SUPPLEMENTARY APPENDIX 2

Table S2. iCCM Systems Framework

Domains, Categories, Definitions, and Critical Questions

Domain 1: Systems Context

Domain No.	Domain	Category No.	Category	Description	Critical Questions
1	Systems Context	1.1	Epidemiological Profile	Describes the burden of disease of the areas of implementation.	• What is the under-five mortality burden attributable to malaria, pneumonia, and diarrhea? • How does this burden potentially waver across target areas? • Are there other diseases or conditions relevant to the under-five mortality burden that can be incorporated into the iCCM service delivery package?
		1.2	SES, Livelihood & Living Standards	Describes the socio-economic context of areas of implementation, including both the recipients and providers of care.	• What are the general socioeconomic conditions of target populations and the CHWs that serve them? To what extent does this affect their ability to perform their roles within the iCCM intervention? (For example, the community's ability to assist CHW, caregivers' abilities to adhere to referral, CHW's ability to forego income to serve community, etc.) • To what extent does the socioeconomic status (SES) of caregivers influence careseeking behavior at health facilities? How does this influence iCCM? • To what extent does the SES of the CHW impact their ability to provide services and perform other iCCM-related activities?
		1.3	Geography & Topography	Describes the geophysical context of the areas of implementation, including the geographic spread of administrative areas.	• What is the topographical makeup of iCCM target areas? (I.e. lakes, mountains, rivers, physical boundaries, etc.) How does this affect iCCM activities and service delivery? • What is the geographical positioning of the target areas? Is this fairly homogenous? How does this affect iCCM activities and service delivery? • What is the geographical spread of iCCM target areas? Are iCCM clusters relatively condensed, or spread across a wide territory? Is this relatively homogenous? How does this affect the need for iCCM, the implementation of iCCM activities, and service delivery? • How is this geographical positioning and spread related to distance from conventional health facilities? • Are there other geographical considerations (i.e. sea level) that could impact iCCM service delivery?

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1.4	Climate & Seasonality	Describes the climate and its seasonal change of the areas of intervention.	• What is the climate of iCCM target areas? How and to what extent does this affect infrastructure on which iCCM activities and service delivery are reliant? • How does the seasonality of iCCM target areas affect disease incidence and demand for iCCM services? • Are iCCM target areas affected by imminent climate change that could hinder or usurp iCCM activities?
1.5	Roads & Buildings Infrastructure	Describes the condition of the public and private building and transportation infrastructure of areas of implementation.	• What are the conditions of roads between districts* and health facilities, and health facilities and iCCM catchment areas? • To what extent is the iCCM intervention dependent upon functional transport infrastructure? • Does the iCCM strategy take variation in infrastructure into consideration in planning activities and targets?
1.6	Internet, Telephone & Power Source Infrastructure	Describes the electrical infrastructure of the areas of implementation, and inputs or program operations that may be dependent upon them.	• How reliable is the telephone network in iCCM target areas? • Do CHWs, supervisors, and/or district staff have regular access to the internet? How reliable is this connection? • Is the program or any of its applications dependent upon the availability of a specific cellular or mobile network, and if so, is this available in program areas? • What is the electricity or power source infrastructure of implementation areas? How might this waver across sub-administrative areas? • What is the main source of energy or power source in households? (i.e. public electricity network; private solar panel; generator; electric; nothing; other, etc.)
1.7	Population & Cultural Demographics	Describes the ethnographic makeup of the population of areas of implementation.**	• What is the demographic makeup of the target population? How does this affect how iCCM service delivery and its recipients? • Is there a primary religious denomination of iCCM target areas? How does this affect iCCM service delivery and its recipients? • For CHWs that practice iCCM in assigned external communities: are local language differences taken into consideration in the placement of CHWs?
1.8	Geopolitical Context	Describes the geopolitical situation of the areas of implementation, including themes of political unrest and migratory or refugee populations.	• What is the distinct geopolitical situation of iCCM target areas? How could this affect the safety of CHWs, their ability to carry out activities, and/or the sustainability of iCCM services? • Are refugee settlements in proximity to target areas? Are children under five in these settlements eligible for iCCM services?

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| 1.9 | Health System and Health Program Context | Describes the organizational health systems infrastructure, including the landscape of current health interventions, the structure of health care services, and other health systems context considerations. | • What are the current community health and child health programs, services or interventions in the areas of implementation? How does this affect the implementation of iCCM?
• Are there other CHW-based programs currently in operation? How does this affect iCCM, and are there synergies upon which iCCM can capitalize?
• What is the current PHC service delivery structure in the areas of implementation, and how does iCCM fit into this? What are the consequences of iCCM on the current PHC structure?
• Do health facilities charge user fees for Integrated Management of Childhood Illness (IMCI) services? How could this affect iCCM, specifically careseeking for referral, supervisor support of the CHW, etc.?
• For supervisors based at a referral health facility: are supervisor salaries dependent upon user fees? Would iCCM absorb supervisors' clientele, and if so what are the unintended consequences of this? |
| 1.10 | Systems Considerations | Describes context-related considerations for iCCM and the health system. | • Is iCCM well-suited to the epidemiological, geographic, socio-economic, cultural, and health systems context of areas of implementation? |

*The term "district" is intended as universal nomenclature in this document to encompass all types of sub-national administrative units

**Cultural demographics are distinguished from cultural norms in that this category pertains to the presence of ethnic and religious groups in an area, as opposed to the values and practices associated with these.

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Domain 2: Program Architecture

Domain No.	Domain	Category No.	Category	Description	Critical Questions
2	Program Architecture	2.1	CHW Density & Distribution	Describes the number of CHWs trained for iCCM, their geographic distribution, and how these are determined.	• How many CHWs were trained in iCCM? How was this number determined, and using which information? • How is the geographic density and distribution (i.e. CHWs per square kilometer or population) determined? Is there a strategy for concentrating or assigning CHWs, or is this based on a preexisting contextual setup? • Is CHW allotment and distribution based on the number of children under five in a defined catchment area, or based on the number of households? • Can more than one CHW be assigned to the same catchment area or community? • Can catchment communities overlap with each other?
		2.2	CHW-to-Catchment Population Ratio	Describes questions related to the catchment populations assigned to CHWs.	• What is the defined minimum and maximum catchment population assigned to one CHW? • Is the defined maximum population a feasible figure for one CHW? Is this a feasible number for service provision? • Does the CHW arrangement strategy allot more communities or a greater geographic catchment breadth to CHWs to fulfill a defined CHW-to-population ratio? • In the case that the catchment population exceeds the defined maximum, is another CHW assigned to the area, or is the area split into two catchment areas? • How does the program adapt to rapidly fluctuating populations in target areas?
		2.3	CWH-to-Supervisor ratio	Describes questions related to the number of CHWs allotted to supervisors.	• What is the current minimum and maximum number of CHWs that are assigned to a supervisor? • What is the theoretical maximum threshold for the number of CHWs assigned to supervisors to ensure timely, frequent, and quality supervision for iCCM services? • How were these determined?
		2.4	CHW Profile, Demographics, & Cadre Structure	Describes the demographic and service delivery profile of CHW cadres.	• Does the program engage iCCM practicing CHWs based on a preexisting cadre of CHWs, or are CHWs newly nominated and trained for iCCM? • Are CHWs chosen for practice within their own communities, or are they dispersed to other communities? • What is the current and/or intended sex and age distribution of CHWs practicing iCCM? Has the program identified a target sex distribution? • Is the iCCM program based on a volunteer service provision structure? Are iCCM-practicing CHWs performing services on a volunteer basis, or as a remunerated job? Are they expected to have a primary vocation, or practice service delivery full-time? • Does this align with national standards for CHW cadres? • Are there other CHW-like cadres which can support, complement or interfere with iCCM implementation (i.e. community-medicine distributors, traditional birth attendants, etc.)?

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2.5	Housing & Residency	Describes the housing and residency requirements and situation of CHWs.	- Is there an official policy outlining housing and residency requirements for iCCM-practicing CHWs? - Are housing and residency standards and expectations addressed by policy or any official documentation? If so what are these standards and requirements? - Are CHWs expected to reside in the catchment area where they provide iCCM services? - Who is expected to fund CHW residency costs in catchment areas? Do these costs fall on the CHW, the community, or the program? - What proportion of CHWs currently reside in their catchment areas? - In the case that the CHW rents a housing structure or builds an area to provide iCCM services, are these costs expected to be borne by the CHW? - Is the onus on the CHW to facilitate renting contracts and facility locations for residency and the provision of iCCM services in locations of which they are not a community member?
2.6	Service Delivery Location	Describes the official designated locations and areas of practice for iCCM as defined by program standards.	- Where are CHWs expected to provide iCCM services: from their homes, from a separate clinic structure, a public facility, in a designated outdoor space, home visits, or other? - Who is expected to search for and/or provide this structure? - Do standardized requirements for the location of iCCM service delivery exist? - If so, what do these comprise? Do these requirements include stipulations for roofing standards, waste disposal, sanitary facilities, and/or drug storage areas? - What are possible consequences of home service delivery that could compromise the quality of iCCM services? Of other service delivery locations? - Is the community expected to provide a service delivery location for the CHW?
2.7	Catchment Area	Describes the definition and geophysical determination of catchment areas for iCCM practice.	- Are there strict boundaries defined for catchment areas, and are CHWs and/or supervisors expected to know these? - How is a catchment area defined, and what are the specific criteria for a catchment area to be termed as an iCCM-eligible area? Is this based on predetermined administrative area criteria or physical geography? Can this entail one village or a cluster of villages? - How are iCCM catchment areas determined within the context of the national child health strategy? This could mean processes required to establish that a catchment area requires iCCM. - What is the maximum breadth of a catchment area? - Is geographic spread used to determine target catchment areas? - Are population estimates used to determine defined catchment areas? - Can the CHW be feasibly accessed on foot by those residing in the entire breadth of the catchment area? - Can the entire catchment area breadth be feasibly accessed by the CHW? - In the case that the catchment area breadth exceeds the defined maximum, is this separated into two catchment areas, or are multiple CHWs assigned to this catchment area?

