



Synthesis of Findings on Integrated Packages for Child Health Services:

A Position Paper

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Acronyms

CHW	community health worker
DRC	Democratic Republic of Congo
ECD	early childhood development
HMIS	health management information system
iCCM	integrated community case management
IMCI	Integrated Management of Childhood Illness
IMNCI	Integrated Management of Newborn and Childhood Illness
KMC	kangaroo mother care
LBW	low-birth-weight
MAM	moderate acute malnutrition
MCSP	Maternal and Child Survival Program
MUAC	mid-upper arm circumference
PSBI	possible serious bacterial infection
SAM	severe acute malnutrition
WHO	World Health Organization

Introduction

The Global Strategy for Women's, Children's, and Adolescents' Health, which supports the Sustainable Development Goals, is providing new guidance for donors and partners in their effort to help children not only survive, but thrive. Within the global child health community, this shift in focus has led to an increased emphasis on expanding child health interventions.

Nutrition in particular is receiving added attention. While pneumonia, diarrhea and malaria remain leading causes of under-five deaths, the vulnerability to, and severity of, these conditions is exacerbated by undernutrition. The rate of reduction in newborn deaths is lagging behind the progress made in under-five mortality, and attention to addressing this age group is therefore intensifying. There is a need to ensure that children can thrive, and interventions to promote this are clearly in the spotlight.

Along with the call for expanded interventions, and in some ways engendered by it, there is concern about integrating additional, sometimes complex interventions into ongoing child health interventions and platforms at the community and primary care level. These concerns include questions about the potential of the interventions, the enabling factors that exist, and barriers to integration.

To help understand specific aspects of this integration, the Maternal and Child Survival Program (MCSP) commissioned and published the three child health intervention reviews below.

Child Health Intervention Reviews

[Review of Policies and Guidelines Related to the Nutrition of Ill and Undernourished Children at the Primary Health Care Level](#)

This review was initiated to provide background for discussions at the 2018 workshop Improving Nutrition Services in the Care of the Ill and Vulnerable Newborn and Child. It contains analyses of relevant nutrition and child health policies and guidelines at the global and national levels. Countries covered are Ethiopia, Ghana, Kenya, Mali, Mozambique, and Nigeria. October 2018

[Review of Newborn Health Content of IMNCI and iCCM Training Materials and Job Aids in Seven MCSP Countries](#)

This review compares the newborn content of global and country Integrated Management of Newborn and Childhood Illness (IMNCI) and integrated Community Case Management (iCCM) training materials and job aids with broader global guidance focusing on essential newborn care, care for preterm and low-birth-weight (LBW) babies, postnatal care, and care for sick young infants with possible serious bacterial infection (PSBI). Countries covered in the review are the Democratic Republic of the Congo (DRC), Ethiopia, Mozambique, Nepal, Nigeria, Rwanda, and Zambia. September 2019

[Landscape Analysis of Survive, Thrive, and Transform Interventions for Children](#)

This review explores countries' experiences in integrating thrive and transform interventions into platforms used to deliver child survival interventions. Through a review of documents and interviews with key informants, this paper maps existing global guidance and looks at operational experiences, primarily in Kenya, Senegal, and Zambia, that focus on early childhood development, early childhood education, and nutrition. Associated interventions include birth registration; water, sanitation, and hygiene; and financial or social protection. June 2019

All reviews were conducted using a mix of literature searches, desk reviews, and interviews with key informants at the global, regional, and country levels. This paper is based on the key informant interviews carried out during these reviews. Although some key informants were at the sub-national level, the findings do not incorporate input from frontline health workers.

It should be noted that the reviews were limited in geographic scope and size. The newborn review looked at seven African countries, the nutrition review examined six, and the landscape analysis of survive, thrive, and transform considered three. Communication was remote, with no country visits to observe activities. The field of thrive and transform interventions is evolving quickly and since the landscape analysis was published, work has progressed significantly in those countries, while others have advanced in the adoption of thrive actions, including the Nurturing Care Framework.

This paper highlights issues to consider when integrating policies and interventions for child health and development, in particular newborn care, nutrition, and activities beyond survival to help children thrive, including but not limited to early childhood development (ECD).

