get BCG? Is it that [supply] was short or their mother didn't come? And why didn't you follow to the house?" (D)

4.2 REPORTS AND SUPERVISION FEEDBACK

Reports are usually drafted following supervision visits and are often translated into an "action plan," which participants agreed was an effective system that often dealt successfully with problems.

"We normally draw an action plan with timelines so that it'll help us with subsequent supervision so that subsequently, when we go [back] there, we will look at the action plan that we did together with them to know whether the gaps we identified together they have been resolved or not." (D)

Several district-level participants offered anecdotes of issues detected during ISS visits and subsequent actions taken. One participant reported that prior to a recent supervision visit, the regional medical stores had frequently delivered medications that were not requested by the facility; after addressing this with the DHMT, the problem resolved. Another reported an infant weighing scale being provided after a supervisors discovered that none were available.

"The issues of [regional medical stores] supplying drugs that are not being requested by the facilities was not written down, but [after supervision], we sent the message and I later consulted the senior colleague, and it was rectified." (D)

"During one of our supportive supervisions in one facility, they were not having baby weighing scale…. They were using the adult weighing scale for weighing newborn babies. What did we do? We came together that I should put my name in for that weighing scale in the next two weeks. I wrote to [find a] weighing scale in the stores. I picked it up and sent it to the facility." (D)

One facility-level participant reported similar efficacy of the MOMENTUM-led IMCI supervision visits. The MOMENTUM supervisors identified missing equipment and the participant was able to request and receive that equipment from their medical director.

"When they recommended these logistics, I also met with the medical director of the facility … and then I told him that to be able to implement our IMCI program successfully in the facility, these were the recommendations that were made from the [MOMENTUM] team. After that, I think they now brought some of the supplies." (F)

4.3 STRENGTHS AND WEAKNESSES OF SUPERVISION

Participants were overall positive about the frequency and efficacy of ISS visits conducted by their DHMTs. Facility-level participants who had received IMCI supervision from MOMENTUM were similarly positive, though they identified that "for sustainability, we cannot always wait on MOMENTUM" (D) for IMCI-specific supervision.

5. SERVICE PROVISION

5.1 ADHERENCE

SELF-REPORTED ADHERENCE

Facility-level participants at MOMENTUM-supported facilities interviewed for this study 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 that aligned with expected activities conducted by IMCI providers, including careful history-taking from caregivers, physical examination, summary assessments, choosing treatments, counseling caregivers, and planning follow-up. Facility-level participants generally rated their confidence with the IMCI protocol as very high, in part due to the recency of their training. District and national participants agreed that the trained providers who had received supervision seemed to be performing very well and adhering to the guidelines carefully.

"Generally, the workers who have been trained are enthusiastic about IMCI. They follow the guidelines and the protocols." (N)

Nearly all participants reported evaluating children for danger signs, and many reported assessing immunization and nutritional status and the child's respirations and hydration on physical examination. Participants described counseling caregivers using the IMCI chart booklet, especially on feeding and nutrition. Follow-up plans included asking caregivers to return to the facility, making home visits, and making phone calls, either from providers to caregivers or vice versa.

ADHERENCE FACILITATORS

District and facility participants pointed to providers' motivation as a key facilitator of good adherence. The sources of motivation listed by participants included intrinsic (one participant reported their main motivator was being "able to provide quality services to clients" [F]) and extrinsic (including recognition for their additional certification and monetary incentives). Notably, several participants reported that receiving additional training and gaining further clinical knowledge was, in itself, a motivating factor.

"Before you were able to diagnose or classify certain conditions, then probably [the client needs] a medical doctor or the lab to confirm, but with [IMCI], because it's guiding you do this, check for this, check for this, then you are able to classify. [It works] without the person going outside to the next level or to the lab to go and waste time, resources, and energy…. I think that is a factor that I actually see that it impresses me. I'm able to do something that a doctor would have done." (F)

In addition to these sources of motivation, several participants reported that repetition was a key factor in their adherence to IMCI guidelines, and they believed they would continue to increase in comfort and confidence with the guidelines over time. Two participants mentioned that the availability of chart booklets was key to providers' success.