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2.8	Health Facility Accessibility	Describes how health facility accessibility is accounted for in the definition of catchment areas and locations of iCCM practice.	- How are reference health facilities determined? Was a health facility assessment conducted to ensure that they are functional and capable of acting as reference health facilities? - Is there a policy which defines access and/or distance from community to health facility for the purposes of iCCM? - Is there a defined minimum and maximum distance to the reference health facility from iCCM target areas? Do these values align with actual distances from iCCM target areas? - Is there a defined minimum and maximum time to reach the health facility from iCCM target areas, either on foot or by local transport? Do these values align with actual time to health facilities from iCCM target areas? - How easy is it to reach the health facility from the defined catchment area? Are there financial, geographical, or infrastructural constraints that make this more difficult for caregivers?
2.9	Protocols, Guidelines, Algorithms, & SOPs	Describes the official documentation, manuals, protocols, guidelines, standard operating procedures (SOPs), service delivery algorithms, and defined roles and responsibilities of stakeholders in the iCCM program.	- Do service delivery algorithms developed for iCCM align with national standards? - Have standardized SOPs for the implementation of iCCM been developed for district staff? - Do the programmatic guidelines and SOPs developed for iCCM activities align with national standards? - Have standardized protocols and guidelines been developed for other key iCCM processes, such as the drug supply chain, data transmission and reporting, or social mobilization processes? - In addition to training manuals, have standardized protocols and guidelines been developed for human resources involved in the implementation of iCCM services and activities? - Have district-level guidelines and/or SOPs been developed outlining roles and responsibilities of iCCM activities? - Is there documentation which defines the specific roles and responsibilities for each program partner involved in the implementation of iCCM?
2.10	Inputs, Tools, Supplies, Equipment, Transport & Logistics	Describes the physical inputs of the iCCM program outside of drugs and tests, including tools, supplies, equipment, transport and logistic necessities.	- Outside of drugs and testing devices, what programmatic inputs, supplies, and equipment are provided to CHWs and supervisors to assist them in performing their role? - Do CHWs receive transport or compensation specifically allocated for transport to the health facility to perform iCCM activities? - Do supervisors receive transport or compensation specifically allocated for transport to the community to perform iCCM supervision activities? - Do caregivers receive transport or compensation specifically allocated for transport to the health facility to ensure adherence to referral? - Is this transport commensurate with health facility distance from the catchment area, and frequency of travel? - Does the type and/or amount of travel stipend provided to CHWs vary per CHW according to their distances and travelling frequency, or is this a standardized amount? - If a transport device is provided, does this function appropriately in accordance with local infrastructure and climate conditions? - Do CHWs receive writing supplies and paper to record information?

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			• Do CHWs receive flashlights or a lighting source to perform iCCM services in the absence of the availability of electricity or alternative power source?
			• Do CHWs receive protective equipment to enable them to travel and perform iCCM activities in difficult weather conditions?
			• Do CHWs receive gear to protect iCCM documents and drugs supplies from the elements during transport?
			• In the case of an epidemic, do CHWs receive adequate personal protective equipment (PPE)?
2.11	Supportive or Alternative iCCM Service Structures	Describes the existence of other mechanisms that aid and/or support the iCCM service delivery structure, such as pharmacies.	• Do supportive or alternative structures, such as private dispensaries or certified drug shops, act as product distribution channels for iCCM? • If so, how does this influence or interact with coexisting classical iCCM structures?
2.12	Implementation & Sustainability Plan	Describes the plan for implementation, as well as the existence and/or development of an overall sustainability or transition plan that details how programs are to transition from ownership of one entity to another, especially to local government	• How long is the expected duration of the implementation of iCCM, via the supporting agent(s) and/or thereafter? • If implementation occurs as an initial standalone pilot intended for scale-up, what aspects of iCCM are to be addressed? • Has a transition plan or roadmap been developed during the initial planning and implementation stages of the iCCM program? • Does this sustainability plan designate the roles and responsibilities of national and international stakeholders post-transition? • Does this sustainability plan designate the roles and responsibilities of the district-level stakeholders post-transition? • Does the sustainability plan designate feasible financing mechanisms for the continuity of iCCM? • How does program design engender Ministry of Health ownership in the case where iCCM implementation is supported by third parties?
2.13	Systems Considerations	Describes program design considerations for the overall health system, and synergies between domains.	• Is the iCCM program designed to be integrated as a formal part of the health system? • Does the program use existing national/public structures and processes for service delivery, data transmission and reporting, drug procurement and supply, mobilization, or are these designed for or tailored specifically to the program? • Are existing systems developed for iCCM service delivery expected to be integrated or aligned with national systems?

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Domain 3: Policy, Governance, Management & Coordination

Domain No.	Domain	Category No.	Category	Description	Critical Questions
3	Policy, Governance, Management, & Coordination	3.1	Child Health Policy Landscape and Evolution	Describes the general Primary Health Care (PHC) and child health policy environment of the areas of implementation, including predicating IMCI programs, and how these evolved over time.	• What kind of child health policies predicated the implementation of iCCM? • What is the history of the PHC model of the country, and the role of CHWs? • What is evolution of IMCI policy within the country? • How are policy and subsequent ministry administrative responsibilities for PHC, child health, community health, and malaria divided?
		3.2	iCCM Policies	Describes the current existence of iCCM specific policies, their content, scope, and conflicts or areas of contention with other policy.	What are the current iCCM-specific policies that exist within the country of implementation? • What aspects of iCCM do these policies entail? Are they generic or specific? • Do these policies form an explicit part of the national health strategy or the national Maternal and Child Health policy? • Are CHW responsibilities for iCCM predicated on a pre-existing country policies for CHWs? • Are there sub-administrative unit (i.e. state or district) specific policy documents for iCCM? If so, what are their content and scope? • Does iCCM policy or its aspects contradict pre-existing policy for other aspects of the health system? (i.e. emphasis on decreasing reliance on CHWs, gravitation away from community-based care, etc.) • What is the timeline for iCCM policy revision?
		3.3	iCCM Policy "Housing" & Placement	Describes where ministerial responsibilities for iCCM policy development and implementation lie.	• In which ministry departments is iCCM policy housed? In other words, which administrative units are tasked with the development, management and implementation of iCCM policies (Child health department, malaria department etc.) • Is iCCM policy couched within one department or shared administratively? How does this affect management and implementation of iCCM policy?
		3.4	Policy Entrepreneurs	Describes the actors involved in the influence, development, and implementation of iCCM policy and policies which influence iCCM.	• Who are the stakeholders involved in the influence of, development and implementation of iCCM policy? • Are these actors shared evenly between program partners and local ministry? • Are there other policy actors which influence policy that indirectly affects iCCM? • Do sub-national actors influence iCCM policy?

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3.5	Policy Drivers & Evidence Use	Describes the drivers of iCCM policy development, and how evidence is used to underpin this.	• Who or what drove the emphasis of iCCM as a strategy within country? Was this primarily internal or external? • How is evidence used in the development and prioritization of the iCCM strategy?
3.6	Policy Processes, Roles & Responsibilities	Describes the policy-making processes, (i.e. steps), and the roles of entities in policy development and/or implementation.	• What are the concrete steps necessary to developing iCCM-specific policy, or policies which enshrine iCCM as a core part of the national health strategy? • Who are the actors involved in these steps, and what are their roles and responsibilities with regards to policy development or implementation?
3.7	Compatibility with International Guidelines	Describes the extent to which iCCM policy is compatible with international guidelines. This encompasses drug-specific policies and pharmaceutical regulation.	• What pre-existing policies overlap with iCCM-specific policy? For example, CHW policies, essential drugs and medicines, etc. • Is iCCM policy the way it is detailed in ministry-sanctioned documentation compatible with international guidelines? • Do overlapping policies encompassed by iCCM align with global standards? (i.e. iCCM drugs are on the essential medicines list, etc.)
3.8	Policy Implementation	Describes how iCCM policy is actually realized, and to what extent implementation mirrors policy design.	• What mechanisms, timelines, or benchmarks are in place to realize the implementation of iCCM policy? • To what extent does iCCM in areas of implementation mirror policy? How does this differ?
3.9	Dissemination Fora	Describes the different discussion fora of iCCM policy and decision-making, and the dissemination of policy-related decisions.	• How is policy information disseminated from political actors to implementers? • What are the different arenas or opportunities for the discussion and decision-making of iCCM policy?
3.10	Management Structures & Coordination Mechanisms	Describes the management structures which oversee iCCM, and the coordination mechanisms in place.	• What are the managing structures which oversee the implementation and management of iCCM? • How do managing partners for iCCM coordinate with each other? In what capacity, forum, and with what frequency?