Defining integration

Integration comes in many forms. Although the idea of integration is popular, it is often unclear what it means and how it is done. The literature considers a range of issues, from how integration differs from simple “bundling” of interventions, to how decisions are made about which components to integrate and which to leave out.

Numerous organizations and authors¹ have put forward categories to describe integration. After discussing the lack of a commonly accepted definition of the term, Atun et al.² propose that integration is the “extent, pattern, and rate of adoption and eventual assimilation of health interventions into each of the critical functions of a health system, which include governance, financing, planning, service delivery, monitoring and evaluation, and demand generation.” World Health Organization (WHO) Technical brief N°1, May 2008³ suggests at least six different types of integrated health services, while the WHO Technical series on primary health care, brief on Integration,⁴ describes the integration of health services and health interventions as a response to the trend of increasing fragmentation.

Findings

A number of common issues related to integration emerged from the three reviews. They are presented in the following findings and include descriptions of three types of integration seen in the reviews, the importance of multisectorality, the need for strengthening nutrition, the absence of standardized indicators, and issues

¹ A few examples: <https://study.com/academy/lesson/integrated-health-systems-definition-types.html>, https://www.who.int/healthsystems/technical_brief_final.pdf, http://www.euro.who.int/_data/assets/pdf_file/0005/322475/Integrated-care-models-overview.pdf

² Atun, R et al. 2010. “Integration of targeted health interventions into health systems: a conceptual framework for analysis.” *Health Policy and Planning*. 25, 104-111.

³ WHO. May 2008. *Integrated Health Services - What and Why? Technical Brief No.1*. WHO.

⁴ WHO. 2018. *Integrating health services*. Technical Series on Primary Health Care. WHO.

around quality and coverage of care. The reviews also generated questions related to integration and identified gaps in technical knowledge related to nutrition and newborns, which are outlined in the section on research questions and in the recommendations.

Finding I: Three types of integration at the country level

Across the topic areas of nutrition, newborn, and thrive interventions, integration into child health platforms fell into three categories: integration at the point of care, systemic integration, and integration through all possible platforms.

Integration at the point of care

At the point of care, integration means a holistic approach to the patient. It implies that a health provider examines and assesses a child for all potential concerns, going beyond what the caregiver describes as the presenting problem. Integrated Management of Neonatal and Childhood Illness (IMNCI)⁵ and integrated Community Case Management (iCCM) can be considered the operationalization of point-of-care integration.

“Integrated” is the first word in IMNCI and in iCCM.

All three reviews included this type of integration and explored country-based examples of how nutrition, newborn, and ECD are being integrated into the existing IMNCI and iCCM platforms. The newborn review found that DRC, Ethiopia, Mozambique, and Zambia had integrated aspects of essential newborn care, care for LBW and preterm babies, and postnatal care into their IMNCI materials. The IMNCI materials from Nigeria and Rwanda mirrored global guidance with newborn content focused on management of sick infants in outpatient settings, when to refer, and care during referral.

Systemic integration

Integrating interventions at the point of care requires upstream and ongoing support throughout the health system. Systemic integration may start with policy, strategy, and financing. It relates to the degree to which an intervention is incorporated into needs assessments for health system support, basic packages of services, health worker training and mentoring, supportive supervision, supply chain, health information management systems (HMIS), quality improvement, and preservice training.

The importance of systemic integration is recognized in the design of IMNCI, which includes systemic actions such as follow-up to training, supervision, and supply management. Acknowledging that systemic integration is necessary and essential, national nutrition policies reviewed demonstrated efforts to coordinate across child health, newborn, and nutrition boundaries by mandating the inclusion of various ministries and divisions at all levels of government to carry out national policies.

Integration through multiple delivery platforms

Integration can also be accomplished by incorporating interventions into a variety of services and providers. This could mean incorporating aspects of nutrition or child development into a well child encounter, an

⁵ Some countries implement Integrated Management of Childhood Illness (IMCI), while others have added newborn care and implement IMNCI. To avoid confusion, this paper uses IMNCI as a generic term unless there is a country-specific reason to refer to IMCI.

immunization campaign, water and sanitation programs, school and after-school programs, vocational training, and other interventions.