ADHERENCE BARRIERS

Participants listed a wide variety of barriers to adherence, with only three themes mentioned by more than one participant: lack of supplies, lack of training, and the perception that IMCI was "time-consuming" because it demanded more thorough, exhaustive evaluation of children than routine non-IMCI care, including reviewing conditions for which caregivers might not have presented such as malnutrition.

National and district participants described lack of medicine, equipment, and registers as barriers in adhering to IMCI protocols.

"They're adhering to the protocol, but then what they need to get the work done is not sufficient or is in limited supply. One is a service provider who is adhering to the protocol and has assessed and classified a child and has to give treatment, but what it takes to provide those treatments is not there. You see that she has done her parts, assessing, classifying, and then coming up with treatment, but the availability of the treatment to give is not there for her to give." (N)

Facility-level participants felt that as long as they were trained, adhering to IMCI protocols was not difficult, and they were confident in their ability to do so, but they attributed their colleagues' discomfort with IMCI to their lack of training. However, some participants noted that even trained providers struggled to implement the guidelines if they felt constrained by excessive workload and that this problem was compounded by the lack of IMCI-trained providers, resulting in heavy workload falling on the few with IMCI training.

"For those who are not performing well, it's not because they don't know. One of them said it was time-consuming. Even though he knew what to do at a point in time for some of the clients, he didn't do that … he smiled and said, 'At times, it's the client load.' We urged him that for every client, he should and also try to give on-the-job training to others so that if there is so much pressure on the team, the others can be of help." (D)

When describing their workload quantitatively, most facility participants reported seeing five to 15 sick children per day. CHPS providers reported seeing perhaps 30 children, but because most of their activities were for well children, they were not able to quantify the number of sick children included in that figure.

5.2 REFERRALS

Facility-level participants expressed clear understanding of an idealized referral system, in which a sick child requiring higher-level care is given a referral slip and prompt transportation to the next level facility (with the sending provider sometimes calling the receiving facility directly to give verbal report), and feedback is returned to the sending facility regarding the child's treatment and outcomes. However, participants in only one of the three districts surveyed for this study reported that the referral system was working smoothly.

"We have a smooth referral system with the biggest facility in the region.… It's not so far. Maybe with an ambulance within 30 minutes, you should get to the hospital. We don't have any problem with them. They receive our kids, our babies with no issues." (D)

In the other two districts, participants reported that transportation and feedback mechanisms were often problematic. In both districts, the National Ambulance System was considered very unreliable.

"Personnel has been sensitized on [the need for timely referrals], which they have good knowledge in, but the transport is our challenge. We have one national ambulance in the district but it's not managed by Ghana Health Service. It's managed by National Ambulance Service.… The service is not all that regular. It has been getting frequent breakdowns. In a year, it can serve you a quarter [of the time], if you want to analyze the time it works." (D)

In another district, a participant described a "community emergency transport system" established by the district about five years ago, which aimed to generate resources from the community to ensure the availability of transport to higher-level facilities. However, the system only lasted for two years before it ran out of funds.

"Community emergency transport system [CETS] was formed but is not active. About three facilities are still using the CETS but The rest will say you look for your own means. And sometimes [with] some of the severe cases we have challenges of them getting to the referral receiving facility. It's a major problem in our district." (D)

Finally, participants reported inconsistent effectiveness of feedback loops after referrals were made. While some reported always or usually receiving feedback, others said it was often absent, especially from regional hospitals.

"Feedback often doesn't come from the higher levels." (D)

"The challenges we have with referrals is that the feedback from the higher facility, like the regional level, most of the time we don't get their feedback within our district." (D)

Of note, several participants described two preventable causes of referrals: first, the prescribing restriction on providers, and second, stockouts. Because CHPS facilities and even physician's assistants are restricted in which antibiotics they were able to prescribe, they had to refer children whom they felt qualified, but not authorized, to treat. In other cases, although a provider was authorized to prescribe the antibiotics, his facility did not have them in stock, so he was forced to refer.