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3.11	Management Ministry Roles & Responsibilities	Describes the roles and responsibilities of management entities, with particular emphasis on those of ministry partners. This includes contractual agreements related to iCCM between the national government and external parties, or lower levels of government.	- Are there clearly defined roles and responsibilities for all entities implementing iCCM? This includes international partners, NGOs, national, and sub-national ministry departments. - Are these roles and responsibilities outlined in any documentation? - Is there an assigned manager to oversee each thematic domain (i.e. supply chain, social mobilization, etc.) at the state, regional, and/or national level? - What is the level of national and sub-national ministry member involvement in the management and implementation of iCCM? - To what extent are NGOs and partner organizations which manage iCCM tasked with implementation? How is responsibility shared between the ministry and partners? - Are ministry-led focal persons or teams developed specifically for the current and future implementation of iCCM? - Are there any memorandum of understandings (MoUs) between the national government and member states or external entities? If so, do these detail expected roles and responsibilities of implicated parties? - To what extent is ministry capacity built and applied in the implementation of iCCM? - Do ministry personnel or teams accompany state- or district-level program partners in the implementation of iCCM? If yes, in what capacity, and if not, how can this be improved?
3.12	Partnerships	Describes the global entities that may not be explicit policy entrepreneurs, but are partnered in the implementation of iCCM and may curry political influence.	- Who are the global partners actively involved or have a stake in the implementation of iCCM or the development of iCCM policy? - What kind of inter-sectoral action is necessary to support change on the local social determinants of health? - Which partners are necessary to support such change? - How does partner involvement affect program sustainability, dependency of local ministries, and the potential for autonomous governmental iCCM implementation?
3.13	Transparency & Corruption	Describes extent to which iCCM political processes are transparent to stakeholders at different levels of the program and system. It also examines if and how the presence of corruption by policy actors can impact the development and implementation of iCCM policies or activities.	- How are political and managing processes transparent, if at all? What is impeding transparency between actors and entities? - Is there a potential for corruption to occur in the implementation of iCCM? If so, how, and what measures can be taken to prevent or mitigate this? - How would this impact the policy development and/ or implementation of iCCM?

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| 3.14 | Systems Considerations | Describes governance and management-related considerations for the overall health system, and synergies between domains. | Is the design of iCCM policy in this country context intended such that iCCM is considered a short-term solution, or a long-term one? What is the expected duration of this strategy with regards to policy development? Does the way iCCM policy is embedded into the country's health strategy encourage its scale-up and/or sustainability? If this is intended outcome, what is required in order for this to occur? How does policy recognition of national dependency on a volunteer structure for health service delivery affect the priorities and future development of the country's healthcare system? Is local capacity used for priority-setting, planning, contracting and/or coordination? How does volunteer labor to fulfill the implementing country's goal of reducing child mortality relate to international labor law or the SDGs? How does the presence of community-based programs and external partners to continue supporting them affect governmental responsibility towards the construction and sustained functioning of the overall health system? What is the overall organizational, policy, and management, and institutional readiness for change in the context of iCCM adaptation? Is there a vision that is collectively owned, with clear change management strategies for leadership of change? |

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Domain 4: Financing & Costing

Domain No.	Domain	Category No.	Categories	Description	Critical Questions
4	Financing	4.1	Costing & Financial Planning	Describes short- and long-term financial planning for iCCM, including what information is collected and used for this purpose.	• Does an itemized costing document exist to plan for the appropriate allocation of funds for inputs and activities required for iCCM implementation? • Do these documents incorporate demographic, population and seasonal data? • Do district-specific costing and financial planning documents for iCCM exist? • Do these costs and data inform the design and scope of iCCM implementation?
		4.2	Financing Sources	Describes the potential and actual types and sources of funds applicable to iCCM.	• Does the country have a specific resource mobilization plan for iCCM? • What are the current and potential sources of funding for iCCM, and who are the primary financing actors? • What proportion of these sources are publically provided by the national health system? • What components of the intervention will these sources cover? • Are there overlapping sources of funding that contribute to the same inputs or program activities? How can these be aligned to promote rational allocation of funds?
		4.3	Financing Recipients	Describes what stakeholders or entities are entitled to receive funds intended for iCCM.	• What actors, structures, entities or organizations are direct beneficiaries of funds intended for iCCM? • Which specific administrative divisions (i.e. districts, zones) are funds allocated towards for iCCM? • Which governmental administrative departments at sub-national levels receive funds? • Is there more than one parallel iCCM program that receives funding from different sources? • If financial responsibilities for iCCM are to be handed over to different entities (i.e. partner to ministry), will the same administrative areas previously implementing iCCM continue to be the recipients of funds?
		4.4	Financing Mandates	Describes current or potential government-based financing mandates that are applicable to iCCM.	• Are there any current or potential child health governmental mandates or schemes that provide funding intended for iCCM or components of the intervention? • How are financing mandates affecting iCCM managed at the highest decentralized administrative division?
		4.5	Public-Private Partnerships	Describes any public-private partnerships that contribute towards iCCM.	• Do any public-private partnerships exist that provide financing, inputs, or services for the implementation of iCCM? • If so, who are the entities that provide these? How is this organized, and what is the longevity of these provisions?

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4.6	Financing & Disbursement Structures	Describes how financing dispersal structures operate, and how funds are allocated and distributed.	• What are the primary financial dispersal structures that allot funds for iCCM? • Who controls these, and how do these function? • How are funds intended for iCCM allocated and distributed at lower-level administrative units? Upon what criteria is this dependent? • Are funds for iCCM appropriated and disbursed in a timely manner and in accordance with deadlines or due dates? If not, then what are the reasons for this?
4.7	Budgets	Describes how national and sub-national budgets allocate for iCCM, and the operational stakeholders that control and influence these.	• Do budgets at the decentralized administrative division (i.e. district) clearly earmark funds for iCCM or activities related to iCCM? • What actors implementing iCCM have access to and provide input towards these budgets? • To what extent do budgets take into consideration external sources of funding? • Are budgets transparent regarding the intended recipients (administrative areas, expected inputs) of funds allocated for iCCM?
4.8	Duration & Sustainability	Describes the existence and development of financial plans to ensure the continuity of iCCM, and the sustainability of current funding sources.	• Does a financial plan exist for the planning and sustainability of iCCM? • How long are these funding sources expected to provide financing intended for iCCM or its inputs and/or activities? • What financial avenues could be pursued to ensure continued funds for iCCM?
4.9	Out-of-Pocket Expenditures (OOPs) and Opportunity Costs	Examines out-of-pocket expenditures and opportunity costs of service delivery providers, supervisors, and recipients of care in the implementation of iCCM.	• In what ways do stakeholders providing iCCM services incur out-of-pocket expenditures in the implementation of ICCM activities? What is the valuation of these expenditures? • In what ways do stakeholders providing iCCM services incur opportunity costs in the implementation of ICCM activities? What is the valuation of these costs? • What is the fiscal value of person-time that CHWs allocate to service delivery? (i.e. local value of labor) • Does the iCCM program strategy compensate these costs, or provide a plan to mitigate them? • Are there social cash transfer programs, community-based cost sharing funds, or other financing mechanisms or health insurance schemes that support OOPs incurred by care recipients?
4.10	Systems Considerations	Describes finance-related considerations for the overall health system, and synergies between domains.	• What are the unintended outcomes of interrupted funding for iCCM activities? Are there mechanisms in place to protect against these? • How do donor priorities, "Big Disease" funding, and external funding cycles affect iCCM? • In the future provision of funding for primary healthcare, are national strategies, plans or budgets diverting financing away from building other components of local health systems to focus on expanding iCCM, CHW cadres, and/or community-based care? If so, what are the potential consequences of this?

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Domain 5: Health Management Information Systems and Monitoring & Evaluation

Domain No.	Domain	Category No.	Category	Description	Critical Questions
5	Health Management Information Systems and Monitoring & Evaluation	5.1	Indicators & Data Elements	Describes the availability of data elements necessary to collecting useable data on the intervention, how they inform indicator definitions, how these align with the national health system.	• How are standard country-wide indicators for iCCM defined? (i.e. according to national guidelines, global benchmarks, etc.) • Using routine data collected for iCCM, is it possible to calculate critical case pathway indicators such as: (i) proportion of cases tested; (ii) proportion of positive test results; (iii) proportion of cases treated; (iv) proportion of cases not treated due to stock-out; iv) proportion of cases referred; (vi) proportion of cases adhered to referral? • Can these be disaggregated by condition or symptom? (i.e. fever, diarrhea, cough + fast breathing) • Can these be disaggregated by sex (male and female)? • Have iCCM reporting indicators changed recently, and are these changes reflected across data collection tools, registries, and databases? • To what extent do data elements and indicators collected for iCCM align with those collected by the national health information system? • Does data exist and is available on the population per CHW catchment area? • Is geographical data available and updated on the breadth of the catchment area? • Is geodata available and updated on the distribution of CHWs? • Is there an available and updated list of active CHWs per supervisor? • Can the number of patients and the number of cases, especially in the case of comorbidities, be differentiated across aggregated forms? (i.e. The same child presents with malaria-positive fever and diarrhea) • Can critical case pathway indicators be calculated and disaggregated by health facility or supervisor using the data system available at national level? • Are key iCCM indicators integrated into a national electronic health platform such as District Health Information Systems (DHIS2)? If so, what data elements are not available or cannot be calculated using DHIS2? • Are both global and country-wide iCCM indicators incorporated into the national monitoring system?
		5.2	Forms, Registers, & Reporting	Describes the types and formats of registries and reporting forms, and other reporting mechanisms.	• Have standardized registers and reporting documents been developed and reviewed for iCCM? • At which levels are forms, registers, and reporting documents paper-based, and at which levels are they electronically-based? • Which data elements can only be found in paper format? • If paper forms or registries are used, what data elements are lost in the transfer of data to electronic databases? In other words, what information cannot be transferred into electronic format, or what information cannot be extracted from electronic databases which can be from paper registries?