In line with this type of integration, Sabu Padmadas, in a commentary to *The Lancet*, describes a successful integrated community intervention as one that “mixed health promotion with outreach activities, such as provision of information, communication, supervision, referral and follow-up services, day care, supplementary nutrition for malnourished children, counseling, home visits, liaison with local public systems, and community-based events.”⁶

A few notable instances of this type of integration emerged from the survive, thrive, and transform review: in one district in Kenya, where ECD was integrated into child health, the goal was to prepare every provider to reach every caregiver through any point of contact (referred to as a “touchpoint”) with the health system. In Zambia, in addition to incorporating relevant aspects of ECD within IMNCI and iCCM, efforts were made to integrate ECD into a variety of health packages and training courses. These included reproductive health and nutrition guidelines, pediatric HIV, community IMCI, antenatal care, essential newborn care, and a National Food and Nutrition Commission strategic document.

Finding 2: Multisectorality is central to the success of integration

Child health professionals are becoming increasingly aware of the compelling need to work across sectors to support the health and well-being of a child. The landscape analysis for thrive interventions and the nutrition review identified multisectoral collaboration, respectively, as a critical factor for success and a key challenge to overcome in supporting integration. While the examples above focus on the interplay across sectors such as health, education, and agriculture, which are housed in different ministries, similar challenges to integration occur within a sector. Newborn care is a prime example with the complex, unresolved issue of whether newborn care should be placed organizationally under maternal health (mother-newborn dyad) or under child health (the newborn is a child) and the need to integrate across these subsectors.

Countries have developed various strategies to address issues of multisectorality that emerge in policy, governance, finances, and monitoring and evaluation. In policy, tensions exist between the approach of having one policy that crosses multiple sectors or having one sector, such as health, embedded in the policies of other sectors. The review of national nutrition policies showed efforts to coordinate across child health, newborn, and nutrition boundaries by mandating inclusion of various groups and divisions at all levels of government to carry out the policies.

The involvement of multiple ministries complicates governance of multisectoral efforts. While one ministry cannot oversee the actions of another, Senegal and Zambia addressed this issue by creating neutral spaces—outside of any single ministry—for coordinating and managing issues such as nutrition and ECD. Budgets create another challenge to working across sectors, as they are often specific to a particular ministry, intervention area, or project. Key informants in the survive, thrive, and transform review indicated that when budgets cross ministerial lines, the flow of funds can become unclear or contentious. Finally, related to issues of monitoring and evaluation, different sectors do not generally have commonly agreed-upon indicators. The

⁶ Padmadas, S. 2017. “Community-based bundled interventions for reproductive and child health in informal settlements: evidence, efficiency, and equity.” *Comment. The Lancet*. Vol. 5, Issue 3, PE240-E241.

survive, thrive, and transform landscape analysis identified significant efforts underway to incorporate ECD indicators in national and district HMISs in order to introduce uniformity in measurement.

Global organizations have a critical role to play in promoting and supporting multisectorality, by revising the internal structures of their global, regional, and country offices to be less siloed and by allowing funding to move between sectors and intra-organizational divisions. Global movements such as Scaling Up Nutrition are working toward reducing the silos. Many partners interviewed have developed nutrition strategies and plans to coordinate across sectors. Some of the most widespread thrive interventions⁷ are being promoted as part of the multisectoral Nurturing Care Framework.⁸

Finding 3: Integration of nutrition interventions needs strengthening

Nutrition interventions brought up in the reviews include education, promoting breastfeeding, integrating screening for severe acute malnutrition (SAM) and moderate acute malnutrition (MAM), evaluating children with SAM or MAM, and integrating treatment for these conditions within the health system. The importance of strengthening the focus on nutrition for children under five emerged strongly in all three reviews because good nutrition is fundamental to health and well-being.

The newborn review mentions continuously the central place of breastfeeding in the care of the well or sick infant. At the same time, it recognizes that the IMNCI section on feeding difficulties needs to be revised and improved in order to be more effective.

Nutrition is central to the Nurturing Care Framework and cannot be separated from child development in improving the well-being of the child. Key informants consistently brought up nutrition as an essential thrive intervention area within national planning.

The nutrition review found that relevant policies and guidelines are in place related to nutrition and the ill or undernourished child, and that the nutrition guidance is mostly harmonized across the health and nutrition sectors. Despite this inclusion, there is concern that many primary health care providers and community health workers (CHWs) fail to recognize malnutrition in children while diagnosing and treating illness, or that they fail, or are unable, to provide appropriate nutritional care to children and counseling to caregivers of sick children.