"One I referred for instance, gentamicin was not there, ampicillin was not there. The distance the patient would have to travel to get those drugs is the same distance the patient travels to receive their treatment [from my facility]." (F)

Key recommendation:

- Evaluate ambulance availability throughout Ghana, especially in very rural districts, and consider the impact of CHPS authorization changes to ambulance demand.
- Consider alternative models, including community-supported transport initiatives (after evaluation of why previous efforts have failed), facility-managed vehicles, improving operations or increasing Ghana Health Service oversight of National Ambulance Service, and transport vouchers.

Topics for further study:

- What would an ideal transport system in Ghana require?
- How can policies change to prevent avoidable referrals (i.e., due to stockouts or limited authorization of CHPS and health center providers)?

5.3 SUPPLIES

ORDERING

Facility staff in Ghana use an online system to manage their facility's stocks and to order supplies, though this can present a challenge for remote facilities, many of which lack internet access and/or computers; the ordering system is not accessible via mobile phone. At least one staff member at every facility is trained in procurement processes. They deliver their requests to district pharmacists, who then place orders to regional medical stores. Regional medical stores deliver medications and supplies directly to facilities. If stock is unavailable, facilities are in theory able to use the "open market" to procure items, but there are many essential medicines for which this is prohibited due to national procurement restrictions in the contract framework.

STOCKOUTS

Though national participants reported that the logistics system was "meeting the needs" (N) of health facilities, participants at facility and district levels reported widespread stockouts.

"At times, we don't get to have certain common drugs, sometimes, even paracetamol. We don't get paracetamol and then we also don't look at ORS [oral rehydration salts]." (D)

"I don't know what the district is doing about it because it's a general problem we are having here. Anytime you request from medical stores, they tell you those things are not available. Those that are not available, you only get what is in medical stores, but you can't get whatever they are not having." (F)

Participants reported frequent stockouts of essential medicines including paracetamol, oral rehydration salts, gentamicin, amoxicillin, ampicillin, and zinc (of note, antibiotic stockouts were reported by providers who are authorized to prescribe antibiotics, i.e., non-CHPS providers). Some facility participants reported that stockouts of these medicines may last two to three months before supplies are received. There was unanimous agreement among district officials that stockouts impede IMCI implementation, and stockouts were often listed among the top three barriers to providing quality services.

CONSEQUENCES OF STOCKOUTS

Facility participants described both short- and long-term consequences of stockouts. In the short term, they are often forced to send caregivers to private pharmacies to purchase essential medications, even if they are members of the National Health Insurance Scheme and appropriately expect their care to be free. In the long run, participants noted that this creates a disincentive to care seeking and may cause delayed care; it also creates mistrust among clients who may suspect ulterior motives for recommending private pharmacies (i.e., accusing the provider of benefitting financially); and the frustration among care recipients is demotivating to providers.

"People delay because, of late, we have had challenges with having essential medicine in all our facilities." (D)

"Let's say a child comes in and you need to give the child some necessary drugs to refer the child up. The child needs urgent referral. Then at the end of the day, this drug is not there. You have to be looking for the drug from elsewhere to buy or for the caretaker to get the drug for you to be able to carry on what you need to do. I think that one alone is time-consuming." (F, in response to question "Do you think there is anything lacking for making service providers comfortable or confident or motivated?")

EXPLANATIONS FOR STOCKOUTS

Some participants reported that regional stores do not always deliver what was ordered due to their own supply shortages, which one participant hypothesized was due to the low prices that national procurement systems offered to suppliers.

"Some of the shortages are not coming from the facility but are from the national or the regional level…. I think because of the prices that they are offering to suppliers, they almost always don't have it, and so very basic medicines like paracetamol and … essential medicines are often not available." (D)

Several participants mentioned that facilities have trouble paying regional stores for their supplies due to delayed and incomplete payments from the National Health Insurance Authority.