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				• By what mechanisms do CHWs report data to their supervisors, and supervisors to district staff?
				• How many forms are CHWs expected to fill and/or submit to their supervisor or mentor?
				• Are reporting forms integrated with other nationally standardized community health data collection forms, or are these specific only to iCCM?
				• Do data elements on these forms overlap with each other? If so, which type of data overlap with each other and on which forms?
				• How can data collection at CHW and supervisor level be optimized to economize on repetitive recording?
				• Who is responsible for physically transporting monthly forms from the health facility to the district, and what is the procedure?
				• Is supervision data reported by both CHWs and supervisors? Does supervision data reported by both the CHW and supervisor appear on monthly aggregate forms reported to the district?
				• Which forms are used to calculate official supervision rates? Are these corroborated by forms provided by CHWs?
				• Where are supervision forms stored?
				• How is replenishment of physical forms and registry booklets organized?
				• Are iCCM data collected and reported using a system that is separate from the national health information system (NHIS)?
				• To what extent is this system, if separate from the NHIS, interoperable?
				• To what extent are registers and reporting documents aligned with the NHIS?
5.3		Accuracy, Completeness & Quality	Describes data quality in the recording and aggregation process, including accuracy of data entry, how completely forms are filled, the proportion of CHWs reporting, and the availability and use of quality control checks.	• What quality control mechanisms are in place at the different steps in the data chain to reduce factors affecting data quality, such as missing fields, miscalculations, or poor reporting? Is there a specific data verification process that occurs between the CHW and supervisor?
				• What quality control mechanisms are built into the data transmission scheme to ensure that forms and information are not lost, and arrive in a timely manner to their destination?
				• In the case of calculation errors or mismatched data elements submitted by CHWs, are these reported as-is in consolidated supervisor forms, or are these changed by the supervisor? If these are changed, on which forms are these changes made?
				• If these are changed, are these corrections made in reference to the original registry data, or changes to simply ensure alignment of totaled figures?
				• How are errors corrected in the aggregation process, including inaccurate data inputs or missing fields on incomplete forms?
				• How is completeness of reporting defined?
				• Are number of CHWs per supervisor available on reporting forms to calculate true completeness of reporting per month?
				• If a monthly form is submitted late, is this data aggregated with the month it was generated, or the current month's data?
				• How often is a Data Quality Assessment (DQA) conducted?
				• Is the DQA conducted internally or externally?
				• Are there elements excluded from the DQA that could better inform the assessment?

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5.4	Data Aggregation	Describes the processes by which data is accumulated and compiled across different levels, and the granularity of iCCM data.	• At which steps in the data aggregation processes, from CHW, to supervisor, to district, can data aggregation and entry errors occur? • What is the lowest level of granularity visible in the national or provincial-level electronic database of iCCM routine monitoring indicators? (i.e. health facility/supervisor, CHW) • When data is aggregated at the supervisor, is this done by CHWs, supervisor, or both? Whose calculation is used for submission to the next administrative level? • Who aggregates data at the district level? How is this done?
5.5	Data Transmission	Describes the data transmission processes at different levels, and responsibilities of stakeholders involved in these processes.	• What is the data transmission process at each level? Are there multiple mechanisms by which data or forms are delivered? • Where is this transmission executed-at the community level or at the health facility? • Who is expected to transmit data and forms from CHW to supervisor, and from supervisor to the next administrative level? • Do CHWs drop off monthly forms with the supervisor, or does the supervisor review each form with the CHW when it is received? • Is there a group meeting forum during which monthly forms are submitted between the CHW and supervisor? • Are all iCCM data elements submitted by the CHW in the same format, or are some submitted electronically while others are submitted on paper? • If a CHW is unable to submit their monthly form, how is this transmitted? • What feedback loops exist to ensure data and information has been transmitted, received, and in necessary cases, acted upon?
5.6	Data Management & Storage	Describes how, where and in what format iCCM data is managed and stored	• Is DHIS2 or a national online system used in the management of iCCM indicators? • Is there any separate program, or physical or electronic database that stores only iCCM data? • For data elements which can only be found in paper format, where are these forms stored?
5.7	Visibility, Transparency, and Availability	Describes the extent of accessibility, availability, visibility and transparency of iCCM data to stakeholders at different levels in the program	• Is routine iCCM data readily accessible in electronic format? • How easily can disaggregated data be accessed by stakeholders at each health system level? • How easily can electronic data be accessed by stakeholders at each level of the health system? • How easily can iCCM monitoring data at each level be accessed by national and district stakeholders? • How does routine data collected at the lowest level (i.e. CHW) differ from data available at subsequent administrative levels (i.e. health facility, district, national)? Do data elements collected by CHWs represent disaggregated versions of those available at the state-province-national level? • If there are implementing partners, is data exchanged regularly between local ministry HMIS officers and program partners? In what format and with what frequency? • Are there key district personnel who could benefit from iCCM data exchange who currently do not have access to it?

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5.8	Data Use & Usability	Describes if and how data is used in decision-making, and to what extent collected data is useable in generating useful information.	• Do CHWs or village health authorities use community-level data for decision-making? How? • If this data is used, is the impact of iCCM assessed to better understand how to improve or change the organization of the local health system and/or PHC? • Do supervisors or health facility staff use aggregate community-level data for decision-making? How? Is this standardized procedure, or are there guidelines dictating how this should be done? • Does the way specific indicators are formulated or reported clearly relay the intended information? (i.e. malaria treatment reported as number of drugs units consumed or as number of cases treated; stockouts reported as number of CHW-days stocked out or number of untreated cases due to stockout, etc.) • Can the instruments used for data collection generate pattern or trend information directly at the CHW or supervisor level? • How is supervision data used? • Have district personnel, supervisors, and/or CHWs been trained in how to use this data, or the significance of indicators?
5.9	Data Communication *This category is distinct from data transmission in that it does not address the physical transfer of data, but rather its interpretation and conveyance so that it is understood.*	Describes how iCCM data is communicated to different stakeholders.	• In what ways are iCCM data communicated (not simply transferred) to stakeholders at different levels, including community members, district staff, etc.? • Do stakeholders and health providers visually present data to different members of their own level? • Are data trends visually represented, discussed or reported at the community level? • Are data trends visually represented, discussed, or reported at the health facility/supervisor level? • What are the primary critical feedback loops in communicating iCCM data? Who are the stakeholders involved in these, and what are the gaps?
5.10	HMIS Guidelines & SOPs	Describes the HMIS-specific guidelines and SOPs related to the availability, collection, transmission, and use of data for iCCM.	• Are there clear designated roles and responsibilities defined for iCCM data collection and transmission procedures? • Do country- or program-specific iCCM reporting guidelines exist for CHWs, supervisors, and district representatives? • Have district-level HMIS officers been trained in the entry and use of iCCM data?
5.11	Monitoring & Evaluation (M&E)	Describes the general Monitoring & Evaluation of iCCM throughout the life of the program.	• Does a comprehensive M&E plan exist for iCCM? • Does this the M&E plan include program objectives and indicators for measurement and tracking progress? • How is data used, and which data is used, for M&E objectives?

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			• Does it include standardized tools for data collection, how often this information is to be collected, at which administrative levels, and the methodology of collection?
			• How does the M&E plan ensure that information collected during regular monitoring provides a holistic picture of program success or failure? In other words, how does the M&E plan inform managers that the program is operating as intended?
			• In what ways is impact measured? How is this defined, and what are the necessary data elements to assess this?
			• Is there an information dissemination plan under M&E? Is there a data use plan?
			• Does the program have or has it developed implementation strength indicators?
			• Does operational research and/or evaluation take place in the same setting of the area of practice?
5.12	Systems Considerations	Describes HMIS-specific considerations for the overall health system, and synergies between domains.	• How linked are the iCCM data transmission pipeline and the supply chain for iCCM products? What must be done to assure synchronicity between the two and a seamless transition of this in the case of program handover?
			• What other health programs exist that are internally or externally operated which rely on community data collection mechanisms? Can these be leveraged or combined for greater efficiency of iCCM? Can their data be used to support operations or inform program implementation?
			• Can mHealth devices or electronic devices be streamlined across different interventions for better community-level data collection?
			• Is there a "data collection burden" placed on CHWs and supervisors? How does presence of iCCM or inefficiencies in its processes contribute to this, and what steps is the intervention taking to mitigate this?