⁷ Intervention areas consistently focused on by the three case study countries include ECD, early childhood education, and nutrition.

⁸ [World Health Organization, United Nations Children's Fund, World Bank Group. 2018. *Nurturing care for early childhood development: a framework for helping children survive and thrive to transform health and human potential*. Geneva: World Health Organization.](#)

Finding 4: Standardized indicators are needed to monitor integrated care across sectors

The survive, thrive, and transform review identified monitoring and documentation of activities as a weak point, and key informants underscored the intention to improve this. The task is complicated by the need to track cross-ministerial and partner efforts. Zambia and Kenya are working toward defining and agreeing on program indicators for nurturing care to be included in health information systems, while Senegal has built monitoring into existing health structures. Countdown to 2030 published a report that includes country profiles and indicators for the five components of nurturing care, and the Africa Early Childhood Network has profiles that provide data on, among other topics, early learning, ECD, and maternal and child health.

The nutrition review revealed the perception that, whereas clear indicators are available for child health programming, a similar set for nutrition programming is sorely lacking. This is partly contradicted by an analysis undertaken by FANTA III, showing that all 16 countries assessed had nutrition-specific indicators in their HMIS, although up to half of the national nutrition indicators were in parallel systems.⁹ Where multisectoral action is required, there is an additional level of complexity involved in ensuring valid indicators that can be appropriately aggregated across sectors.

Finding 5: Quality and coverage of key interventions remain variable

The variable quality and coverage of interventions makes integration more difficult. It is of note that concerns about coverage and quality were brought up in all three reviews. Key informants in the nutrition review specifically identified low coverage and variable quality of implementation of iCCM and IMNCI as the most pervasive reason for inadequate attention to nutrition. Health system constraints were the most important barriers to increasing quality and coverage, according to key informants. These constraints include insufficient human resources, inadequate health facilities, inconsistent supply of commodities, and poorly functioning referral systems.

Quality of care requires adequate training that includes effective follow-up visits, regular and helpful supervision that focuses on problem solving, and assurance that commodities are available. It also requires that standards are adopted and applied at the first-level facility, referral facility, in the HMIS, and in communication with families. To date, most evaluations and assessments of quality of care are limited to the medical encounter. Few reports are available on the quality of care at the outpatient level, and even fewer at the community level.

Finding 6: Gaps in technical guidance related to nutrition and newborns

Effective integration is predicated on the existence of clear technical guidance for each of the interventions to be integrated. Key informants responded with a high level of consistency, at both global and national levels,

⁹ [Food and Nutrition Technical Assistance III \(FANTA\). 2016. *Landscape of Nutrition Indicators within Government-led Monitoring and Evaluation Systems in 16 PEPFAR-Funded Countries*. Washington, DC: FHI 360/FANTA.](#)

on perceived gaps in global technical guidance related to both nutrition and newborns. The gaps generally reflected areas with a lack of evidence to develop adequate guidance. Questions raised by key informants were consistent with global research agendas.

Gaps in guidance related to nutrition

Countries are requesting resolution to numerous gaps in technical guidance related to nutrition. One of the foremost issues is global guidance for treating MAM (yellow measurement on the mid-upper arm circumference [MUAC] tape). A large proportion of global and national key informants found this missing information to be significant, and the current efficiency of curative care to be limited. Without this guidance, health providers often fail to intervene for a child at risk.

While guidance for detecting and managing SAM among children 6–59 months of age is perceived as clear, similar guidance is needed for those under 6 months. Additional work is needed to understand how to prepare health providers to effectively counsel and support mothers with breastfeeding, especially in a situation where a weak, malnourished infant is not suckling enough to stimulate adequate milk production.

For management of acute malnutrition in IMNCI, there are very clear advantages to integrating case detection and home-based treatment, but there are also operational challenges related to the complexity of acute malnutrition interventions. These challenges include the need to manage and track SAM treatment on a regular basis over an extended period of time and the capacity to manage an additional commodity.¹⁰

Further knowledge gaps identified include effective ways of identifying children at risk and intervening early to prevent MAM and SAM, treatment for stunting, treatment for comorbidities of stunting and anemia or stunting and wasting, predictors of moderate wasting, whether iron dosage should be based on weight or age, and alternative formulations of ready-to-use therapeutic food.