"National or central medical stores is unable to pay the price that the pharmaceutical companies [ask], and the tariffs are lower than what the pharmaceutical companies will supply for it. It trickles down to the lower level, and then the clients or the recipient is the one who is affected…. [The National Health Insurance Authority] is also delaying the reimbursement. As I speak [in December 2022], health insurance is still reimbursing 2021 claims." (D)

"If the national health insurance doesn't reimburse the facilities on time, they also have difficult paying the medical stores." (D)

Finally, participants explained that though they were technically authorized to procure medications from private suppliers, many essential medicines, including ones that are frequently stocked out, were unavailable for private procurement due to prohibitions in the national contract framework.

"The medications that are on that list [unavailable for private procurement] … are [generally] the ones that the lower facilities can prescribe." (D)

Key recommendation:

- Evaluate facility-level stockouts, including of medicines and nutrition commodities, more rigorously to establish underlying cause(s), including regional medical stores challenges and National Health Insurance Schemes reimbursement delays and shortfalls.
- Review contract framework that prevents emergency procurement of essential IMCI medicines.
- Prepare for potential changes in CHPS activities with careful forecasting and supply chain modifications.

Topics for further study:

- Can IMCI leaders and advocates affect National Health Insurance Authority processes? If not, are alternatives available to lessen the impact of low or delayed National Health Insurance Authority reimbursement on IMCI implementation?
- Are regional medical stores operating at optimal capacity, or can management be improved?
- Is there a precedent for exempting essential medicines from procurement restrictions?

6. CONCLUSION

As is evident in this report, Ghana has made important commitments to child health but without the structure of typical IMCI programs. Participants at the district and national level seem eager to utilize IMCI more fully, including by expanding training (especially to CHPS facilities), aligning sick-child registers and supportive supervision with IMCI, and recruiting partners to support IMCI activities, though their ability and eagerness to mobilize domestic resources and reorganize Ghana Health Service structures to support IMCI implementation was less evident from these interviews. Several key health system weaknesses will make effective IMCI implementation a challenge in Ghana, including widespread stockouts, inadequate transportation for urgent referrals, and difficulties aligning Ghana Health Service's goals with partner priorities. In addition, to realize the full potential of IMCI at the most peripheral level, CHPS providers credentials and prescribing authorizations must be reviewed to ensure appropriate treatments can be delivered at the first point of contact. These issues are inextricably linked: if CHPS providers are authorized to prescribe antibiotics and thereby empowered as providers of full-scope IMCI, what effect will this have on the medicines supply chain at both CHPS and higher-level facilities? What effect will it have on the workload of providers at various levels? These are challenging issues deserving of further exploration in Ghana.

Participants in MOMENTUM-supported districts and at the national level expressed enthusiasm for IMCI's potential to improve child survival, and lessons learned from other settings may help Ghana Health Service leaders and providers leverage IMCI to improve overall quality of care, but will also require greater mobilization of both domestic and partner resources.

We anticipate the results and recommendations contained in this report—gathered from national- and district-level IMCI managers and supervisors, as well as facility-level IMCI service providers—will inform regional and global partners and stakeholders in a forthcoming consultation to strengthen operationalization of IMCI. MOMENTUM Ghana will also be disseminating these results with respondents and representatives of the Family Health Division of Ghana Health Service and other relevant stakeholders in Ghana.

In addition, the authors of this report would like to extend their gratitude to the officials and providers in Ghana who participated in data collection, including the leadership of the Ghana Health Service and especially the Family Health Division for their interest and support of the study. Their insights and candid feedback were extremely valuable in understanding the future of Ghana's IMCI program, and their commitment to improving the health and welfare of children in Ghana is both evident and admirable. We are also grateful for the local USAID mission for their review of this report and to the MOMENTUM Ghana team for organizing the interviews reflected in this report.

www.usaidmomentum.org

@USAID_MOMENTUM
@USAIDMOMENTUM
@USAID MOMENTUM