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Domain 6: Commodities & Supply Chain

Domain	Domain No.	Category No.	Category	Description	Critical Questions
6	Commodities & Supply Chain	6.1	Drugs & Commodities	Describes medical products and related materials, including drugs, testing devices, supplies, and other commodities required for the diagnosis and treatment of conditions within the iCCM package.	• Are all key iCCM medicines & diagnostics registered with the National Regulatory Authority (NRA) or similar agency? • Are all iCCM medicines and commodities included in country's Essential Drug List? • What are the categories and brands of materials and commodities designated for iCCM? • Are these brands or formulations different than their counterparts available in public government health facilities? • What specific diagnostic instruments and tools are required for iCCM services? • What instruments are necessary in the testing of pneumonia? • What is the guaranteed lifespan of these instruments and tools? Is this information taken into consideration in their selection and the resupply plan? • What other supplies and materials are required for diagnosis and treatment of cases? (i.e. water bottles, cups, mid-upper arm circumference (MUAC) measurement material, receptacles for sharp waste, etc.)
		6.2	Quantification	Describes the processes underlying the calculations for the amounts of required drugs and commodities intended for iCCM.	• How often are quantifications for iCCM medicines and supplies performed? • How are quantities of medicines and commodities procured from international suppliers calculated? Are there SOPs determining these? • What specific criteria are procurement and resupply calculations based upon? Do these account for population, seasonality, case rates, number of CHWs, their distribution, among others? • Are individual needs of CHWs calculated and aggregated per supervisor? Is this information used in quantification calculations? • Are quantities intended for downstream iCCM stakeholders based on fixed amounts, or do these vary based on certain criteria? • How are stockouts reported? As the number of CHWs stocked out per month; number of days CHW stocked out of key products; number of stocks received and stocks consumed; or the number of untreated or referred patients due to stockout? How is this information collected for tracking-at CHW level or supervisor level?
		6.3	Procurement	Describes the processes by which these drugs and commodities are procured.	• Has a standard procurement plan for iCCM commodities been developed? If so, where is this documented? • What is the procurement process, and which actors and entities are involved in this? • Is there a public-private partnership encompassing the supply of drugs and commodities? • What are the sources or manufacturers of each drug and commodity? Are these the same as for government-procured commodities and supplies?

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				• From where are diagnostic equipment, tools and supplies procured?
				• What information gaps affect procurement and resupply procedures?
6.4	Distribution & Transport	Describes the transportation and distribution mechanisms of iCCM drugs and commodities.		• By what mechanisms are medicines and commodities transported and distributed from the national level to the community level? Outline each step. • Who are the main actors and entities implicated in these distribution processes? Are these always the same, or are different stakeholders responsible for the same role? • To what extent are these roles government-, program-, or privately operated? To what extent are ministry staff involved in the distribution of iCCM supplies? • Are pre-existing distribution channels used in the transport of iCCM supplies and drugs, or are there separate iCCM-specific distribution mechanisms in place? • Does distribution of iCCM commodities occur in conjunction with or independent of the resupply of government facilities with general health commodities? • With what frequency are drugs and commodities expected to be distributed to each restocking point? To what extent does the frequency align with demand? • With what frequency are drugs and commodities expected to be fetched at each restocking point? To what extent does the frequency align with demand?
6.5	Inventory & Storage	Describes the inventory control system and storage practices for iCCM products.		• Where are iCCM commodities stored-at the district, facility, and community level? • Are storage conditions of iCCM products assessed? How often is this done, and by whom? • Has a standard inventory control system for iCCM commodities been developed? If so, where is this documented? • Do these align with national standards? • Do all CHWs practicing iCCM have access to a standardized drugbox for storage of supplies? Who is expected to supply a drugbox?
6.6	Resupply & Allocation	Describes the frequency of and calculations by which iCCM product allocations are determined for stakeholders at different administrative levels, and the processes governing their resupply.		• Has a standardized resupply logistic system for iCCM drugs and commodities been developed? • With what frequency is each level in the logistic chain expected to be restocked with drugs and supplies? To what extent are these rates respected/observed? • Is drug restocking based on a push or pull system? Does this mirror resupply procedure for other community-based commodities? • Do supervisors determine overall monthly allocations for CHWs? • If so, how do supervisors determine how much to allocate to their CHWs? How are CHW resupply stocks calculated in general? • What factors and data are used to calculate district allocations of iCCM commodities to supervisors intended for CHWs? • Does each level calculate a buffer stock? Upon what criteria is the buffer stock calculation based? Are these orders fulfilled regularly?

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				• What is the physical mechanism by which CHWs are resupplied with medicines and commodities? (I.e. delivery, pickup, meetings) Does this ever vary? • How are resupply notifications transferred? In what forms and by what mechanism? • Do districts pharmacists use disaggregated stock use data to determine procurement requirements per CHW? • Do district pharmacists examine trends of CHW-specific commodity use, and is there a mechanism to do this? • Do district pharmacists use any other information or forms outside of monthly summary forms to determine iCCM drug procurement requirements for their districts? • What information or communication gaps affect the regular availability of drugs and commodities?
	6.7	Availability & Stockouts	Describes how drug stockouts are handled at different administrative levels, and factors affecting regular availability of drugs.	• How are stockouts of iCCM commodities handled at each level? How are stockouts communicated to the next procuring level? • What mechanisms are triggered at these levels to resupply drugs? How quickly does this occur? • Are sufficient stocks intended for health facility use available at health facilities such that community iCCM stocks are not used? • Are CHWs expected to continue to provide iCCM services when they are stocked out of key commodities? Do registry forms provide a section that documents this? • What factors drive stockouts at different levels? (i.e. Insufficient supply, overwhelming demand, poor distribution of iCCM-practicing sites, oversized catchment populations, erratic seasonal changes in morbidity, poor documentation, etc.)
	6.8	Commodity Quality & Sustainability	Describes the quality and efficacy of drugs provided through the iCCM program, and its continuity.	• Are any of the drugs within the iCCM profile susceptible to drug resistance? If so how does this affect the supply chain, especially in the case of program handover? • Is drug resistance tracked, especially for antimalarials and antibiotics? • What is the efficacy and robustness of the different iCCM commodities offered through the iCCM package? Could these change? If so, how? • Are the drugs offered as a part of the iCCM portfolio of the same or differing quality than those offered through the routine health system? • How can the sustained quality of commodities be assured?
	6.9	Protocols, Guidelines, Manuals & SOPs	Describes the availability and existence of guidelines, training tools, protocols, and SOPs related to the different steps in the supply chain of iCCM products.	• Are there protocols, guidelines, or SOPs for district pharmacists for the supply chain procedures for iCCM products? Are these separate than normal guidelines for commodities intended for health facilities? • Are there standardized protocols and guidelines for supervisors in the calculation or resupply stocks and distribution iCCM products to CHWs? • Are district pharmacists trained in iCCM drug allocation and distribution procedures? Is this standardized across districts, and are training tools readily accessible to them?

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6.10	Systems Considerations	Describes some supply chain-specific considerations for the overall health system, and synergies between domains.	• Is there an existing logistic management information system that incorporates iCCM? • What data gaps exist that affect the adequate procurement and quantification of drugs and supplies? • How is mHealth used in the documentation, quantification, and resupply of drugs and commodities? What are the advantages and disadvantages of this? • Does the supply chain for iCCM commodities operate in parallel to the country's existing procurement and delivery system? • Are there national regulatory supply chain policies that exist that govern how iCCM supplies are procured, distributed and allocated? • Are commodities supplied by different sources? List these sources. • Do commodities for iCCM overlap with those of other community programs? • In communities where supply is not commensurate with demand, are there contextual or social factors which may contribute to this?

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Domain 7: Service Delivery

Domain No.	Domain	Category No.	Category	Description	Critical Questions
7	Service Delivery	7.1	Availability & Accessibility	Describes the location of iCCM practice and the service delivery schedule maintained by the CHW.	- Are CHWs required to reside within the communities they practice iCCM? - Have strict definitions of CHW availability been outlined in program documentation? - Do CHWs offer iCCM services outside of their post or catchment area, or treat individuals that are not from their catchment area? Are there guidelines that define these? - How many days per week and hours per day are CHWs expected to perform iCCM services? Do CHWs designate days and hours for the provision of iCCM services, or are CHWs expected to provide services at any time/day? - Does this vary between communities or is this standardized across the iCCM program? - Is this enough to provide effective coverage within their catchment areas? How has this been measured? - Is this schedule feasible for CHWs to maintain? - Does the defined iCCM service delivery schedule align with the CHW's actual service delivery times and hours? Do CHWs generally practice iCCM outside established hours and days of practice? - Who developed the iCCM service delivery schedule? - Are caregivers aware of this schedule? - Do caregivers respect this iCCM service delivery schedule, or are CHWs expected to be available outside of these days/times? In other words, what is both the caregiver and official expectation of CHW availability to perform iCCM services relative to their chosen availability? - Are CHWs expected to be on-call between certain hours? Are there guidelines which define communication expectations between CHWs and caregivers? - Are CHWs expected to provide their contact information to all caregivers within their catchment area? - Where are CHWs expected to provide services? Do standardize guidelines exist regarding where CHWs are expected to practice? - Do CHWs provide services out of physical structures, such as their homes, village clinics, public structures (i.e. school or hall)? - Do CHWs practice iCCM in a public space or outdoors (i.e. outdoor community or personal space)? - What does a caregiver do in the case of the unavailable CHW? Is this communicated to the caregiver? - Is the CHW's place of practice easily accessible within the community? - Do CHWs provide services out of a roofed structure? Do guidelines or regulations exist regulating the minimum required structural standards for the provision of iCCM services? - Are there other infrastructural requirements (such as sharp and general waste disposal, water infrastructure) that are defined in program guidelines? - Is there anything about the CHW's place of practice that would disincentivize caregivers to seek services provided by the CHW, or the ability or desire of the CHW to practice iCCM? - If the CHW practices out of their home, how does this affect availability of iCCM services? What are the advantages and disadvantages of this for the CHW and community?