Gaps in guidance on care for newborns

The newborn review compared global guidance from several WHO documents with newborn content incorporated into IMNCI and iCCM adaptations for different countries. This comparison of newborn content raises the question of which elements of newborn care are appropriate for incorporation into global IMNCI and iCCM guidance. Understanding that the IMNCI and iCCM guidelines are intended for outpatient use, it would be helpful to answer questions related to the evidence base for incorporating various newborn content into IMNCI or iCCM, as well as the quality of training, subsequent performance by providers, and impact on the outcomes for the child.

Both the nutrition and the newborn review revealed significant gaps in global guidance related to newborn care, including managing malnutrition under 2 months of age and alternatives for simplifying anthropometry for those too young for MUAC (under 6 months). The newborn review discussed the need for guidance on appropriate care for small and LBW babies in the community and in the home. It found that current instructions on counseling for infection prevention among LBW and preterm babies, who do not need referral, are too generic, and there is a need to strengthen the content. The reviews also brought up the need

¹⁰ [Deconinck, H et al. 2016. "Understanding factors that influence the integration of acute malnutrition interventions into the national health system in Niger." *Health Policy and Planning*. 31, 1364-1373.](#)

to harmonize age brackets for very young infants across different guidelines.

Unresolved questions related to integration

In considering integration, the reviews reiterated a number of unresolved questions: How much can realistically be added to the existing child health platforms? How often can countries be expected to update their guidelines? How much can realistically be added to counseling guidelines?

How much can realistically be added to IMNCI and iCCM?

The three reviews reiterated, but did not attempt to answer, the pervasive and persistent question of how many interventions can realistically be included in IMNCI and iCCM considering the reality of a given health system. When adding new interventions to these platforms, the impact on child health or on health providers' behaviors has not been evaluated.

When considering integrating new interventions into the existing guidance, key informants enumerated barriers that included workload for community-based providers and health workers, difficulties in maintaining quality of care, logistics of additional training, complications of numerous follow-up appointments for different interventions, and the need for acquiring and managing additional commodities. For any integration, these challenges must be balanced with the importance of addressing the child holistically in order to ensure that he/she survives and thrives.

Questions emerged from all three reviews related to the role of community-based providers and the level of care that can be delegated to them. Key to this discussion is whether or not a community-based provider can help manage and follow up on a child with SAM or MAM, manage feeding problems, or be charged with essential newborn care actions. These concerns are common and have been discussed extensively in the literature for many years, with multiple recommended solutions but little resolution. Small-scale published experiences show that this is possible with the right support.¹¹ Collins et al posit that, to be effective, iCCM services must be available from a single provider (one-stop shopping).¹² At the same time, reviews of iCCM in Malawi and Mozambique,¹³ and in Uganda,¹⁴ found that CHWs are overloaded, while programs keep identifying more tasks for them as part of an expanding community platform. The reviews suggest that interventions delivered by CHWs must be prioritized based on an objective evaluation of positive or negative synergistic effects at the CHW level. The role, skill set, and training of the CHW is not standardized and such evaluation would need to be context-specific.

¹¹ Puett C et al. 2013. "Quality of care for severe acute malnutrition delivered by community health workers in southern Bangladesh." *Maternal and Child Nutrition*. 9, 130–142.

¹² Collins D, Ijarah Z, Gilmartin C, Saya U. 2014. "The costs of integrated community case management (iCCM) programs: A multi-country analysis." *J Glob Health*. 4(2):020407.

¹³ Sadruddin S, Pagnoni F, Baugh G. 2019. "Lessons from the integrated community case management (iCCM) Rapid Access Expansion Program." *J Glob Health*. 9(2):020101.

¹⁴ Baine, S.O., Kasangaki, A. & Baine, E.M.M. 2018. "Task shifting in health service delivery from a decision and policy makers' perspective: a case of Uganda." *Hum Resour Health* 16, 20.

In discussing integration at the community level, it is important to underscore the philosophy underpinning the iCCM guidelines: one observation by a community-based provider leads to one, and only one, action. The newborn review suggests that any addition of content to existing facility (IMNCI) and community (iCCM) platforms calls for innovative strategies to simplify the process and action to ensure its feasibility.

Key informants in the survive, thrive, and transform review found that most interventions to promote thriving are a natural addition to the existing child health platform. At the same time, long-standing and familiar concerns were expressed about the risks of adding content and skills to an already dense learning course. In the newborn review, key informants identified that the quality of training on IMNCI may have been compromised by the integration of newborn care. The duration of a training course on IMNCI is the same as for IMCI, which means that some sessions have been shortened. In addition, the low caseload of sick young infants in outpatient facilities makes it difficult to do hands-on practice.

How often can countries update child health materials?

In addition to the programmatic need to streamline implementation by adding onto existing platforms, there is the issue of incorporating new and updated information for interventions already covered. As science advances, as new priorities and conditions emerge, and as experience from countries influences subsequent research, global guidance is continually updated. Past IMNCI revisions include the addition of zinc supplementation in the treatment of diarrhea, care for the HIV- and tuberculosis-affected child, improved guidelines on infant and young child feeding, and care for the very young infant (Chopra et al).

The process of updating national child health materials, such as policies, guidelines, and training courses requires time, funding, and significant effort. Covering all health facilities and community health posts, and getting all appropriate health workers trained, supplied, and supported is a significant challenge everywhere. The task of re-training with continuing education to incorporate the latest guidance is an enormous undertaking. Often, by the time global policies and guidelines are translated into national training materials and used in countries, updated global guidance has been issued. This creates a conundrum for countries: how often should they invest in revising policies and materials? This problem is not limited to child health and development; similar concerns have been expressed for reproductive health, HIV, immunization, and other areas.

How much can realistically be added to provider counseling guidelines?

All three intervention areas—nutrition, newborn care, and ECD—depend on influencing caregiver behaviors. IMNCI chart booklets include a section on counseling the mother, which incorporates an assessment of feeding problems and counseling on a number of key family practices related to breastfeeding, infant and young child feeding, supportive caregiving, and kangaroo mother care (KMC). In iCCM, the CHW is expected to simply provide advice, not counseling. While advice is limited to providing information on the recommended behavior, counseling implies listening, reflecting back, and using a problem-solving process.

Key informants in the nutrition review questioned whether the assessment of feeding problems took place and expressed concern that many health providers did not have the knowledge or skills to carry out the assessment or counseling prescribed. When considering additional content involving counseling, questions

need to be raised about whether health providers normally access the counseling section of the IMNCI guidelines and, if they do, how well counseling is currently carried out.

A search for evaluations to inform this question turned up little. The origins of IMNCI and iCCM are firmly rooted in interventions for medical care, and consequently, most evaluations of the quality of care focused on the medical process: correct assessment, correct treatment/referral, and availability of commodities. There are few published documents that describe the frequency or quality of counseling. In a 2004 evaluation, Karamagi et al¹⁵ found that Ugandan health providers covered 9 out of 20 IMNCI counseling items. These documents suggest that IMNCI counseling could be improved through better use of IMNCI job aids, strengthened supervision, and positive feedback to health providers.

Some issues may be related to the content of the counseling sections. The newborn review found that many country materials lacked adequate instruction and guidance on counseling mothers on KMC, infection prevention for LBW or preterm babies, and postnatal care.

Exploration may be needed on effective messaging and on placement of the advice in guidance for health providers. Potential questions for formative research include whether health providers are able to navigate the age-appropriate guidance in the IMNCI food box to identify messages to promote in a specific situation, whether the nutrition messaging can be simplified to increase ease of use without losing essential usefulness, whether or not providers go beyond the Assess and Classify the Sick Child section in the chart booklets and use the Counsel the Mother materials, if they are competent and comfortable (both technically and culturally) in assessing and counseling on breastfeeding and attachment, and whether they can develop the needed skills to effectively counsel mothers with undernourished children.

¹⁵ Karamagi CAI, Lubanga RG, Kiguli S, Ekwaru PJ, Heggenhougen K. 2004. "Health providers' counselling of caregivers in the Integrated Management of Childhood Illness (IMCI) programme in Uganda." *Afr Health Sci. Apr;4(1):31-9.*

Research questions for consideration

The following research questions were formed as a result of the three reviews and the analysis conducted for this paper. Please note that this is not an exhaustive list. The reviews have additional questions and provide more details, as well as technical issues raised by key informants.