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7.2	Assessment, Testing & Treatment	Describes the CHW's core service delivery package of iCCM activities, including diagnostics, testing, and treatment.	• Do standardized algorithms exist for the assessment, testing, and treatment of fever, diarrhea, and cough and fast breathing by CHWs? • Does a plan for rational use of medicines exist? • Do iCCM service delivery protocols align with national standards for assessment, testing and treatment of defined illnesses? • Are RDTs used to test for malaria? • How is pneumonia diagnosed- through respiratory rate counting, pulse oximetry, or other methods? What are the challenges associating with chosen pneumonia diagnostic methods? • How are comorbidities handled during the diagnostic process? • How are danger signs handled during the diagnostic process? • How do protocols, guidelines and algorithms address the potential of failure-to-refer, especially in the case of difficult-to-diagnose severe cases (i.e. severe pneumonia)? • Are CHW service delivery manuals and protocols available to all actors at all levels? Are these available electronically? • Do protocols, algorithms, plans, and guidelines emanate from the ministry of health, or are these partner program documents? Do they align with country policy, or exist as separate program documents?
7.3	Referral & Adherence	Describes the referral and counter-referral systems, and the protocols for confirming referral adherence by the CHW.	• Does a standardize referral and counter-referral system exist? • Have referral guidelines been developed? Where can these be found (i.e. policy documents, program documents, etc.) • Are the preexisting referral mechanisms for CHWs at service delivery point? • Which conditions fall outside iCCM service delivery and are therefore referred? • What are the mechanisms by which a CHW can confirm that a caregiver has adhered to referral? • What are the mechanisms by which a district official or supervisor can confirm that a caregiver has adhered to referral? (for data-quality purposes) • Is the onus on the caregiver, CHW, or supervisor to confirm referral adherence? Is this information transmitted by paper, telephone, or both? By whom? • Is referral adherence confirmation dependent upon follow-up? • How are the data collection system and referral adherence system interlinked? Can this data be accurately derived from existing records at district and/or national level? • What mechanisms are in place to support or encourage referral? (i.e. Transportation, reduction in service fees at select health facilities?)
7.4	Follow-Up	Describes SOPs for follow-up by the CHW, and defined expectations for the service provider and caregiver for follow-up.	• How are follow-up visits organized? Are CHWs expected to make home visits, or are caregivers expected to appear at the CHW? • How are follow-up visits tracked? • Are caregivers only expected to follow up with CHWs after a referral is made? • In the case that a physical follow-up assessment of the child is not performed, how is this recorded? Differentiate between expectation or policy, and what is normally actually done.

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7.5	Quality Assurance	Describes the quality assurance mechanisms that are in place to ensure appropriate case management.	• How is Appropriate Case Management defined for each condition? • How is quality of care measured? • To what extent are caregiver experiences integrated into assessments of quality of care? • Is there a way to track this for each symptom/condition? (For example, by examining registry data can one track appropriate diagnosis and treatment of cough/fast breathing?) • What quality control checks are in place at different steps of the care continuum or service delivery algorithm to ensure timely and appropriate care? • Is there a plan to conduct Quality of Care Assessments? If so, who conducts these, and how often are they to be performed?
7.6	Prevention Activities	Describes prevention activities such as IEC as part of the CHW's package of services, if at all.*	• Are Information, Education, Communication (IEC) or prevention activities considered a core part of CHWs' terms of reference (ToR)? • If so, how are these organized, and how often are they expected to occur? • Do these overlap with other CHW program activities? • What are the advantages and drawbacks of including prevention as a core part of the CHW's activities for iCCM?
7.7	Systems Considerations	Describes some service delivery-specific considerations for the overall health system, and synergies between domains.	• How does service availability in communities affect, strengthen, or compromise the relationship of caregivers and the community with local health facilities, and the overall primary healthcare system? • How is residency or a separate clinic structures associated with availability? How is community support associated with residency or place of practice? • How are other health personnel that are dependent upon for-profit services for remuneration affected by the provision of free services within communities? • How are non-national residents of communities and ad-hoc settlements (i.e. refugees and asylum-seekers) treated with regards to their access of iCCM services? • How is denial of services to non-qualifying recipients of care at community-level (i.e. older than 5 years) viewed from an ethical vantage point? • Do local community structures support or help coordinate referrals?

General IEC within the context of the full iCCM program is examined in the Community & Social Mobilization domain.

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Domain 8: Human Resources

Domain	Domain No.	Category No	Category	Description	Critical Questions
8	Human Resources	8.1	Terms of Reference (ToR)	Describes core responsibilities and expectations of the CHW, including their tasks, schedules, and what services and inputs they are expected to provide.	• What services and activities are iCCM-practicing CHWs expected to provide, including and beyond basic iCCM services? (i.e. pick up drugs, deliver forms, prevention activities, mobilization activities, etc.) Are these services and activities explicitly outlined in documentation agreed upon by the CHW? • What is the additional work burden of iCCM-practicing CHWs? I.e. How many other programs are iCCM-practicing CHWs involved in? How much time are CHWs expected to devote to these separate services? • What is the time allocation for iCCM that is outlined for CHWs? Are CHWs expected to provide iCCM services within a certain time frame or in accordance with a predetermined schedule? • Who determines time allocated for iCCM activities? • Are CHWs expected to be present at home at all times to receive patients? Are they expected to receive night calls? If so, is this explicitly outlined in documentation agreed upon by the CHW? • Are CHWs expected to provide their own finances, equipment, transport or other inputs towards the realization of iCCM activities? If so, is this explicitly outlined in documentation agreed upon by the CHW? • Are CHWs expected to know the total number of people and/or children under five in their catchment population, or report on changes in the population? • What are the roles and responsibilities that fall inside and outside the terms of reference of the CHWs? • Are supervisors expected to incorporate supervision of iCCM activity of CHWs as a regular part of their routine activities? Is this agreement done through spoken or written contract? • Irrespective of whether the CHW is a volunteer or governmental employee, are international labor standards respected in the determination of their terms of reference, including activities and time allocation towards these? • Are there any competing priorities that may override iCCM tasks among CHWs? • Are supervisors able to integrate iCCM activities into their existing ToR?
		8.2	Qualifications, Recruitment, & Selection	Describes the defined selection criteria of the CHW position, how CHWs are recruited to submit their candidature, and the selection processes employed.	• How are CHWs chosen? Does a standardized recruitment and selection process exist? • To what extent do local leaders, village chief(s), and the community influence who is chosen as a CHW? • Is the selection process performed democratically (i.e. by vote)?

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- If so, are votes cast anonymously (i.e. blind ballot), or publically (i.e. by a show of hands)?
- Is the selection process performed in a public forum? If so, is the audience relatively heterogeneous, or are there more likely to be representatives of a certain demographic participating in selection?
- Are steps taken to encourage gender balance in the recruitment process?
- To what extent do caregivers represent the selection committee? Are there measures in place to ensure their representation?
- Who conducts or presides over the selection process? Could this influence who is chosen?
- How are supervisors chosen to be supervisors of iCCM-practicing CHWs?
- To what extent do supervisors possess different qualifications than CHWs? Is this distinguishable through certification and/or training?
- What are the recruitment and selection criteria for CHWs? Do these include certain educational requirements, village residency requirements, literacy requirements, gender or job requirements, or life-situation requirements?
- What are the unintended consequences of over- or under-qualified recruitment criteria for staff?
- What criteria are CHWs expected to fulfill before application and selection to the position?
- Are those well-connected with influential community leaders more likely to be selected over someone who is better suited to the role, and does the selection process instigate measures to mitigate this likelihood?

| 8.3 | Training | Describes the duration, frequency, and content of the training of both CHWs and supervisors for iCCM services, and knowledge retention. | What content are iCCM training packages comprised of, and what knowledge and skills are CHWs and supervisors expected to possess after training? How long are training sessions for CHWs and supervisors, and what is their spacing during initial iCCM training? Is this standardized and/or guided by national guidelines? How often do refresher trainings occur? With what frequency are training sessions conducted? Do supervisors receive training on supervision and personnel management skills, beyond basic training for supervision of activities? Have supervisors been trained in IMCI? How is knowledge and skills retention of CHWs and supervisors tracked and measured? |

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8.4	Supervision	Describes the supervision practices and performance quality control mechanisms in place to oversee CHW activities.	• What is the modality of supervision? Does the supervisor visit the CHW or does the CHW go the Health Facility? • How often are supervisors expected to supervise CHWs for iCCM activities, and to what extent is this schedule respected? • If the supervision rate (i.e. no. of CHWs expected to receive a visit within a given timeframe) is sub-optimal, what are the primary reasons attributed to non-supervision? • Do supervisors always supervise one designated group of CHWs for iCCM, or does this change? • Are supervision duties for a group of CHWs shared by more than one supervisor? • Does anyone besides the supervisor perform supervision of CHWs for iCCM? • How often are supervisors transferred or reassigned, and what potential consequences could this have on supervision of CHWs for iCCM? • How often are supervisors supervised by the district? By the national team? • How is feedback provided to CHWs about their performance during a supervision visit? How is this tracked? • How is information about the content of the CHW supervision visit reported? At what level can this be accessed? • How is feedback provided to supervisors about their performance during a supervision visit? How is this tracked? • How is information about the content of the supervisor's district supervision visit reported? At what level can this be accessed?
8.5	Mentorship	Describes the continuous practices of skills-building mentorship to CHWs by qualified personnel. This is distinct from refresher training.	• Is there a mentorship structure in place for the training of CHWs? • If so, how is mentorship executed and by whom? • How often are CHWs expected to be mentored, and to what extent is this schedule respected? • What are the primary reasons for lack of mentorship or poor mentorship? • How can consistent, quality mentorship be arranged to support continuous capacity building of CHWs? • How can mentorship be leveraged for stronger links between the community, CHW; and health facility staff?
8.6	Peers Support Groups & Cluster Meetings	Describes the different opportunities for key iCCM stakeholders to congregate and exchange information and knowledge in a group setting, including peer support groups and cluster meetings.	• What are the primary forums where supervisors and CHWs meet amongst their peers to exchange information at community, health facility and/or district level? • Do CHWs meet in peer support groups or cluster meetings format? • Does the iCCM HR strategy incorporate a CHW head or captain for the purposes of organizing group meetings between CHWs? • How often and where are these meetings expected to occur, and how are these organized and reported?

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			• Is problem-solving, data review, and idea exchange a core component of these group meetings?
			• How are these meetings documented and monitored?
			• What are the potential benefits of peer support group meetings, and how can these be leveraged to accomplish other tasks by iCCM stakeholders?
8.7	Retention & Attrition	Describes the strategies and challenges involved in retaining CHWs to practice iCCM.	• Are there identifiable retention strategies incorporated in the iCCM program plan?
			• Does program strategy favor training and retention of CHWs for long durations, or high turnover of CHWs?
			• Does the former model impose economic or development challenges on CHWs? Are there measures in place to address these?
			• What is the attrition rate of CHWs, and what are the primary reasons attributed to this?
			• How does the retention model for iCCM-practicing CHWs affect the sustainability of the program?
8.8	Compensation, Benefits, & Incentives	Describes the salary models and various incentives provided to CHWs for their services. Describes how incentives and benefits are perceived and expected, and their channels for distribution.	• How are CHWs incentivized to perform iCCM services? Which of these are intrinsic and which of these are extrinsic?
			• How does the program differentiate between salary, compensation to cover expenses related to the program, inputs to perform program activities, material benefits, and intangible incentives for performing iCCM activities for CHWs?
			• Are stipends framed as financial benefits to the CHW?
			• Are stipends a set sum or do they waver depending upon expenses incurred?
			• Are stipends sufficient to cover CHW and supervisor expenses related to iCCM activities?
			• If CHWs are compensated, do these funds originate from government funding, project funding, a combination of these, or multiple funding sources? What are the advantages and disadvantages of this?
			• What non-monetary tangible incentives are provided to CHWs performing iCCM services?
			• Which of these are expected to be provided by the program, and which are expected to be provided by the community?
			• Are there intangible incentives associated with performing the CHW role? What are these?
			• Is there an incentive structure where packages increase the longer the CHW performs iCCM activities?
			• Do supervisors receive any benefits or financial reimbursement for performing supervision of iCCM activities? Do supervisors expect any benefits?

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| 8.9 | Support, Tools & Resources | Describes what kind of human resource tools and support mechanisms are available to CHWs and supervisors through the intervention. | • What support mechanisms or channels are available to CHWs and their supervisors?
• Do forums exist where CHWs and supervisors can vocally express their concerns? How is information regarding concerns transferred to the district?
• What kinds of tools and resources are provided to CHWs and their supervisors to support them in performing iCCM activities?
• In what way are specific challenges related to gender differences taken into consideration when providing support to stakeholders performing iCCM? |
| 8.10 | Professional Advancement | Describes what kind of career path or certification the program provides, if any, for CHWs practicing iCCM or their supervisors. | • Does a plan for upward career mobility exist for the CHW or supervisor?
• Is career development, certification, or extended capacity building built into the framework of CHW training?
• Is upward career mobility for the CHW or supervisor framed as an incentive for individuals to become CHWs, add iCCM supervision duties, or participate in iCCM activities? |

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Domain 9: Caregivers, Community & Social Mobilization

Domain No.	Domain	Category No.	Category	Description	Critical Questions
9	Caregivers, Community & Social Mobilization	9.1	Local Structures Engagement	Describes how local figures and influential groups, such as traditional leaders and village chiefs, are engaged in the planning and implementation of iCCM.	• Have traditional leaders, local authorities, and local chiefs been contacted and/or are actively engaged in the planning or implementation of iCCM mobilization activities? • How specifically is the village head or chief(s) involved in the implementation of iCCM activities, and the support of the CHW? • How are other local governance structures involved in support and implementation of iCCM? • Have any of these local actors and structures been recruited to provide financial, political, or material support for the continuation of the program? • If not, what evidence is there that demonstrates support from traditional structures and leaders for iCCM? • How will the engagement of traditional leaders and/or committees be ensured after program handover? • How do the traditional leaders and or committee perceive their roles in engaging with the larger community members for ownership and sustainability of iCCM?
		9.2	Awareness & Information Dissemination	Describes the understanding that caregivers and the community have towards CHWs and their roles, the iCCM program and its intent. It also describes IEC activities and communities' participation in these.	• Are targeted caregivers and the community aware of iCCM services, the intended treatment group and targeted conditions, and why? • Do targeted caregivers and the community understand the intention behind iCCM, and why the treatment group and targeted conditions are rigidly defined? • Are targeted caregivers and the community aware of the CHW and their status as either a volunteer or a remunerated service provider? • Are the community and caregivers aware that the CHW has been trained by certified authority? • Are targeted caregivers and the community aware of the benefits and constraints of the program? • Are targeted caregivers and the community aware of what the CHW can and cannot do, and why? • Do caregivers and/or community members actively participate in information dissemination, communication and/or prevention activities? • Who is the primary audience for IEC activities- mothers, village leaders, or all community members of all genders? • What are the channels for disseminating social mobilization information? • Are IEC materials developed in the local languages using local context? • Are there identified community champions who can attest to the efficacy of the services provided by the CHW who can be a part of the IEC campaign?

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9.3	Careseeking, Knowledge & Behavior	Describes caregivers', tendencies, behaviors and careseeking practices; barriers to careseeking; and their understanding of the symptoms and causes of the illnesses covered in the iCCM package.	• Can caregivers within target areas actively recognize and differentiate between different childhood diseases, their causes, their symptoms, their treatment and preventative methods? • What practices do caregivers within target areas generally undertake to prevent diarrhea, pneumonia, and malaria, and ensure the health of their child? • What practices of caregivers within target areas can *cause* diarrhea, pneumonia, or diarrhea in children, or aggravate or worsen their symptoms? • If caregivers within target areas choose to manage illness within the home, what home management behaviors do they practice? • What barriers to careseeking exist within communities? • What providers do caregivers prefer and why? • What is non-careseeking primarily attributed to? Does iCCM as designed address this gap? • Does the presence of free services and treatment in the community delay careseeking to a health facility in the case of CHW absence or drug unavailability?
9.4	Need, Demand, Acceptability, and Use	Describes the demand for iCCM services and how this is related to actual demonstrated community need, and how social mobilization is tied to acceptability, buy-in and use of the intervention.	• Is there a social mobilization plan guiding the creation and implementation of informed demand in the communities? • What drives the underlying need for iCCM? Is this due to: distance or accessibility of the health facility; ill-equipped health facilities; inability to pay for services/transport; general lack of awareness of child health issues; poor careseeking at existing sources of care; a combination of these or other reasons? • Is demand for iCCM commensurate with services provided? • Is iCCM acceptable to caregivers when provided by CHWs? Why or why not? • How do mobilization strategies for iCCM encourage sustained acceptability and buy-in by communities & local patrons for continued financial support? • How do mobilization strategies influence use? • How is iCCM used within the community? Is it perceived as a replacement of primary health care services for children, or as supplement to existing health infrastructure?
9.5	Treatment & Referral Adherence	Describes caregivers' adherence to referral and prescriptive iCCM treatments in domicile (where applicable), and challenges related to these.	• What are the primary reasons for non-adherence to referrals? How has the mobilization strategy attempted to address this? • How is the tracking system for referral adherence designed, and is this conducive to caregiver participation? • How are transport and financial constraints associated with non-adherence to referral mitigated through iCCM or its mobilization strategy? • Are caregivers expected to administer any continuation of treatment at home? If so, do they follow through with the full course of treatment? • Are caregivers aware of follow up expectations with the CHW, both post-treatment and after referral?