Research Questions

- Do providers go beyond the Assess and Classify the Sick Child section in the chart booklets and use the Counsel the Mother materials? Is there any knowledge about how these sections are or are not used that would be useful for informing future instructional design to encourage greater provider use?
- Can health care providers develop the skills needed to effectively counsel mothers with undernourished children?
- Are health care providers able to navigate the age-appropriate guidance in the food box to identify the messages they should promote in the specific situation? If not, would there be another way to visually structure this assessment to facilitate better use?
- Can nutrition messaging be simplified to increase ease of use without diluting the content? Will too much simplification lead to a decrease in individual applicability?
- Are health care providers competent and comfortable (both technically and culturally) in assessing and counseling on breastfeeding and attachment? Are they currently providing this service?
- What are successful models for multisectoral collaboration and for nurturing care?
- How can cross-sector coordination groups become more functional?
- Are developmental milestones established at the global level applicable and acceptable across different countries and cultures?

Research needs specific to addressing technical gaps in nutrition and newborn care:

- Assessing and treating MAM for all children
- Treating SAM and MAM in children under 6 months of age
- Assessing and treating undernutrition under 2 months of age
- Treating SAM at the community level
- Identifying at-risk children early
- Simplifying anthropometry for those too young for MUAC
- Harmonizing age brackets

Recommendations for action to support integration

The following recommendations emerged from an analysis of documents and discussions with key informants. While each of the three reviews provides recommendations specific to its topic area, this list represents those that converge across all three and relate to the issues of integration described in the findings above.

1. **Monitor, document, and publish implementation experiences to be shared across countries and agencies.** Building on Finding 1, which describes three types of integration at the country level, documentation should ensure clarity on the description of the integration approach in order to support learning in the child health community.
2. **Support countries to institute and maintain mechanisms for sustainable multisectoral collaboration and coordination.** Working across sectors to support the health and well-being of the child is central to the success of integration. Countries will need to determine the best national and local mechanisms for effective coordination.
3. **Revise internal structures in organizations to mitigate the effect of working in silos and create flexibility to enable funding to move between sectors.** The detrimental effects of working in silos are significant and detract from addressing the needs of the child.
4. **Explore the barriers that prevent primary care providers and CHWs from recognizing and addressing malnutrition during the sick child encounter.** Better integration of nutrition interventions in child health services is essential for improving child health and well-being.
5. **Support the development and use of standardized global indicators.** Standardized indicators help to monitor the progress and impact of integrated care across sectors, and allow for comparison across countries. Countries should be supported to institutionalize the use of these indicators.
6. **Focus on addressing health system issues to improve coverage and quality of care for interventions being integrated.** The quality and coverage of key interventions remains variable and is seen as a major constraint to integrating child health services.
7. **Monitor and improve the counseling skills of health care workers.** Integrating nutrition, newborn care, and ECD depends on influencing caregiver behaviors. Additional formative research and innovation may be required to better understand providers' challenges with providing quality counseling and what support is needed to overcome them.
8. **Improve guidance for assessing and treating feeding problems.** Review the section on assessing and treating feeding problems in the standard IMNCI materials to understand how it can be used better, and explore opportunities for simplifying guidance and developing more effective job aids.
9. **Explore innovative approaches to training and re-training, and extend care and capacity at the community level.** Develop context-specific, innovative, and hands-on strategies to increase the capacity of providers to implement IMNCI and iCCM, without taking them away from their posts for extended periods of time.

10. **Address gaps in technical guidance related to nutrition and newborn care.** Since effective integration depends on clear technical guidance for each intervention involved, global partners should promote research and develop guidance for a range of areas related to nutrition and newborn care (see page 14). Global partners should also update the standard WHO/UNICEF guidelines for IMNCI and iCCM based on more recent guidelines related to newborn health and the current review of country-based adaptations.

Conclusion

The increased focus on expanding child health interventions has initiated a push to optimize and maximize the services that can be provided during a child's visit with a health provider. While opportunities exist for integrating services through this touchpoint, numerous questions remain about the capacity of the provider and the support from the health system.

The open questions related to integration necessitate additional implementation research and ongoing information sharing that can illuminate the challenges and solutions that will give children across the world a better chance in life. This paper was written to spark debate and action in the child health community and among the donors and partners who support it. We urge you to join in this effort and take action, and to challenge our findings for a richer discourse.