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9.6	Mobilization, Support & Community Engagement	Describes the iCCM social mobilization strategy deployed, its stakeholders, processes, content and messages.	• Have mobilization efforts practiced needs assessment of specific communities to determine in what ways the community can best support the CHW or iCCM activities? • Were the project beneficiaries informed about their roles and responsibilities in the successful implementation and sustainability of the program? • Who are the most appropriate actors to be trained as social mobilizers, (i.e. CHWs, supervisors, independent recruits) and how do these liaise with key iCCM stakeholders? • Have mobilization efforts encouraged financial or material support for CHWs or iCCM activities by members in target communities? • Have mobilization efforts encouraged the provision of services to support the CHW or iCCM activities? (I.e. babysitting, community works, farmhand help) • Have mobilization efforts encouraged the provision or development of housing or iCCM service delivery facilities by the community? • Have mobilization efforts encouraged the provision of goods or tokens of support or appreciation by local authorities or members in target communities? • By what mechanisms is the continuity of such support ensured? • Do mobilization efforts present such community support as mandatory or simply encouraged?
9.7	Local Oversight and Health & Development Committees	Describes how local development structures such as health and development committees are developed, revived, or included in the rollout of iCCM.	• Do any form of community-based organizations, or village health or development committees exist? If not, does the intervention mobilization plan intend to develop these? • How does the iCCM community mobilization plan promote, develop or encourage existing local health and development committees? • Who are these governed by, who are they composed of, how often do they meet, and what are their terms of reference? • Who are the members of these committees? Are CHWs, Social Mobilizers, caregivers, the CHW supervisors, village heads and/or traditional leaders involved, and if so what are their respective roles? • Do these actually meet regularly, and how is this recorded? • How do these committees specifically demonstrate support for iCCM, for example, through political championing, appeals for financial or material support? • What structures are in place to ensure the continuity of iCCM within their agendas? • What mechanisms are in place to ensure their sustained use over time?
9.8	Ownership	Describes the extent to which caregivers and community members have adopted iCCM as a locally-owned community good.	• How does the mobilization strategy engender ownership of iCCM? • How do communities perceive the iCCM intervention? Were their roles and responsibilities clearly defined at the onset of the program? • Do community members view iCCM as an intervention that they own and actively participate in, or rather as an imposed intervention? • What structures, forums, and behaviors are demonstrative of community ownership of iCCM?

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Domain 10: Systems Software

Domain No.	Domain	Category No.	Category	Description	Critical Questions
10	System Software	10.1	Accountability & Enforceability	Describes the mechanisms and social contracts that ensure that stakeholders in iCCM are accountable to each other.	• To what actors and entities are different iCCM stakeholders accountable? It may be useful to map these connections. • What accountability and enforceability mechanisms exist within the iCCM intervention to ensure that activities are carried out according to program standards?*
		10.2	Appreciation & Recognition	Describes the CHWs' perceptions of being acknowledged, recognized, and appreciated for the work they perform in the context of iCCM.	• In what ways are CHW's roles recognized by their catchment communities? In what ways do CHWs express feeling that their role is recognized by their catchment communities? How important is this to the CHW to carry out their roles? • Do caregivers generally understand and acknowledge the CHW's status as a volunteer? How does this affect how the caregiver may interact with the CHW? • Is there an awareness, acknowledgement and/or recognition of their work burden and terms of service? • How might caregiver perceptions of the CHW's role affect how the caregiver interacts with the CHW, CHW morale, and their ability to carry out CHW activities?
		10.3	Social Capital & Prestige	Describes the social capital and prestige associated with the position of the CHW within the community.	• What forms of social capital, such as social status and prestige, are associated with the position of CHW? How is this influenced or encouraged by the program? • Do CHWs report feeling respected (beyond their role being recognized and appreciated)? What program elements exist to encourage this, if any? • Is the CHW role designed to provide CHWs with a voice in local governance or decision-making? How can this affect the motivation of the CHW and/or their ability to carry out iCCM activities? • Is the iCCM intervention dependent upon social capital provided to the CHW to function effectively?
		10.4	Communication & Cooperation	Describes the effect and value of effective communication and cooperation between stakeholders within iCCM.	• How important is effective communication between CHWs and supervisors to the performance of iCCM? Why? • How is communication and cooperation between CHWs supervisors encouraged? What are obstacles to this?

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10.5	Morale, Confidence & Esteem	Describes CHW's perceptions and feelings of confidence, esteem and personal morale as they relate to their intrinsic motivation. It also describes potential demotivating factors.	• To what extent is the program dependent upon intrinsic CHW motivation to perform iCCM activities? • How does the morale, confidence, and motivation and CHW affect this intrinsic motivation? • What intangible factors can affect the morale of the CHW? • What different intangible benefits does iCCM provide to CHWs? • What factors, obstacles, or challenges could be considered demotivating factors? Could these include financial, commodity-related, work burden, or intangible reasons?
10.6	Power & Agency	Describes the clout and influence that stakeholders have within the iCCM intervention, and how they exercise these powers over others.	• To what extent do district managers exercise power implementing iCCM? • To what extent do they exercise power over supervisors? How does this affect the implementation of iCCM? • To what extent do supervisors exercise power in implementing iCCM? • To what extent do they exercise power over CHWs? How does this affect the implementation of iCCM? • To what extent do CHWs have agency within the iCCM intervention? In which ways do they not? • What other entities and agencies exercise power within iCCM?
10.7	Expectations	Describes the expectations of stakeholders within the iCCM intervention.	• Do caregiver expectations of the role of the CHW affect how the CHW performs iCCM services? • Do caregiver expectations of treatment affect the CHW's ability to perform iCCM effectively? • Do CHW and supervisor expectations of what the program does and does not provide affect the performance of activities? How?
10.8	Culture, Religion, Values, & Norms	Describes cultural and religious norms and values of CHWs and communities and their effect on iCCM implementation.	• How do religious and cultural norms influence CHWs interactions with caregivers and their communities? Their supervisors? • How do religious and cultural values affect the way iCCM is rolled out? • Do religious or cultural norms impose gatekeepers to the success of the iCCM intervention, or social networks that could be capitalized upon for its success?
10.9	Gender Equity	Describes specifically gender norms and issues of gender equity as they relate to the iCCM intervention.	• Does the program attempt to incorporate principles of gender equity as a part of its strategy? • Do gender disparities appear in recruited CHWs performing iCCM? How could this affect their activities and service delivery? • How do gender norms affect how iCCM is rolled out and its potential effectiveness?

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10.10	Trust	Describes the wariness, skepticism and confidence stakeholders have with each other, and how this influences how iCCM operates.	- How does the program determine, measure, or assess community and caregiver trust of CHWs? - To what extent is the iCCM intervention dependent upon trust? How? - What might CHWs, supervisors, and caregivers be wary or skeptical of with regards to the iCCM intervention, and each other? How might this influence the iCCM intervention and its outcomes? - Is there top-down confidence or trust of CHWs demonstrated by supervisors, health facility staff, or district managers in CHW? - Does caregiver trust influence the implementation and potential outcomes of iCCM? In what ways? - Is supervisor trust in the CHW's capacities necessary to effective implementation? - Are there potential programmatic limitations which may undermine the trust that caregivers place in their CHWs? - How does the iCCM strategy engender trust among lower-level stakeholders? - Do caregivers trust the diagnostic instruments, test results, and/or the quality of drugs used in the treatment of their child? How might this influence the iCCM intervention and its outcomes? - Are CHWs trusted by the health professional staff? How does this affect iCCM services?
10.11	Guilt & Pressure	Describes how stakeholders may be beholden to each other outside of accountability and enforceability mechanisms.	- To what extent may CHWs feel pressured by or beholden to their communities? Their supervisors? - Is caregiver pressure to treat in the absence of a diagnosis a viable concern? How does the program prepare CHWs to handle this?
10.12	Satisfaction	Describes satisfaction of iCCM stakeholders performing their roles, including the recipients of care	- How is satisfaction of CHWs important to the iCCM intervention? Supervisors? - How is the satisfaction of caregivers important to the iCCM intervention? - Does the iCCM strategic plan take service provider and care recipient satisfaction into consideration? In what ways?
10.13	Altruism & Desire to Contribute	Describes the desire of service providers to participate in iCCM to contribute to a perceived higher cause, without expectation of reward.	To what extent is the success of iCCM dependent upon the CHW's personal altruistic desire to contribute to the communities that they serve?

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10.14	Fear	Describes how fear may influence decision-making among CHWs performing iCCM, and caregivers from seeking care.	• How and to what extent might fear influence CHWs to continue providing services even in the event that they are no longer able? • How might fear dissuade community members from seeking services from CHWs?
10.15	Stigma	Describes if and how stigma may be used inadvertently within iCCM, and how CHWs or other stakeholders may experience stigma.	• Is stigma ever used to guide behavior change? • Are caregivers who seek free iCCM services stigmatized based on their socioeconomic class? • Do CHWs or caregivers face other forms of stigma within their communities? If so, how and why?
10.16	Willingness to Pay	Describes the willingness to pay for child health services by caregivers. This is also framed as the extent to which CHWs and supervisors are willing to contribute personal funds for the operation of iCCM activities.	• What is the willingness to pay for housing, village clinics, fuel, transport, supplies among CHWs? What is this willingness to subsidize these financial tangibles related to iCCM among the community? How may this affect the success of iCCM? • What is caregiver willingness to pay for referral adherence or attendance to the health facility? How might this impact initial careseeking and the demand for iCCM, as well as referral adherence?
10.17	Ethics	Describes the potential ethical constructs underlying the iCCM intervention	• What ethical ideals does iCCM help contribute towards? • In what ways is iCCM unethical? Are there any marginalized actors or groups that do not benefit or may be further disenfranchised as a result of the implementation of iCCM? • Are any human rights violated in the implementation of iCCM? • Does the pursuit of iCCM compromise the attainment of other SDGs?

*Accountability and enforceability are distinguishable in that accountability implies a dependency upon approval from a source or entity to whom the actor is accountable. Enforceability encompasses the ability of an entity or actor to impose sanctions, reprimand, or reward upon an agent that is accountable to it.

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